TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 180-41935-1

Job Description: Harley Davidson

For:
Groundwater Sciences Corporation
2601 Market Place Street, Suite 310
Harrisburg, PA 17110-9307

Attention: Allan Miller

Approved for release.
Carrie L Gamber
Senior Project Manager
3/24/2015 10:52 AM

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Revision: 1

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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

CASE NARRATIVE

Client: Groundwater Sciences Corporation

Project: Harley Davidson

Report Number: 180-41935-1 REVISED

NOTE: This revised report includes the current alkalinity reagent paperwork. The original data package included expired reagent paperwork.

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 03/11/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.2 C.

VOLATILES

Methylene Chloride was detected in method blank MB 180-135719/4 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Methylene Chloride was detected in method blank MB 180-135984/4 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

METALS

Calcium was detected in method blank MB 180-135569/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Some Internal standard (ISTDs) responses for the following samples were outside of the acceptance limits low: (180-41935-11 PDS), HD-COD-SW-10-0/1-0 (180-41935-5), HD-COD-SW-11-0/1-0 (180-41935-6), HD-COD-SW-12-0/1-0 (180-41935-7), HD-COD-SW-13-0/1-0 (180-41935-8), HD-COD-SW-15-0/1-0 (180-41935-9), HD-COD-SW-16-0/1-0 (180-41935-10), HD-COD-SW-17-0/1-0 (180-41935-11), HD-COD-SW-17-0/1-0 (180-41935-11 MS), HD-COD-SW-17-0/1-0 (180-41935-11 MSD), HD-COD-SW-20-0/1-0 (180-41935-12), HD-COD-SW-26-0/1-0 (180-41935-13), HD-COD-SW-27-0/1-0 (180-41935-14), HD-COD-SW-28-0/1-0 (180-41935-15), HD-COD-SW-29-0/1-0 (180-41935-16), HD-COD-SW-7-0/1-0 (180-41935-2), HD-COD-SW-8-0/1-0 (180-41935-3), HD-QC1-0/1-1 (180-41935-17). All instrument (CCV/CCB) and LCS/PDS recoveries were within the control limits.

GENERAL CHEMISTRY

Several samples required dilution prior to analysis for the IC. The reporting limits have been adjusted accordingly.

Bicarbonate Alkalinity as CaCO3 and Total Alkalinity as CaCO3 to pH 4.5 were detected in method blank MB 180-136070/2 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Detection Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Client Sample ID: HD-COD-SW-6-0/1-0 — Lab Sample ID: 180-41935-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.9	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	2.1		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	160		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	11		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	34000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	3500		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	6800		100	1.2	ug/L	1		6020A	Total/NA
Sodium	87000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	95	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	95	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-7-0/1-0 — Lab Sample ID: 180-41935-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.1	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	2.0		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	55		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	13		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	21000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6700		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	6000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	29000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	64	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	64	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-8-0/1-0 — Lab Sample ID: 180-41935-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.0	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	2.1		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	66		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	20000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6000		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	5500		100	1.2	ug/L	1		6020A	Total/NA
Sodium	33000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	68	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	68	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-9-0/1-0 — Lab Sample ID: 180-41935-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.7	J	5.0	2.5	ug/L	1		8260C	Total/NA
Trichloroethene	0.18	J	1.0	0.14	ug/L	1		8260C	Total/NA
Nitrate as N	2.4		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	86		5.0	0.98	mg/L	5		300.0	Total/NA
Sulfate	17		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	32000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	7000		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	7600		100	1.2	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-9-0/1-0 (Continued) — Lab Sample ID: 180-41935-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sodium	51000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	91	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	91	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-10-0/1-0 — Lab Sample ID: 180-41935-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.3		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	190		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	20		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	65000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6600		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	100000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	180	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	180	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-11-0/1-0 — Lab Sample ID: 180-41935-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.18	J	1.0	0.17	ug/L	1		8260C	Total/NA
Nitrate as N	3.3		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	120		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	16		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	65000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	2700		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	15000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	60000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-12-0/1-0 — Lab Sample ID: 180-41935-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.43	J	1.0	0.17	ug/L	1		8260C	Total/NA
Nitrate as N	3.5		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	240		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	37		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	63000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	11000		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	11000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	130000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	160	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-13-0/1-0 — Lab Sample ID: 180-41935-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.3	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	2.0		0.10	0.0062	mg/L	1		300.0	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-13-0/1-0 (Continued)

Lab Sample ID: 180-41935-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	70		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	21000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	5800		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	5300		100	1.2	ug/L	1		6020A	Total/NA
Sodium	35000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	54	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	54	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-15-0/1-0

Lab Sample ID: 180-41935-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.51	J	1.0	0.30	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	0.16	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	10		1.0	0.24	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	0.41	J	1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	8.6		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	4.7		1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	3.6		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	110		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	28		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	74000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	5400		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	15000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	56000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	200	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	200	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-16-0/1-0

Lab Sample ID: 180-41935-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.5	J	5.0	2.5	ug/L	1		8260C	Total/NA
Trichloroethene	0.27	J	1.0	0.14	ug/L	1		8260C	Total/NA
Nitrate as N	2.0		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	73		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	35000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6100		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	8400		100	1.2	ug/L	1		6020A	Total/NA
Sodium	37000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	70	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	70	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-17-0/1-0

Lab Sample ID: 180-41935-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	2.9	J	5.0	2.5	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.0		1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	1.0		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	3.6		1.0	0.15	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-17-0/1-0 (Continued)

Lab Sample ID: 180-41935-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	2.1		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	73		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	24000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	4900		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	5300		100	1.2	ug/L	1		6020A	Total/NA
Sodium	36000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	76	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	76	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-20-0/1-0

Lab Sample ID: 180-41935-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.1	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	2.2		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	160		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	11		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	37000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	3600		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	7100		100	1.2	ug/L	1		6020A	Total/NA
Sodium	90000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	91	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	91	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-26-0/1-0

Lab Sample ID: 180-41935-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.2	J	5.0	2.5	ug/L	1		8260C	Total/NA
Trichloroethene	0.16	J	1.0	0.14	ug/L	1		8260C	Total/NA
Nitrate as N	2.1		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	60		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	13		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	22000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6400		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	6100		100	1.2	ug/L	1		6020A	Total/NA
Sodium	30000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	72	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	72	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-27-0/1-0

Lab Sample ID: 180-41935-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.9	J	5.0	2.5	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	0.27	J	1.0	0.24	ug/L	1		8260C	Total/NA
Trichloroethene	0.30	J	1.0	0.14	ug/L	1		8260C	Total/NA
Nitrate as N	2.2		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	62		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	14		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	23000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6200		100	5.8	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-COD-SW-27-0/1-0 (Continued) — Lab Sample ID: 180-41935-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	6300		100	1.2	ug/L	1		6020A	Total/NA
Sodium	32000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	64	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	64	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-28-0/1-0 — Lab Sample ID: 180-41935-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.2	J	5.0	2.5	ug/L	1		8260C	Total/NA
Trichloroethene	0.16	J	1.0	0.14	ug/L	1		8260C	Total/NA
Nitrate as N	2.6		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	100		5.0	0.98	mg/L	5		300.0	Total/NA
Sulfate	18		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	38000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6700		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	8900		100	1.2	ug/L	1		6020A	Total/NA
Sodium	56000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	95	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	95	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-COD-SW-29-0/1-0 — Lab Sample ID: 180-41935-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	4.0	J	5.0	2.5	ug/L	1		8260C	Total/NA
Nitrate as N	2.1		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	59		1.0	0.20	mg/L	1		300.0	Total/NA
Sulfate	12		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	20000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	6100		100	5.8	ug/L	1		6020A	Total/NA
Magnesium	5800		100	1.2	ug/L	1		6020A	Total/NA
Sodium	31000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	89	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	89	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-QC1-0/1-1 — Lab Sample ID: 180-41935-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.37	J	1.0	0.30	ug/L	1		8260C	Total/NA
Methylene Chloride	0.22	J B	1.0	0.13	ug/L	1		8260C	Total/NA
1,1-Dichloroethane	0.15	J	1.0	0.12	ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	9.3		1.0	0.24	ug/L	1		8260C	Total/NA
Chloroform	0.17	J	1.0	0.17	ug/L	1		8260C	Total/NA
1,1,1-Trichloroethane	0.48	J	1.0	0.29	ug/L	1		8260C	Total/NA
Trichloroethene	7.7		1.0	0.14	ug/L	1		8260C	Total/NA
Tetrachloroethene	4.7		1.0	0.15	ug/L	1		8260C	Total/NA
Nitrate as N	3.8		0.10	0.0062	mg/L	1		300.0	Total/NA
Chloride	110		10	2.0	mg/L	10		300.0	Total/NA
Sulfate	29		1.0	0.21	mg/L	1		300.0	Total/NA
Calcium	76000	B	100	2.8	ug/L	1		6020A	Total/NA
Potassium	5600		100	5.8	ug/L	1		6020A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: HD-QC1-0/1-1 (Continued)

Lab Sample ID: 180-41935-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Magnesium	15000		100	1.2	ug/L	1		6020A	Total/NA
Sodium	57000		100	3.8	ug/L	1		6020A	Total/NA
Total Alkalinity as CaCO3 to pH 4.5	210	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA
Bicarbonate Alkalinity as CaCO3	210	B	5.0	0.41	mg/L	1		SM 2320B	Total/NA

Client Sample ID: HD-QC1-0/1-2

Lab Sample ID: 180-41935-18

No Detections.

This Detection Summary does not include radiochemical test results.

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 03/10/15 11:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 17:31	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 17:31	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 17:31	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 17:31	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 17:31	1
Acetone	**2.9**	**J**	5.0	2.5	ug/L			03/17/15 17:31	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 17:31	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 17:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 17:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 17:31	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 17:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 17:31	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 17:31	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 17:31	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 17:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 17:31	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 17:31	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 17:31	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 17:31	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 17:31	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 17:31	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 17:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 17:31	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 17:31	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 17:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 17:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 17:31	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 17:31	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 17:31	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 17:31	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 17:31	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 17:31	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 17:31	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 17:31	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 17:31	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 17:31	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 17:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 17:31	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 17:31	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*03/17/15 17:31*	*1*
Toluene-d8 (Surr)	*102*		*71 - 118*		*03/17/15 17:31*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 118*		*03/17/15 17:31*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*03/17/15 17:31*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 03/10/15 12:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 17:55	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 17:55	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 17:55	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 17:55	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 17:55	1
Acetone	**4.1**	**J**	5.0	2.5	ug/L			03/17/15 17:55	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 17:55	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 17:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 17:55	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 17:55	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 17:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 17:55	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 17:55	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 17:55	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 17:55	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 17:55	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 17:55	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 17:55	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 17:55	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 17:55	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 17:55	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 17:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 17:55	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 17:55	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 17:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 17:55	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 17:55	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 17:55	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 17:55	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 17:55	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 17:55	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 17:55	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 17:55	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 17:55	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 17:55	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 17:55	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 17:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 17:55	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 17:55	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 135*		*03/17/15 17:55*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/17/15 17:55*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 118*		*03/17/15 17:55*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*03/17/15 17:55*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 03/10/15 08:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 18:19	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 18:19	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 18:19	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 18:19	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 18:19	1
Acetone	**4.0**	**J**	5.0	2.5	ug/L			03/17/15 18:19	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 18:19	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 18:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 18:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 18:19	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 18:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 18:19	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 18:19	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 18:19	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 18:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 18:19	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 18:19	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 18:19	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 18:19	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 18:19	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 18:19	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 18:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 18:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 18:19	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 18:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 18:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 18:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 18:19	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 18:19	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 18:19	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 18:19	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 18:19	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 18:19	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 18:19	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 18:19	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 18:19	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 18:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 18:19	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 18:19	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 18:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 135*		*03/17/15 18:19*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/17/15 18:19*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 118*		*03/17/15 18:19*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 128*		*03/17/15 18:19*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 03/10/15 12:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 18:43	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 18:43	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 18:43	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 18:43	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 18:43	1
Acetone	**3.7**	**J**	5.0	2.5	ug/L			03/17/15 18:43	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 18:43	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 18:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 18:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 18:43	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 18:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 18:43	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 18:43	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 18:43	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 18:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 18:43	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 18:43	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 18:43	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 18:43	1
Trichloroethene	**0.18**	**J**	1.0	0.14	ug/L			03/17/15 18:43	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 18:43	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 18:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 18:43	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 18:43	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 18:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 18:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 18:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 18:43	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 18:43	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 18:43	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 18:43	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 18:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 18:43	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 18:43	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 18:43	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 18:43	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 18:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 18:43	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 18:43	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 18:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*64 - 135*		*03/17/15 18:43*	*1*
Toluene-d8 (Surr)	*106*		*71 - 118*		*03/17/15 18:43*	*1*
4-Bromofluorobenzene (Surr)	*114*		*70 - 118*		*03/17/15 18:43*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*03/17/15 18:43*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 03/10/15 10:05
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 19:07	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 19:07	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 19:07	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 19:07	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 19:07	1
Acetone	5.0	U	5.0	2.5	ug/L			03/17/15 19:07	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 19:07	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 19:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 19:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 19:07	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 19:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 19:07	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 19:07	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 19:07	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 19:07	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 19:07	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 19:07	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 19:07	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 19:07	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 19:07	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 19:07	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 19:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 19:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 19:07	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 19:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 19:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 19:07	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 19:07	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 19:07	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 19:07	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 19:07	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 19:07	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 19:07	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 19:07	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 19:07	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 19:07	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 19:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 19:07	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 19:07	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 19:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*03/17/15 19:07*	*1*
Toluene-d8 (Surr)	*103*		*71 - 118*		*03/17/15 19:07*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 118*		*03/17/15 19:07*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*03/17/15 19:07*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 03/10/15 13:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 19:31	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 19:31	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 19:31	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 19:31	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 19:31	1
Acetone	5.0	U	5.0	2.5	ug/L			03/17/15 19:31	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 19:31	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 19:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 19:31	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 19:31	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 19:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 19:31	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 19:31	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 19:31	1
Chloroform	**0.18**	**J**	1.0	0.17	ug/L			03/17/15 19:31	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 19:31	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 19:31	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 19:31	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 19:31	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 19:31	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 19:31	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 19:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 19:31	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 19:31	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 19:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 19:31	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 19:31	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 19:31	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 19:31	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 19:31	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 19:31	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 19:31	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 19:31	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 19:31	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 19:31	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 19:31	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 19:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 19:31	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 19:31	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 19:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 135*		*03/17/15 19:31*	*1*
Toluene-d8 (Surr)	*100*		*71 - 118*		*03/17/15 19:31*	*1*
4-Bromofluorobenzene (Surr)	*106*		*70 - 118*		*03/17/15 19:31*	*1*
Dibromofluoromethane (Surr)	*101*		*70 - 128*		*03/17/15 19:31*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 03/10/15 13:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 19:55	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 19:55	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 19:55	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 19:55	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 19:55	1
Acetone	5.0	U	5.0	2.5	ug/L			03/17/15 19:55	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 19:55	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 19:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 19:55	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 19:55	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 19:55	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 19:55	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 19:55	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 19:55	1
Chloroform	**0.43**	**J**	1.0	0.17	ug/L			03/17/15 19:55	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 19:55	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 19:55	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 19:55	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 19:55	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 19:55	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 19:55	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 19:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 19:55	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 19:55	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 19:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 19:55	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 19:55	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 19:55	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 19:55	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 19:55	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 19:55	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 19:55	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 19:55	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 19:55	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 19:55	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 19:55	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 19:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 19:55	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 19:55	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 135*		*03/17/15 19:55*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/17/15 19:55*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 118*		*03/17/15 19:55*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 128*		*03/17/15 19:55*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 03/10/15 10:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 20:19	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 20:19	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 20:19	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 20:19	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 20:19	1
Acetone	**4.3**	**J**	5.0	2.5	ug/L			03/17/15 20:19	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 20:19	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 20:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 20:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 20:19	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 20:19	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 20:19	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 20:19	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 20:19	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 20:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 20:19	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 20:19	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 20:19	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 20:19	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 20:19	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 20:19	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 20:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 20:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 20:19	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 20:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 20:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 20:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 20:19	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 20:19	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 20:19	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 20:19	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 20:19	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 20:19	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 20:19	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 20:19	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 20:19	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 20:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 20:19	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 20:19	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 20:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*64 - 135*		*03/17/15 20:19*	*1*
Toluene-d8 (Surr)	*106*		*71 - 118*		*03/17/15 20:19*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 118*		*03/17/15 20:19*	*1*
Dibromofluoromethane (Surr)	*98*		*70 - 128*		*03/17/15 20:19*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 03/10/15 14:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 20:44	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 20:44	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 20:44	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 20:44	1
1,1-Dichloroethene	**0.51**	**J**	1.0	0.30	ug/L			03/17/15 20:44	1
Acetone	5.0	U	5.0	2.5	ug/L			03/17/15 20:44	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 20:44	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 20:44	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 20:44	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 20:44	1
1,1-Dichloroethane	**0.16**	**J**	1.0	0.12	ug/L			03/17/15 20:44	1
cis-1,2-Dichloroethene	**10**		1.0	0.24	ug/L			03/17/15 20:44	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 20:44	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 20:44	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 20:44	1
1,1,1-Trichloroethane	**0.41**	**J**	1.0	0.29	ug/L			03/17/15 20:44	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 20:44	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 20:44	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 20:44	1
Trichloroethene	**8.6**		1.0	0.14	ug/L			03/17/15 20:44	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 20:44	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 20:44	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 20:44	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 20:44	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 20:44	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 20:44	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 20:44	1
Tetrachloroethene	**4.7**		1.0	0.15	ug/L			03/17/15 20:44	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 20:44	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 20:44	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 20:44	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 20:44	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 20:44	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 20:44	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 20:44	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 20:44	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 20:44	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 20:44	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 20:44	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 20:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*64 - 135*		*03/17/15 20:44*	*1*
Toluene-d8 (Surr)	*100*		*71 - 118*		*03/17/15 20:44*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 118*		*03/17/15 20:44*	*1*
Dibromofluoromethane (Surr)	*105*		*70 - 128*		*03/17/15 20:44*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 03/10/15 10:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 21:08	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 21:08	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 21:08	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 21:08	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 21:08	1
Acetone	**4.5**	**J**	5.0	2.5	ug/L			03/17/15 21:08	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 21:08	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 21:08	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 21:08	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 21:08	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 21:08	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 21:08	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 21:08	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 21:08	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 21:08	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 21:08	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 21:08	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 21:08	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 21:08	1
Trichloroethene	**0.27**	**J**	1.0	0.14	ug/L			03/17/15 21:08	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 21:08	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 21:08	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 21:08	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 21:08	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 21:08	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 21:08	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 21:08	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 21:08	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 21:08	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 21:08	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 21:08	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 21:08	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 21:08	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 21:08	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 21:08	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 21:08	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 21:08	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 21:08	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 21:08	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*64 - 135*		*03/17/15 21:08*	*1*
Toluene-d8 (Surr)	*100*		*71 - 118*		*03/17/15 21:08*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 118*		*03/17/15 21:08*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*03/17/15 21:08*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 03/10/15 11:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 15:30	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 15:30	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 15:30	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 15:30	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 15:30	1
Acetone	**2.9**	**J**	5.0	2.5	ug/L			03/17/15 15:30	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 15:30	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 15:30	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 15:30	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 15:30	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 15:30	1
cis-1,2-Dichloroethene	**1.0**		1.0	0.24	ug/L			03/17/15 15:30	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 15:30	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 15:30	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 15:30	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 15:30	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 15:30	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 15:30	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 15:30	1
Trichloroethene	**1.0**		1.0	0.14	ug/L			03/17/15 15:30	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 15:30	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 15:30	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 15:30	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 15:30	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 15:30	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 15:30	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 15:30	1
Tetrachloroethene	**3.6**		1.0	0.15	ug/L			03/17/15 15:30	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 15:30	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 15:30	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 15:30	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 15:30	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 15:30	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 15:30	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 15:30	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 15:30	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 15:30	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 15:30	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 15:30	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 135*		*03/17/15 15:30*	*1*
Toluene-d8 (Surr)	*99*		*71 - 118*		*03/17/15 15:30*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 118*		*03/17/15 15:30*	*1*
Dibromofluoromethane (Surr)	*96*		*70 - 128*		*03/17/15 15:30*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 03/10/15 11:30
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 21:32	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 21:32	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 21:32	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 21:32	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 21:32	1
Acetone	**3.1**	**J**	5.0	2.5	ug/L			03/17/15 21:32	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 21:32	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 21:32	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 21:32	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 21:32	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 21:32	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 21:32	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 21:32	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 21:32	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 21:32	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 21:32	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 21:32	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 21:32	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 21:32	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 21:32	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 21:32	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 21:32	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 21:32	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 21:32	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 21:32	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 21:32	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 21:32	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 21:32	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 21:32	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 21:32	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 21:32	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 21:32	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 21:32	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 21:32	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 21:32	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 21:32	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 21:32	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 21:32	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 21:32	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 21:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 135*		*03/17/15 21:32*	*1*
Toluene-d8 (Surr)	*103*		*71 - 118*		*03/17/15 21:32*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 118*		*03/17/15 21:32*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 128*		*03/17/15 21:32*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 03/10/15 11:55
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/19/15 19:09	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/19/15 19:09	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/19/15 19:09	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/19/15 19:09	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/19/15 19:09	1
Acetone	**4.2**	**J**	5.0	2.5	ug/L			03/19/15 19:09	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/19/15 19:09	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/19/15 19:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/19/15 19:09	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/19/15 19:09	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/19/15 19:09	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/19/15 19:09	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/19/15 19:09	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/19/15 19:09	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/19/15 19:09	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/19/15 19:09	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/19/15 19:09	1
Benzene	1.0	U	1.0	0.11	ug/L			03/19/15 19:09	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/19/15 19:09	1
Trichloroethene	**0.16**	**J**	1.0	0.14	ug/L			03/19/15 19:09	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/19/15 19:09	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/19/15 19:09	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/19/15 19:09	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/19/15 19:09	1
Toluene	1.0	U	1.0	0.15	ug/L			03/19/15 19:09	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/19/15 19:09	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/19/15 19:09	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/19/15 19:09	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/19/15 19:09	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/19/15 19:09	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/19/15 19:09	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/19/15 19:09	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/19/15 19:09	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/19/15 19:09	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/19/15 19:09	1
Styrene	1.0	U	1.0	0.097	ug/L			03/19/15 19:09	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/19/15 19:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/19/15 19:09	1
Acrylonitrile	20	U	20	0.55	ug/L			03/19/15 19:09	1
1,4-Dioxane	200	U	200	34	ug/L			03/19/15 19:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 135*		*03/19/15 19:09*	*1*
Toluene-d8 (Surr)	*99*		*71 - 118*		*03/19/15 19:09*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 118*		*03/19/15 19:09*	*1*
Dibromofluoromethane (Surr)	*107*		*70 - 128*		*03/19/15 19:09*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 03/10/15 14:10
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 22:19	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 22:19	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 22:19	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 22:19	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 22:19	1
Acetone	**3.9**	**J**	5.0	2.5	ug/L			03/17/15 22:19	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 22:19	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 22:19	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 22:19	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 22:19	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 22:19	1
cis-1,2-Dichloroethene	**0.27**	**J**	1.0	0.24	ug/L			03/17/15 22:19	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 22:19	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 22:19	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 22:19	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 22:19	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 22:19	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 22:19	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 22:19	1
Trichloroethene	**0.30**	**J**	1.0	0.14	ug/L			03/17/15 22:19	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 22:19	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 22:19	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 22:19	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 22:19	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 22:19	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 22:19	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 22:19	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 22:19	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 22:19	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 22:19	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 22:19	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 22:19	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 22:19	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 22:19	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 22:19	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 22:19	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 22:19	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 22:19	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 22:19	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 22:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*64 - 135*		*03/17/15 22:19*	*1*
Toluene-d8 (Surr)	*100*		*71 - 118*		*03/17/15 22:19*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 118*		*03/17/15 22:19*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 128*		*03/17/15 22:19*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 03/10/15 13:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 22:43	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 22:43	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 22:43	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 22:43	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 22:43	1
Acetone	**3.2**	**J**	5.0	2.5	ug/L			03/17/15 22:43	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 22:43	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 22:43	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 22:43	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 22:43	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 22:43	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 22:43	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 22:43	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 22:43	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 22:43	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 22:43	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 22:43	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 22:43	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 22:43	1
Trichloroethene	**0.16**	**J**	1.0	0.14	ug/L			03/17/15 22:43	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 22:43	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 22:43	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 22:43	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 22:43	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 22:43	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 22:43	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 22:43	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 22:43	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 22:43	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 22:43	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 22:43	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 22:43	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 22:43	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 22:43	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 22:43	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 22:43	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 22:43	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 22:43	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 22:43	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 22:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*		*03/17/15 22:43*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/17/15 22:43*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 118*		*03/17/15 22:43*	*1*
Dibromofluoromethane (Surr)	*99*		*70 - 128*		*03/17/15 22:43*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 03/10/15 09:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 23:07	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 23:07	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 23:07	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 23:07	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 23:07	1
Acetone	**4.0**	**J**	5.0	2.5	ug/L			03/17/15 23:07	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 23:07	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 23:07	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 23:07	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 23:07	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 23:07	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 23:07	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 23:07	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 23:07	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 23:07	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 23:07	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 23:07	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 23:07	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 23:07	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 23:07	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 23:07	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 23:07	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 23:07	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 23:07	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 23:07	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 23:07	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 23:07	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 23:07	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 23:07	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 23:07	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 23:07	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 23:07	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 23:07	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 23:07	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 23:07	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 23:07	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 23:07	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 23:07	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 23:07	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 23:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 135*		*03/17/15 23:07*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/17/15 23:07*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 118*		*03/17/15 23:07*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 128*		*03/17/15 23:07*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-QC1-0/1-1
Date Collected: 03/10/15 08:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/19/15 19:33	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/19/15 19:33	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/19/15 19:33	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/19/15 19:33	1
1,1-Dichloroethene	**0.37**	**J**	1.0	0.30	ug/L			03/19/15 19:33	1
Acetone	5.0	U	5.0	2.5	ug/L			03/19/15 19:33	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/19/15 19:33	1
Methylene Chloride	**0.22**	**J B**	1.0	0.13	ug/L			03/19/15 19:33	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/19/15 19:33	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/19/15 19:33	1
1,1-Dichloroethane	**0.15**	**J**	1.0	0.12	ug/L			03/19/15 19:33	1
cis-1,2-Dichloroethene	**9.3**		1.0	0.24	ug/L			03/19/15 19:33	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/19/15 19:33	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/19/15 19:33	1
Chloroform	**0.17**	**J**	1.0	0.17	ug/L			03/19/15 19:33	1
1,1,1-Trichloroethane	**0.48**	**J**	1.0	0.29	ug/L			03/19/15 19:33	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/19/15 19:33	1
Benzene	1.0	U	1.0	0.11	ug/L			03/19/15 19:33	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/19/15 19:33	1
Trichloroethene	**7.7**		1.0	0.14	ug/L			03/19/15 19:33	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/19/15 19:33	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/19/15 19:33	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/19/15 19:33	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/19/15 19:33	1
Toluene	1.0	U	1.0	0.15	ug/L			03/19/15 19:33	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/19/15 19:33	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/19/15 19:33	1
Tetrachloroethene	**4.7**		1.0	0.15	ug/L			03/19/15 19:33	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/19/15 19:33	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/19/15 19:33	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/19/15 19:33	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/19/15 19:33	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/19/15 19:33	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/19/15 19:33	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/19/15 19:33	1
Styrene	1.0	U	1.0	0.097	ug/L			03/19/15 19:33	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/19/15 19:33	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/19/15 19:33	1
Acrylonitrile	20	U	20	0.55	ug/L			03/19/15 19:33	1
1,4-Dioxane	200	U	200	34	ug/L			03/19/15 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 135*		*03/19/15 19:33*	*1*
Toluene-d8 (Surr)	*103*		*71 - 118*		*03/19/15 19:33*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 118*		*03/19/15 19:33*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 128*		*03/19/15 19:33*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS)

Client Sample ID: HD-QC1-0/1-2
Date Collected: 03/10/15 12:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-18
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 15:06	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 15:06	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 15:06	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 15:06	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 15:06	1
Acetone	5.0	U	5.0	2.5	ug/L			03/17/15 15:06	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 15:06	1
Methylene Chloride	1.0	U	1.0	0.13	ug/L			03/17/15 15:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 15:06	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 15:06	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 15:06	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 15:06	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 15:06	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 15:06	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 15:06	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 15:06	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 15:06	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 15:06	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 15:06	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 15:06	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 15:06	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 15:06	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 15:06	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 15:06	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 15:06	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 15:06	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 15:06	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 15:06	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 15:06	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 15:06	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 15:06	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 15:06	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 15:06	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 15:06	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 15:06	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 15:06	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 15:06	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 15:06	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 15:06	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*64 - 135*		*03/17/15 15:06*	*1*
Toluene-d8 (Surr)	*104*		*71 - 118*		*03/17/15 15:06*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 118*		*03/17/15 15:06*	*1*
Dibromofluoromethane (Surr)	*97*		*70 - 128*		*03/17/15 15:06*	*1*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 03/10/15 11:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.1		0.10	0.0062	mg/L			03/11/15 23:25	1
Chloride	160		10	2.0	mg/L			03/11/15 23:41	10
Sulfate	11		1.0	0.21	mg/L			03/11/15 23:25	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 03/10/15 12:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.0		0.10	0.0062	mg/L			03/11/15 22:38	1
Chloride	55		1.0	0.20	mg/L			03/11/15 22:38	1
Sulfate	13		1.0	0.21	mg/L			03/11/15 22:38	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 03/10/15 08:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.1		0.10	0.0062	mg/L			03/11/15 20:03	1
Chloride	66		1.0	0.20	mg/L			03/11/15 20:03	1
Sulfate	12		1.0	0.21	mg/L			03/11/15 20:03	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 03/10/15 12:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.4		0.10	0.0062	mg/L			03/12/15 04:21	1
Chloride	86		5.0	0.98	mg/L			03/12/15 04:36	5
Sulfate	17		1.0	0.21	mg/L			03/12/15 04:21	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 03/10/15 10:05
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.3		0.10	0.0062	mg/L			03/12/15 00:58	1
Chloride	190		10	2.0	mg/L			03/12/15 01:14	10
Sulfate	20		1.0	0.21	mg/L			03/12/15 00:58	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 03/10/15 13:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.3		0.10	0.0062	mg/L			03/12/15 01:29	1
Chloride	120		10	2.0	mg/L			03/12/15 01:45	10
Sulfate	16		1.0	0.21	mg/L			03/12/15 01:29	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 03/10/15 13:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.5		0.10	0.0062	mg/L			03/12/15 02:01	1
Chloride	240		10	2.0	mg/L			03/12/15 02:16	10
Sulfate	37		1.0	0.21	mg/L			03/12/15 02:01	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 03/10/15 10:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.0		0.10	0.0062	mg/L			03/12/15 04:05	1
Chloride	70		1.0	0.20	mg/L			03/12/15 04:05	1
Sulfate	12		1.0	0.21	mg/L			03/12/15 04:05	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 03/10/15 14:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.6		0.10	0.0062	mg/L			03/12/15 02:32	1
Chloride	110		10	2.0	mg/L			03/12/15 02:47	10
Sulfate	28		1.0	0.21	mg/L			03/12/15 02:32	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 03/10/15 10:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.0		0.10	0.0062	mg/L			03/11/15 20:18	1
Chloride	73		1.0	0.20	mg/L			03/11/15 20:18	1
Sulfate	12		1.0	0.21	mg/L			03/11/15 20:18	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 03/10/15 11:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.1		0.10	0.0062	mg/L			03/11/15 21:52	1
Chloride	73		1.0	0.20	mg/L			03/11/15 21:52	1
Sulfate	12		1.0	0.21	mg/L			03/11/15 21:52	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 03/10/15 11:30
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.2		0.10	0.0062	mg/L			03/12/15 03:03	1
Chloride	160		10	2.0	mg/L			03/12/15 03:18	10
Sulfate	11		1.0	0.21	mg/L			03/12/15 03:03	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 03/10/15 11:55
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.1		0.10	0.0062	mg/L			03/11/15 20:34	1
Chloride	60		1.0	0.20	mg/L			03/11/15 20:34	1
Sulfate	13		1.0	0.21	mg/L			03/11/15 20:34	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 03/10/15 14:10
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.2		0.10	0.0062	mg/L			03/11/15 20:49	1
Chloride	62		1.0	0.20	mg/L			03/11/15 20:49	1
Sulfate	14		1.0	0.21	mg/L			03/11/15 20:49	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 03/10/15 13:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.6		0.10	0.0062	mg/L			03/12/15 04:52	1
Chloride	100		5.0	0.98	mg/L			03/12/15 05:07	5
Sulfate	18		1.0	0.21	mg/L			03/12/15 04:52	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 03/10/15 09:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	2.1		0.10	0.0062	mg/L			03/11/15 21:05	1
Chloride	59		1.0	0.20	mg/L			03/11/15 21:05	1
Sulfate	12		1.0	0.21	mg/L			03/11/15 21:05	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 300.0 - Anions, Ion Chromatography

Client Sample ID: HD-QC1-0/1-1
Date Collected: 03/10/15 08:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	3.8		0.10	0.0062	mg/L			03/11/15 23:56	1
Chloride	110		10	2.0	mg/L			03/12/15 00:12	10
Sulfate	29		1.0	0.21	mg/L			03/11/15 23:56	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 03/10/15 11:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	34000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 11:44	1
Potassium	3500		100	5.8	ug/L		03/16/15 09:13	03/20/15 11:44	1
Magnesium	6800		100	1.2	ug/L		03/16/15 09:13	03/20/15 11:44	1
Sodium	87000		100	3.8	ug/L		03/16/15 09:13	03/20/15 11:44	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 03/10/15 12:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	21000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 11:47	1
Potassium	6700		100	5.8	ug/L		03/16/15 09:13	03/20/15 11:47	1
Magnesium	6000		100	1.2	ug/L		03/16/15 09:13	03/20/15 11:47	1
Sodium	29000		100	3.8	ug/L		03/16/15 09:13	03/20/15 11:47	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 03/10/15 08:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 11:51	1
Potassium	6000		100	5.8	ug/L		03/16/15 09:13	03/20/15 11:51	1
Magnesium	5500		100	1.2	ug/L		03/16/15 09:13	03/20/15 11:51	1
Sodium	33000		100	3.8	ug/L		03/16/15 09:13	03/20/15 11:51	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 03/10/15 12:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	32000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 11:55	1
Potassium	7000		100	5.8	ug/L		03/16/15 09:13	03/20/15 11:55	1
Magnesium	7600		100	1.2	ug/L		03/16/15 09:13	03/20/15 11:55	1
Sodium	51000		100	3.8	ug/L		03/16/15 09:13	03/20/15 11:55	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 03/10/15 10:05
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	65000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 11:59	1
Potassium	6600		100	5.8	ug/L		03/16/15 09:13	03/20/15 11:59	1
Magnesium	11000		100	1.2	ug/L		03/16/15 09:13	03/20/15 11:59	1
Sodium	100000		100	3.8	ug/L		03/16/15 09:13	03/20/15 11:59	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 03/10/15 13:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	65000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:05	1
Potassium	2700		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:05	1
Magnesium	15000		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:05	1
Sodium	60000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:05	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 03/10/15 13:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	63000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:09	1
Potassium	11000		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:09	1
Magnesium	11000		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:09	1
Sodium	130000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:09	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 03/10/15 10:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	21000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:13	1
Potassium	5800		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:13	1
Magnesium	5300		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:13	1
Sodium	35000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:13	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 03/10/15 14:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	74000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:27	1
Potassium	5400		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:27	1
Magnesium	15000		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:27	1
Sodium	56000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:27	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 03/10/15 10:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	35000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:31	1
Potassium	6100		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:31	1
Magnesium	8400		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:31	1
Sodium	37000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:31	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 03/10/15 11:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	24000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:35	1
Potassium	4900		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:35	1
Magnesium	5300		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:35	1
Sodium	36000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:35	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 03/10/15 11:30
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	37000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:54	1
Potassium	3600		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:54	1
Magnesium	7100		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:54	1
Sodium	90000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:54	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 03/10/15 11:55
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	22000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 12:57	1
Potassium	6400		100	5.8	ug/L		03/16/15 09:13	03/20/15 12:57	1
Magnesium	6100		100	1.2	ug/L		03/16/15 09:13	03/20/15 12:57	1
Sodium	30000		100	3.8	ug/L		03/16/15 09:13	03/20/15 12:57	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 03/10/15 14:10
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	23000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 13:01	1
Potassium	6200		100	5.8	ug/L		03/16/15 09:13	03/20/15 13:01	1
Magnesium	6300		100	1.2	ug/L		03/16/15 09:13	03/20/15 13:01	1
Sodium	32000		100	3.8	ug/L		03/16/15 09:13	03/20/15 13:01	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 03/10/15 13:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	38000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 13:15	1
Potassium	6700		100	5.8	ug/L		03/16/15 09:13	03/20/15 13:15	1
Magnesium	8900		100	1.2	ug/L		03/16/15 09:13	03/20/15 13:15	1
Sodium	56000		100	3.8	ug/L		03/16/15 09:13	03/20/15 13:15	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 03/10/15 09:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	20000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 13:19	1
Potassium	6100		100	5.8	ug/L		03/16/15 09:13	03/20/15 13:19	1
Magnesium	5800		100	1.2	ug/L		03/16/15 09:13	03/20/15 13:19	1
Sodium	31000		100	3.8	ug/L		03/16/15 09:13	03/20/15 13:19	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 6020A - Metals (ICP/MS)

Client Sample ID: HD-QC1-0/1-1
Date Collected: 03/10/15 08:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	76000	B	100	2.8	ug/L		03/16/15 09:13	03/20/15 13:23	1
Potassium	5600		100	5.8	ug/L		03/16/15 09:13	03/20/15 13:23	1
Magnesium	15000		100	1.2	ug/L		03/16/15 09:13	03/20/15 13:23	1
Sodium	57000		100	3.8	ug/L		03/16/15 09:13	03/20/15 13:23	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-6-0/1-0
Date Collected: 03/10/15 11:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**95**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**95**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-7-0/1-0
Date Collected: 03/10/15 12:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**64**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**64**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-8-0/1-0
Date Collected: 03/10/15 08:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**68**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**68**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-9-0/1-0
Date Collected: 03/10/15 12:50
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**91**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**91**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-10-0/1-0
Date Collected: 03/10/15 10:05
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**180**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**180**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-11-0/1-0
Date Collected: 03/10/15 13:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-6
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**160**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**160**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-12-0/1-0
Date Collected: 03/10/15 13:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-7
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**160**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**160**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-13-0/1-0
Date Collected: 03/10/15 10:15
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-8
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**54**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**54**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-15-0/1-0
Date Collected: 03/10/15 14:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-9
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**200**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**200**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-16-0/1-0
Date Collected: 03/10/15 10:40
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-10
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**70**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**70**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-17-0/1-0
Date Collected: 03/10/15 11:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-11
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**76**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**76**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-20-0/1-0
Date Collected: 03/10/15 11:30
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-12
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**91**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**91**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-26-0/1-0
Date Collected: 03/10/15 11:55
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-13
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**72**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**72**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-27-0/1-0
Date Collected: 03/10/15 14:10
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-14
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**64**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**64**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-28-0/1-0
Date Collected: 03/10/15 13:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-15
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**95**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**95**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-COD-SW-29-0/1-0
Date Collected: 03/10/15 09:25
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-16
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**89**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**89**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

General Chemistry

Client Sample ID: HD-QC1-0/1-1
Date Collected: 03/10/15 08:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-17
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	**210**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	**210**	**B**	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Default Detection Limits

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1,2-Tetrachloroethane	1.0	0.28	ug/L	8260C
1,1,1-Trichloroethane	1.0	0.29	ug/L	8260C
1,1,2,2-Tetrachloroethane	1.0	0.20	ug/L	8260C
1,1,2-Trichloroethane	1.0	0.20	ug/L	8260C
1,1-Dichloroethane	1.0	0.12	ug/L	8260C
1,1-Dichloroethene	1.0	0.30	ug/L	8260C
1,2-Dibromoethane (EDB)	1.0	0.18	ug/L	8260C
1,2-Dichloroethane	1.0	0.21	ug/L	8260C
1,2-Dichloropropane	1.0	0.095	ug/L	8260C
1,4-Dioxane	200	34	ug/L	8260C
2-Butanone (MEK)	5.0	0.55	ug/L	8260C
2-Hexanone	5.0	0.16	ug/L	8260C
4-Methyl-2-pentanone (MIBK)	5.0	0.53	ug/L	8260C
Acetone	5.0	2.5	ug/L	8260C
Acrylonitrile	20	0.55	ug/L	8260C
Benzene	1.0	0.11	ug/L	8260C
Bromochloromethane	1.0	0.18	ug/L	8260C
Bromodichloromethane	1.0	0.13	ug/L	8260C
Bromoform	1.0	0.19	ug/L	8260C
Bromomethane	1.0	0.31	ug/L	8260C
Carbon disulfide	1.0	0.21	ug/L	8260C
Carbon tetrachloride	1.0	0.14	ug/L	8260C
Chlorobenzene	1.0	0.14	ug/L	8260C
Chloroethane	1.0	0.21	ug/L	8260C
Chloroform	1.0	0.17	ug/L	8260C
Chloromethane	1.0	0.28	ug/L	8260C
cis-1,2-Dichloroethene	1.0	0.24	ug/L	8260C
cis-1,3-Dichloropropene	1.0	0.19	ug/L	8260C
Dibromochloromethane	1.0	0.14	ug/L	8260C
Ethylbenzene	1.0	0.23	ug/L	8260C
Methyl tert-butyl ether	1.0	0.18	ug/L	8260C
Methylene Chloride	1.0	0.13	ug/L	8260C
Styrene	1.0	0.097	ug/L	8260C
Tetrachloroethene	1.0	0.15	ug/L	8260C
Toluene	1.0	0.15	ug/L	8260C
trans-1,2-Dichloroethene	1.0	0.17	ug/L	8260C
trans-1,3-Dichloropropene	1.0	0.15	ug/L	8260C
Trichloroethene	1.0	0.14	ug/L	8260C
Vinyl chloride	1.0	0.23	ug/L	8260C
Xylenes, Total	3.0	0.49	ug/L	8260C

Method: 300.0 - Anions, Ion Chromatography

Analyte	RL	MDL	Units	Method
Chloride	1.0	0.20	mg/L	300.0
Nitrate as N	0.10	0.0062	mg/L	300.0
Sulfate	1.0	0.21	mg/L	300.0

Method: 6020A - Metals (ICP/MS)

Analyte	RL	MDL	Units	Method
Calcium	100	2.8	ug/L	6020A

Method: 6020A - Metals (ICP/MS) (Continued)

Analyte	RL	MDL	Units	Method
Magnesium	100	1.2	ug/L	6020A
Potassium	100	5.8	ug/L	6020A
Sodium	100	3.8	ug/L	6020A

General Chemistry

Analyte	RL	MDL	Units	Method
Bicarbonate Alkalinity as CaCO3	5.0	0.41	mg/L	SM 2320B
Carbonate Alkalinity as CaCO3	5.0	0.41	mg/L	SM 2320B
Total Alkalinity as CaCO3 to pH 4.5	5.0	0.41	mg/L	SM 2320B

Surrogate Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	TOL	BFB	DBFM
Lab Sample ID	Client Sample ID	(64-135)	(71-118)	(70-118)	(70-128)
180-41935-1	HD-COD-SW-6-0/1-0	97	102	108	96
180-41935-2	HD-COD-SW-7-0/1-0	101	104	109	98
180-41935-3	HD-COD-SW-8-0/1-0	99	104	112	101
180-41935-4	HD-COD-SW-9-0/1-0	98	106	114	97
180-41935-5	HD-COD-SW-10-0/1-0	97	103	109	98
180-41935-6	HD-COD-SW-11-0/1-0	101	100	106	101
180-41935-7	HD-COD-SW-12-0/1-0	103	104	112	102
180-41935-8	HD-COD-SW-13-0/1-0	96	106	111	98
180-41935-9	HD-COD-SW-15-0/1-0	102	100	109	105
180-41935-10	HD-COD-SW-16-0/1-0	100	100	105	96
180-41935-11	HD-COD-SW-17-0/1-0	99	99	105	96
180-41935-11 MS	HD-COD-SW-17-0/1-0	97	110	100	94
180-41935-11 MSD	HD-COD-SW-17-0/1-0	105	105	105	99
180-41935-12	HD-COD-SW-20-0/1-0	103	103	112	100
180-41935-13	HD-COD-SW-26-0/1-0	104	99	108	107
180-41935-14	HD-COD-SW-27-0/1-0	101	100	112	103
180-41935-15	HD-COD-SW-28-0/1-0	97	104	113	99
180-41935-16	HD-COD-SW-29-0/1-0	103	104	111	103
180-41935-17	HD-QC1-0/1-1	104	103	112	102
180-41935-18	HD-QC1-0/1-2	99	104	110	97
LCS 180-135719/7	Lab Control Sample	103	104	104	102
LCS 180-135984/10	Lab Control Sample	88	92	89	85
MB 180-135719/4	Method Blank	94	102	109	94
MB 180-135984/4	Method Blank	104	101	108	106

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 180-135719/4
Matrix: Water
Analysis Batch: 135719

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/17/15 14:17	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/17/15 14:17	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/17/15 14:17	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 14:17	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/17/15 14:17	1
Acetone	5.0	U	5.0	2.5	ug/L			03/17/15 14:17	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/17/15 14:17	1
Methylene Chloride	0.225	J	1.0	0.13	ug/L			03/17/15 14:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/17/15 14:17	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/17/15 14:17	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/17/15 14:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/17/15 14:17	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/17/15 14:17	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/17/15 14:17	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/17/15 14:17	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/17/15 14:17	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/17/15 14:17	1
Benzene	1.0	U	1.0	0.11	ug/L			03/17/15 14:17	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/17/15 14:17	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/17/15 14:17	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/17/15 14:17	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/17/15 14:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/17/15 14:17	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/17/15 14:17	1
Toluene	1.0	U	1.0	0.15	ug/L			03/17/15 14:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/17/15 14:17	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 14:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/17/15 14:17	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/17/15 14:17	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/17/15 14:17	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/17/15 14:17	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/17/15 14:17	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/17/15 14:17	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/17/15 14:17	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/17/15 14:17	1
Styrene	1.0	U	1.0	0.097	ug/L			03/17/15 14:17	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/17/15 14:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/17/15 14:17	1
Acrylonitrile	20	U	20	0.55	ug/L			03/17/15 14:17	1
1,4-Dioxane	200	U	200	34	ug/L			03/17/15 14:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*64 - 135*		*03/17/15 14:17*	*1*
Toluene-d8 (Surr)	*102*		*71 - 118*		*03/17/15 14:17*	*1*
4-Bromofluorobenzene (Surr)	*109*		*70 - 118*		*03/17/15 14:17*	*1*
Dibromofluoromethane (Surr)	*94*		*70 - 128*		*03/17/15 14:17*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-135719/7
Matrix: Water
Analysis Batch: 135719

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	11.3		ug/L		113	50 - 139
Vinyl chloride	10.0	10.9		ug/L		109	53 - 138
Bromomethane	10.0	11.5		ug/L		115	33 - 150
Chloroethane	10.0	10.4		ug/L		104	36 - 142
1,1-Dichloroethene	10.0	10.0		ug/L		100	65 - 136
Acetone	20.0	21.5		ug/L		107	22 - 150
Carbon disulfide	10.0	9.58		ug/L		96	54 - 132
Methylene Chloride	10.0	9.66		ug/L		97	63 - 129
trans-1,2-Dichloroethene	10.0	10.2		ug/L		102	73 - 126
Methyl tert-butyl ether	10.0	10.2		ug/L		102	64 - 123
1,1-Dichloroethane	10.0	10.5		ug/L		105	73 - 126
cis-1,2-Dichloroethene	10.0	10.2		ug/L		102	70 - 120
Bromochloromethane	10.0	10.3		ug/L		103	70 - 127
2-Butanone (MEK)	20.0	19.0		ug/L		95	39 - 138
Chloroform	10.0	10.3		ug/L		103	72 - 127
1,1,1-Trichloroethane	10.0	10.3		ug/L		103	63 - 133
Carbon tetrachloride	10.0	9.87		ug/L		99	55 - 150
Benzene	10.0	10.6		ug/L		106	80 - 120
1,2-Dichloroethane	10.0	10.7		ug/L		107	68 - 132
Trichloroethene	10.0	10.4		ug/L		104	73 - 120
1,2-Dichloropropane	10.0	10.5		ug/L		105	76 - 124
Bromodichloromethane	10.0	10.4		ug/L		104	66 - 130
cis-1,3-Dichloropropene	10.0	10.1		ug/L		101	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	18.1		ug/L		90	45 - 145
Toluene	10.0	10.7		ug/L		107	80 - 123
trans-1,3-Dichloropropene	10.0	9.78		ug/L		98	65 - 125
1,1,2-Trichloroethane	10.0	10.5		ug/L		105	77 - 127
Tetrachloroethene	10.0	10.1		ug/L		101	70 - 135
2-Hexanone	20.0	15.6		ug/L		78	25 - 132
Dibromochloromethane	10.0	10.6		ug/L		106	60 - 140
1,2-Dibromoethane (EDB)	10.0	10.1		ug/L		101	74 - 123
Chlorobenzene	10.0	10.3		ug/L		103	80 - 120
1,1,1,2-Tetrachloroethane	10.0	10.4		ug/L		104	63 - 140
Ethylbenzene	10.0	10.5		ug/L		105	72 - 126
Xylenes, Total	20.0	21.0		ug/L		105	76 - 128
Styrene	10.0	10.6		ug/L		106	71 - 127
Bromoform	10.0	10.2		ug/L		102	46 - 150
1,1,2,2-Tetrachloroethane	10.0	10.4		ug/L		104	62 - 125
1,4-Dioxane	200	213		ug/L		107	10 - 160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*103*		*64 - 135*
Toluene-d8 (Surr)	*104*		*71 - 118*
4-Bromofluorobenzene (Surr)	*104*		*70 - 118*
Dibromofluoromethane (Surr)	*102*		*70 - 128*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-41935-11 MS
Matrix: Water
Analysis Batch: 135719

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	1.0	U	10.0	10.1		ug/L		101	50 - 139
Vinyl chloride	1.0	U	10.0	10.0		ug/L		100	53 - 138
Bromomethane	1.0	U	10.0	10.3		ug/L		103	33 - 150
Chloroethane	1.0	U	10.0	9.73		ug/L		97	36 - 142
1,1-Dichloroethene	1.0	U	10.0	8.78		ug/L		88	65 - 136
Acetone	2.9	J	20.0	22.9		ug/L		100	22 - 150
Carbon disulfide	1.0	U	10.0	8.19		ug/L		82	54 - 132
Methylene Chloride	1.0	U	10.0	8.13		ug/L		81	63 - 129
trans-1,2-Dichloroethene	1.0	U	10.0	8.88		ug/L		89	73 - 126
Methyl tert-butyl ether	1.0	U	10.0	8.95		ug/L		89	64 - 123
1,1-Dichloroethane	1.0	U	10.0	9.52		ug/L		95	73 - 126
cis-1,2-Dichloroethene	1.0		10.0	9.86		ug/L		88	70 - 120
Bromochloromethane	1.0	U	10.0	8.52		ug/L		85	70 - 127
2-Butanone (MEK)	5.0	U	20.0	17.2		ug/L		86	39 - 138
Chloroform	1.0	U	10.0	8.93		ug/L		89	72 - 127
1,1,1-Trichloroethane	1.0	U	10.0	9.06		ug/L		91	63 - 133
Carbon tetrachloride	1.0	U	10.0	8.93		ug/L		89	55 - 150
Benzene	1.0	U	10.0	9.26		ug/L		93	80 - 120
1,2-Dichloroethane	1.0	U	10.0	9.24		ug/L		92	68 - 132
Trichloroethene	1.0		10.0	9.91		ug/L		89	73 - 120
1,2-Dichloropropane	1.0	U	10.0	9.12		ug/L		91	76 - 124
Bromodichloromethane	1.0	U	10.0	8.75		ug/L		87	66 - 130
cis-1,3-Dichloropropene	1.0	U	10.0	8.41		ug/L		84	66 - 120
4-Methyl-2-pentanone (MIBK)	5.0	U	20.0	18.9		ug/L		94	45 - 145
Toluene	1.0	U	10.0	10.1		ug/L		101	80 - 123
trans-1,3-Dichloropropene	1.0	U	10.0	9.10		ug/L		91	65 - 125
1,1,2-Trichloroethane	1.0	U	10.0	9.58		ug/L		96	77 - 127
Tetrachloroethene	3.6		10.0	13.2		ug/L		95	70 - 135
2-Hexanone	5.0	U	20.0	15.1		ug/L		76	25 - 132
Dibromochloromethane	1.0	U	10.0	9.42		ug/L		94	60 - 140
1,2-Dibromoethane (EDB)	1.0	U	10.0	9.73		ug/L		97	74 - 123
Chlorobenzene	1.0	U	10.0	9.81		ug/L		98	80 - 120
1,1,1,2-Tetrachloroethane	1.0	U	10.0	9.70		ug/L		97	63 - 140
Ethylbenzene	1.0	U	10.0	9.64		ug/L		96	72 - 126
Xylenes, Total	3.0	U	20.0	19.1		ug/L		96	76 - 128
Styrene	1.0	U	10.0	9.60		ug/L		96	71 - 127
Bromoform	1.0	U	10.0	8.84		ug/L		88	46 - 150
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.53		ug/L		95	62 - 125
1,4-Dioxane	200	U	200	184	J	ug/L		92	10 - 160

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*64 - 135*
Toluene-d8 (Surr)	*110*		*71 - 118*
4-Bromofluorobenzene (Surr)	*100*		*70 - 118*
Dibromofluoromethane (Surr)	*94*		*70 - 128*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 180-41935-11 MSD
Matrix: Water
Analysis Batch: 135719

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloromethane	1.0	U	10.0	10.7		ug/L		107	50 - 139	6	35
Vinyl chloride	1.0	U	10.0	10.4		ug/L		104	53 - 138	3	35
Bromomethane	1.0	U	10.0	12.0		ug/L		120	33 - 150	15	35
Chloroethane	1.0	U	10.0	10.4		ug/L		104	36 - 142	7	35
1,1-Dichloroethene	1.0	U	10.0	9.30		ug/L		93	65 - 136	6	35
Acetone	2.9	J	20.0	23.7		ug/L		104	22 - 150	4	35
Carbon disulfide	1.0	U	10.0	8.59		ug/L		86	54 - 132	5	35
Methylene Chloride	1.0	U	10.0	8.77		ug/L		88	63 - 129	8	35
trans-1,2-Dichloroethene	1.0	U	10.0	9.70		ug/L		97	73 - 126	9	35
Methyl tert-butyl ether	1.0	U	10.0	9.83		ug/L		98	64 - 123	9	35
1,1-Dichloroethane	1.0	U	10.0	10.2		ug/L		102	73 - 126	7	35
cis-1,2-Dichloroethene	1.0		10.0	11.0		ug/L		100	70 - 120	11	35
Bromochloromethane	1.0	U	10.0	9.45		ug/L		94	70 - 127	10	35
2-Butanone (MEK)	5.0	U	20.0	19.4		ug/L		97	39 - 138	12	35
Chloroform	1.0	U	10.0	9.82		ug/L		98	72 - 127	9	35
1,1,1-Trichloroethane	1.0	U	10.0	9.71		ug/L		97	63 - 133	7	35
Carbon tetrachloride	1.0	U	10.0	9.34		ug/L		93	55 - 150	5	35
Benzene	1.0	U	10.0	10.1		ug/L		101	80 - 120	8	32
1,2-Dichloroethane	1.0	U	10.0	10.0		ug/L		100	68 - 132	8	32
Trichloroethene	1.0		10.0	10.6		ug/L		96	73 - 120	7	35
1,2-Dichloropropane	1.0	U	10.0	9.87		ug/L		99	76 - 124	8	34
Bromodichloromethane	1.0	U	10.0	9.37		ug/L		94	66 - 130	7	35
cis-1,3-Dichloropropene	1.0	U	10.0	9.44		ug/L		94	66 - 120	12	35
4-Methyl-2-pentanone (MIBK)	5.0	U	20.0	18.5		ug/L		93	45 - 145	2	35
Toluene	1.0	U	10.0	9.98		ug/L		100	80 - 123	2	35
trans-1,3-Dichloropropene	1.0	U	10.0	9.54		ug/L		95	65 - 125	5	35
1,1,2-Trichloroethane	1.0	U	10.0	9.96		ug/L		100	77 - 127	4	35
Tetrachloroethene	3.6		10.0	12.7		ug/L		91	70 - 135	4	35
2-Hexanone	5.0	U	20.0	15.8		ug/L		79	25 - 132	4	35
Dibromochloromethane	1.0	U	10.0	9.20		ug/L		92	60 - 140	2	35
1,2-Dibromoethane (EDB)	1.0	U	10.0	9.38		ug/L		94	74 - 123	4	35
Chlorobenzene	1.0	U	10.0	9.89		ug/L		99	80 - 120	1	29
1,1,1,2-Tetrachloroethane	1.0	U	10.0	9.13		ug/L		91	63 - 140	6	34
Ethylbenzene	1.0	U	10.0	9.81		ug/L		98	72 - 126	2	33
Xylenes, Total	3.0	U	20.0	19.5		ug/L		97	76 - 128	2	32
Styrene	1.0	U	10.0	9.80		ug/L		98	71 - 127	2	34
Bromoform	1.0	U	10.0	8.95		ug/L		90	46 - 150	1	35
1,1,2,2-Tetrachloroethane	1.0	U	10.0	9.78		ug/L		98	62 - 125	3	35
1,4-Dioxane	200	U	200	205		ug/L		103	10 - 160	11	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*64 - 135*
Toluene-d8 (Surr)	*105*		*71 - 118*
4-Bromofluorobenzene (Surr)	*105*		*70 - 118*
Dibromofluoromethane (Surr)	*99*		*70 - 128*

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 180-135984/4
Matrix: Water
Analysis Batch: 135984

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	1.0	U	1.0	0.28	ug/L			03/19/15 13:17	1
Vinyl chloride	1.0	U	1.0	0.23	ug/L			03/19/15 13:17	1
Bromomethane	1.0	U	1.0	0.31	ug/L			03/19/15 13:17	1
Chloroethane	1.0	U	1.0	0.21	ug/L			03/19/15 13:17	1
1,1-Dichloroethene	1.0	U	1.0	0.30	ug/L			03/19/15 13:17	1
Acetone	5.0	U	5.0	2.5	ug/L			03/19/15 13:17	1
Carbon disulfide	1.0	U	1.0	0.21	ug/L			03/19/15 13:17	1
Methylene Chloride	0.406	J	1.0	0.13	ug/L			03/19/15 13:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	0.17	ug/L			03/19/15 13:17	1
Methyl tert-butyl ether	1.0	U	1.0	0.18	ug/L			03/19/15 13:17	1
1,1-Dichloroethane	1.0	U	1.0	0.12	ug/L			03/19/15 13:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	0.24	ug/L			03/19/15 13:17	1
Bromochloromethane	1.0	U	1.0	0.18	ug/L			03/19/15 13:17	1
2-Butanone (MEK)	5.0	U	5.0	0.55	ug/L			03/19/15 13:17	1
Chloroform	1.0	U	1.0	0.17	ug/L			03/19/15 13:17	1
1,1,1-Trichloroethane	1.0	U	1.0	0.29	ug/L			03/19/15 13:17	1
Carbon tetrachloride	1.0	U	1.0	0.14	ug/L			03/19/15 13:17	1
Benzene	1.0	U	1.0	0.11	ug/L			03/19/15 13:17	1
1,2-Dichloroethane	1.0	U	1.0	0.21	ug/L			03/19/15 13:17	1
Trichloroethene	1.0	U	1.0	0.14	ug/L			03/19/15 13:17	1
1,2-Dichloropropane	1.0	U	1.0	0.095	ug/L			03/19/15 13:17	1
Bromodichloromethane	1.0	U	1.0	0.13	ug/L			03/19/15 13:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	0.19	ug/L			03/19/15 13:17	1
4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53	ug/L			03/19/15 13:17	1
Toluene	1.0	U	1.0	0.15	ug/L			03/19/15 13:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	0.15	ug/L			03/19/15 13:17	1
1,1,2-Trichloroethane	1.0	U	1.0	0.20	ug/L			03/19/15 13:17	1
Tetrachloroethene	1.0	U	1.0	0.15	ug/L			03/19/15 13:17	1
2-Hexanone	5.0	U	5.0	0.16	ug/L			03/19/15 13:17	1
Dibromochloromethane	1.0	U	1.0	0.14	ug/L			03/19/15 13:17	1
1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18	ug/L			03/19/15 13:17	1
Chlorobenzene	1.0	U	1.0	0.14	ug/L			03/19/15 13:17	1
1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28	ug/L			03/19/15 13:17	1
Ethylbenzene	1.0	U	1.0	0.23	ug/L			03/19/15 13:17	1
Xylenes, Total	3.0	U	3.0	0.49	ug/L			03/19/15 13:17	1
Styrene	1.0	U	1.0	0.097	ug/L			03/19/15 13:17	1
Bromoform	1.0	U	1.0	0.19	ug/L			03/19/15 13:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20	ug/L			03/19/15 13:17	1
Acrylonitrile	20	U	20	0.55	ug/L			03/19/15 13:17	1
1,4-Dioxane	200	U	200	34	ug/L			03/19/15 13:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*64 - 135*		*03/19/15 13:17*	*1*
Toluene-d8 (Surr)	*101*		*71 - 118*		*03/19/15 13:17*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 118*		*03/19/15 13:17*	*1*
Dibromofluoromethane (Surr)	*106*		*70 - 128*		*03/19/15 13:17*	*1*

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 180-135984/10
Matrix: Water
Analysis Batch: 135984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloromethane	10.0	8.56		ug/L		86	50 - 139
Vinyl chloride	10.0	9.32		ug/L		93	53 - 138
Bromomethane	10.0	8.40		ug/L		84	33 - 150
Chloroethane	10.0	9.06		ug/L		91	36 - 142
1,1-Dichloroethene	10.0	8.60		ug/L		86	65 - 136
Acetone	20.0	25.5		ug/L		127	22 - 150
Carbon disulfide	10.0	8.61		ug/L		86	54 - 132
Methylene Chloride	10.0	7.82		ug/L		78	63 - 129
trans-1,2-Dichloroethene	10.0	8.60		ug/L		86	73 - 126
Methyl tert-butyl ether	10.0	8.44		ug/L		84	64 - 123
1,1-Dichloroethane	10.0	8.82		ug/L		88	73 - 126
cis-1,2-Dichloroethene	10.0	8.70		ug/L		87	70 - 120
Bromochloromethane	10.0	8.03		ug/L		80	70 - 127
2-Butanone (MEK)	20.0	16.9		ug/L		85	39 - 138
Chloroform	10.0	8.66		ug/L		87	72 - 127
1,1,1-Trichloroethane	10.0	9.28		ug/L		93	63 - 133
Carbon tetrachloride	10.0	8.90		ug/L		89	55 - 150
Benzene	10.0	9.12		ug/L		91	80 - 120
1,2-Dichloroethane	10.0	8.86		ug/L		89	68 - 132
Trichloroethene	10.0	9.09		ug/L		91	73 - 120
1,2-Dichloropropane	10.0	8.70		ug/L		87	76 - 124
Bromodichloromethane	10.0	8.81		ug/L		88	66 - 130
cis-1,3-Dichloropropene	10.0	8.77		ug/L		88	66 - 120
4-Methyl-2-pentanone (MIBK)	20.0	17.7		ug/L		88	45 - 145
Toluene	10.0	9.82		ug/L		98	80 - 123
trans-1,3-Dichloropropene	10.0	8.19		ug/L		82	65 - 125
1,1,2-Trichloroethane	10.0	9.12		ug/L		91	77 - 127
Tetrachloroethene	10.0	9.28		ug/L		93	70 - 135
2-Hexanone	20.0	15.9		ug/L		80	25 - 132
Dibromochloromethane	10.0	9.62		ug/L		96	60 - 140
1,2-Dibromoethane (EDB)	10.0	9.29		ug/L		93	74 - 123
Chlorobenzene	10.0	9.62		ug/L		96	80 - 120
1,1,1,2-Tetrachloroethane	10.0	9.02		ug/L		90	63 - 140
Ethylbenzene	10.0	9.53		ug/L		95	72 - 126
Xylenes, Total	20.0	18.6		ug/L		93	76 - 128
Styrene	10.0	9.63		ug/L		96	71 - 127
Bromoform	10.0	8.78		ug/L		88	46 - 150
1,1,2,2-Tetrachloroethane	10.0	9.09		ug/L		91	62 - 125
1,4-Dioxane	200	175	J	ug/L		87	10 - 160

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*88*		*64 - 135*
Toluene-d8 (Surr)	*92*		*71 - 118*
4-Bromofluorobenzene (Surr)	*89*		*70 - 118*
Dibromofluoromethane (Surr)	*85*		*70 - 128*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 180-135268/33
Matrix: Water
Analysis Batch: 135268

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	0.10	U	0.10	0.0062	mg/L			03/11/15 19:47	1
Chloride	1.0	U	1.0	0.20	mg/L			03/11/15 19:47	1
Sulfate	1.0	U	1.0	0.21	mg/L			03/11/15 19:47	1

Lab Sample ID: LCS 180-135268/32
Matrix: Water
Analysis Batch: 135268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.44		mg/L		98	90 - 110
Chloride	50.0	47.4		mg/L		95	90 - 110
Sulfate	50.0	46.5		mg/L		93	90 - 110

Lab Sample ID: 180-41935-2 MS
Matrix: Water
Analysis Batch: 135268

Client Sample ID: HD-COD-SW-7-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.0		1.25	3.28		mg/L		100	80 - 120
Chloride	55		25.0	82.1		mg/L		107	80 - 120
Sulfate	13		25.0	36.0		mg/L		94	80 - 120

Lab Sample ID: 180-41935-2 MSD
Matrix: Water
Analysis Batch: 135268

Client Sample ID: HD-COD-SW-7-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.0		1.25	3.25		mg/L		98	80 - 120	1	20
Chloride	55		25.0	81.7		mg/L		105	80 - 120	0	20
Sulfate	13		25.0	35.9		mg/L		93	80 - 120	0	20

Lab Sample ID: 180-41935-11 MS
Matrix: Water
Analysis Batch: 135268

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.1		1.25	3.39		mg/L		106	80 - 120
Chloride	73		25.0	100	E	mg/L		110	80 - 120
Sulfate	12		25.0	35.5		mg/L		93	80 - 120

Lab Sample ID: 180-41935-11 MSD
Matrix: Water
Analysis Batch: 135268

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	2.1		1.25	3.36		mg/L		104	80 - 120	1	20
Chloride	73		25.0	99.0		mg/L		104	80 - 120	1	20
Sulfate	12		25.0	34.8		mg/L		91	80 - 120	2	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: 180-41935-11 MS
Matrix: Water
Analysis Batch: 136203

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA
Prep Batch: 135569

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	24000	B	50000	71300		ug/L		95	75 - 125
Potassium	4900		50000	49200		ug/L		89	75 - 125
Magnesium	5300		50000	47400		ug/L		84	75 - 125
Sodium	36000		50000	80100		ug/L		89	75 - 125

Lab Sample ID: 180-41935-11 MSD
Matrix: Water
Analysis Batch: 136203

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA
Prep Batch: 135569

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	24000	B	50000	73400		ug/L		100	75 - 125	3	20
Potassium	4900		50000	50600		ug/L		91	75 - 125	3	20
Magnesium	5300		50000	48500		ug/L		86	75 - 125	2	20
Sodium	36000		50000	81700		ug/L		92	75 - 125	2	20

Lab Sample ID: MB 180-135569/1-A
Matrix: Water
Analysis Batch: 136203

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 135569

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	3.89	J	100	2.8	ug/L		03/16/15 09:13	03/20/15 11:36	1
Potassium	100	U	100	5.8	ug/L		03/16/15 09:13	03/20/15 11:36	1
Magnesium	100	U	100	1.2	ug/L		03/16/15 09:13	03/20/15 11:36	1
Sodium	100	U	100	3.8	ug/L		03/16/15 09:13	03/20/15 11:36	1

Lab Sample ID: LCS 180-135569/2-A
Matrix: Water
Analysis Batch: 136203

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 135569

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	50000	45600		ug/L		91	80 - 120
Potassium	50000	45400		ug/L		91	80 - 120
Magnesium	50000	43800		ug/L		88	80 - 120
Sodium	50000	44100		ug/L		88	80 - 120

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 180-136070/2
Matrix: Water
Analysis Batch: 136070

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	2.06	J	5.0	0.41	mg/L			03/21/15 09:33	1
Bicarbonate Alkalinity as CaCO3	2.06	J	5.0	0.41	mg/L			03/21/15 09:33	1
Carbonate Alkalinity as CaCO3	5.0	U	5.0	0.41	mg/L			03/21/15 09:33	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 180-136070/1
Matrix: Water
Analysis Batch: 136070

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Alkalinity as CaCO3 to pH 4.5			250	253		mg/L		101	80 - 120		

Lab Sample ID: 180-41935-1 DU
Matrix: Water
Analysis Batch: 136070

Client Sample ID: HD-COD-SW-6-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	95	B		96.8		mg/L				2	20
Bicarbonate Alkalinity as CaCO3	95	B		96.8		mg/L				2	20
Carbonate Alkalinity as CaCO3	5.0	U		5.0	U	mg/L				NC	20

Lab Sample ID: 180-41935-11 DU
Matrix: Water
Analysis Batch: 136070

Client Sample ID: HD-COD-SW-17-0/1-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	76	B		76.2		mg/L				0	20
Bicarbonate Alkalinity as CaCO3	76	B		76.2		mg/L				0	20
Carbonate Alkalinity as CaCO3	5.0	U		5.0	U	mg/L				NC	20

GC/MS VOA

Analysis Batch: 135719

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-1	HD-COD-SW-6-0/1-0	Total/NA	Water	8260C	
180-41935-2	HD-COD-SW-7-0/1-0	Total/NA	Water	8260C	
180-41935-3	HD-COD-SW-8-0/1-0	Total/NA	Water	8260C	
180-41935-4	HD-COD-SW-9-0/1-0	Total/NA	Water	8260C	
180-41935-5	HD-COD-SW-10-0/1-0	Total/NA	Water	8260C	
180-41935-6	HD-COD-SW-11-0/1-0	Total/NA	Water	8260C	
180-41935-7	HD-COD-SW-12-0/1-0	Total/NA	Water	8260C	
180-41935-8	HD-COD-SW-13-0/1-0	Total/NA	Water	8260C	
180-41935-9	HD-COD-SW-15-0/1-0	Total/NA	Water	8260C	
180-41935-10	HD-COD-SW-16-0/1-0	Total/NA	Water	8260C	
180-41935-11	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C	
180-41935-11 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C	
180-41935-11 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	8260C	
180-41935-12	HD-COD-SW-20-0/1-0	Total/NA	Water	8260C	
180-41935-14	HD-COD-SW-27-0/1-0	Total/NA	Water	8260C	
180-41935-15	HD-COD-SW-28-0/1-0	Total/NA	Water	8260C	
180-41935-16	HD-COD-SW-29-0/1-0	Total/NA	Water	8260C	
180-41935-18	HD-QC1-0/1-2	Total/NA	Water	8260C	
LCS 180-135719/7	Lab Control Sample	Total/NA	Water	8260C	
MB 180-135719/4	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 135984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-13	HD-COD-SW-26-0/1-0	Total/NA	Water	8260C	
180-41935-17	HD-QC1-0/1-1	Total/NA	Water	8260C	
LCS 180-135984/10	Lab Control Sample	Total/NA	Water	8260C	
MB 180-135984/4	Method Blank	Total/NA	Water	8260C	

HPLC/IC

Analysis Batch: 135268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-1	HD-COD-SW-6-0/1-0	Total/NA	Water	300.0	
180-41935-1	HD-COD-SW-6-0/1-0	Total/NA	Water	300.0	
180-41935-2	HD-COD-SW-7-0/1-0	Total/NA	Water	300.0	
180-41935-2 MS	HD-COD-SW-7-0/1-0	Total/NA	Water	300.0	
180-41935-2 MSD	HD-COD-SW-7-0/1-0	Total/NA	Water	300.0	
180-41935-3	HD-COD-SW-8-0/1-0	Total/NA	Water	300.0	
180-41935-4	HD-COD-SW-9-0/1-0	Total/NA	Water	300.0	
180-41935-4	HD-COD-SW-9-0/1-0	Total/NA	Water	300.0	
180-41935-5	HD-COD-SW-10-0/1-0	Total/NA	Water	300.0	
180-41935-5	HD-COD-SW-10-0/1-0	Total/NA	Water	300.0	
180-41935-6	HD-COD-SW-11-0/1-0	Total/NA	Water	300.0	
180-41935-6	HD-COD-SW-11-0/1-0	Total/NA	Water	300.0	
180-41935-7	HD-COD-SW-12-0/1-0	Total/NA	Water	300.0	
180-41935-7	HD-COD-SW-12-0/1-0	Total/NA	Water	300.0	
180-41935-8	HD-COD-SW-13-0/1-0	Total/NA	Water	300.0	
180-41935-9	HD-COD-SW-15-0/1-0	Total/NA	Water	300.0	
180-41935-9	HD-COD-SW-15-0/1-0	Total/NA	Water	300.0	
180-41935-10	HD-COD-SW-16-0/1-0	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 135268 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-11	HD-COD-SW-17-0/1-0	Total/NA	Water	300.0	
180-41935-11 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	300.0	
180-41935-11 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	300.0	
180-41935-12	HD-COD-SW-20-0/1-0	Total/NA	Water	300.0	
180-41935-12	HD-COD-SW-20-0/1-0	Total/NA	Water	300.0	
180-41935-13	HD-COD-SW-26-0/1-0	Total/NA	Water	300.0	
180-41935-14	HD-COD-SW-27-0/1-0	Total/NA	Water	300.0	
180-41935-15	HD-COD-SW-28-0/1-0	Total/NA	Water	300.0	
180-41935-15	HD-COD-SW-28-0/1-0	Total/NA	Water	300.0	
180-41935-16	HD-COD-SW-29-0/1-0	Total/NA	Water	300.0	
180-41935-17	HD-QC1-0/1-1	Total/NA	Water	300.0	
180-41935-17	HD-QC1-0/1-1	Total/NA	Water	300.0	
LCS 180-135268/32	Lab Control Sample	Total/NA	Water	300.0	
MB 180-135268/33	Method Blank	Total/NA	Water	300.0	

Metals

Prep Batch: 135569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-1	HD-COD-SW-6-0/1-0	Total/NA	Water	3005A	
180-41935-2	HD-COD-SW-7-0/1-0	Total/NA	Water	3005A	
180-41935-3	HD-COD-SW-8-0/1-0	Total/NA	Water	3005A	
180-41935-4	HD-COD-SW-9-0/1-0	Total/NA	Water	3005A	
180-41935-5	HD-COD-SW-10-0/1-0	Total/NA	Water	3005A	
180-41935-6	HD-COD-SW-11-0/1-0	Total/NA	Water	3005A	
180-41935-7	HD-COD-SW-12-0/1-0	Total/NA	Water	3005A	
180-41935-8	HD-COD-SW-13-0/1-0	Total/NA	Water	3005A	
180-41935-9	HD-COD-SW-15-0/1-0	Total/NA	Water	3005A	
180-41935-10	HD-COD-SW-16-0/1-0	Total/NA	Water	3005A	
180-41935-11	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-41935-11 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-41935-11 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-41935-11 PDS	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-41935-11 SD	HD-COD-SW-17-0/1-0	Total/NA	Water	3005A	
180-41935-12	HD-COD-SW-20-0/1-0	Total/NA	Water	3005A	
180-41935-13	HD-COD-SW-26-0/1-0	Total/NA	Water	3005A	
180-41935-14	HD-COD-SW-27-0/1-0	Total/NA	Water	3005A	
180-41935-15	HD-COD-SW-28-0/1-0	Total/NA	Water	3005A	
180-41935-16	HD-COD-SW-29-0/1-0	Total/NA	Water	3005A	
180-41935-17	HD-QC1-0/1-1	Total/NA	Water	3005A	
LCS 180-135569/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
MB 180-135569/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 136203

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-1	HD-COD-SW-6-0/1-0	Total/NA	Water	6020A	135569
180-41935-2	HD-COD-SW-7-0/1-0	Total/NA	Water	6020A	135569
180-41935-3	HD-COD-SW-8-0/1-0	Total/NA	Water	6020A	135569
180-41935-4	HD-COD-SW-9-0/1-0	Total/NA	Water	6020A	135569
180-41935-5	HD-COD-SW-10-0/1-0	Total/NA	Water	6020A	135569

Metals (Continued)

Analysis Batch: 136203 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-6	HD-COD-SW-11-0/1-0	Total/NA	Water	6020A	135569
180-41935-7	HD-COD-SW-12-0/1-0	Total/NA	Water	6020A	135569
180-41935-8	HD-COD-SW-13-0/1-0	Total/NA	Water	6020A	135569
180-41935-9	HD-COD-SW-15-0/1-0	Total/NA	Water	6020A	135569
180-41935-10	HD-COD-SW-16-0/1-0	Total/NA	Water	6020A	135569
180-41935-11	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	135569
180-41935-11 MS	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	135569
180-41935-11 MSD	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	135569
180-41935-11 PDS	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	135569
180-41935-11 SD	HD-COD-SW-17-0/1-0	Total/NA	Water	6020A	135569
180-41935-12	HD-COD-SW-20-0/1-0	Total/NA	Water	6020A	135569
180-41935-13	HD-COD-SW-26-0/1-0	Total/NA	Water	6020A	135569
180-41935-14	HD-COD-SW-27-0/1-0	Total/NA	Water	6020A	135569
180-41935-15	HD-COD-SW-28-0/1-0	Total/NA	Water	6020A	135569
180-41935-16	HD-COD-SW-29-0/1-0	Total/NA	Water	6020A	135569
180-41935-17	HD-QC1-0/1-1	Total/NA	Water	6020A	135569
CRI 180-136203/66	DL		Water	6020A	
CRI 180-136203/7	DL		Water	6020A	
ICSA 180-136203/8	ICS		Water	6020A	
ICSAB 180-136203/9	ICS		Water	6020A	
LCS 180-135569/2-A	Lab Control Sample	Total Recoverable	Water	6020A	135569
MB 180-135569/1-A	Method Blank	Total Recoverable	Water	6020A	135569

General Chemistry

Analysis Batch: 136070

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-41935-1	HD-COD-SW-6-0/1-0	Total/NA	Water	SM 2320B	
180-41935-1 DU	HD-COD-SW-6-0/1-0	Total/NA	Water	SM 2320B	
180-41935-2	HD-COD-SW-7-0/1-0	Total/NA	Water	SM 2320B	
180-41935-3	HD-COD-SW-8-0/1-0	Total/NA	Water	SM 2320B	
180-41935-4	HD-COD-SW-9-0/1-0	Total/NA	Water	SM 2320B	
180-41935-5	HD-COD-SW-10-0/1-0	Total/NA	Water	SM 2320B	
180-41935-6	HD-COD-SW-11-0/1-0	Total/NA	Water	SM 2320B	
180-41935-7	HD-COD-SW-12-0/1-0	Total/NA	Water	SM 2320B	
180-41935-8	HD-COD-SW-13-0/1-0	Total/NA	Water	SM 2320B	
180-41935-9	HD-COD-SW-15-0/1-0	Total/NA	Water	SM 2320B	
180-41935-10	HD-COD-SW-16-0/1-0	Total/NA	Water	SM 2320B	
180-41935-11	HD-COD-SW-17-0/1-0	Total/NA	Water	SM 2320B	
180-41935-11 DU	HD-COD-SW-17-0/1-0	Total/NA	Water	SM 2320B	
180-41935-12	HD-COD-SW-20-0/1-0	Total/NA	Water	SM 2320B	
180-41935-13	HD-COD-SW-26-0/1-0	Total/NA	Water	SM 2320B	
180-41935-14	HD-COD-SW-27-0/1-0	Total/NA	Water	SM 2320B	
180-41935-15	HD-COD-SW-28-0/1-0	Total/NA	Water	SM 2320B	
180-41935-16	HD-COD-SW-29-0/1-0	Total/NA	Water	SM 2320B	
180-41935-17	HD-QC1-0/1-1	Total/NA	Water	SM 2320B	
LCS 180-136070/1	Lab Control Sample	Total/NA	Water	SM 2320B	
MB 180-136070/2	Method Blank	Total/NA	Water	SM 2320B	

Client Sample ID: HD-COD-SW-6-0/1-0

Lab Sample ID: 180-41935-1

Date Collected: 03/10/15 11:25

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 17:31	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 23:25	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/11/15 23:41	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 11:44	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-7-0/1-0

Lab Sample ID: 180-41935-2

Date Collected: 03/10/15 12:25

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 17:55	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 22:38	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 11:47	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-8-0/1-0

Lab Sample ID: 180-41935-3

Date Collected: 03/10/15 08:50

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 18:19	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 20:03	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 11:51	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-9-0/1-0

Lab Sample ID: 180-41935-4

Date Collected: 03/10/15 12:50

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 18:43	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 04:21	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		5	1 mL		135268	03/12/15 04:36	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 11:55	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-10-0/1-0

Lab Sample ID: 180-41935-5

Date Collected: 03/10/15 10:05

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 19:07	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 00:58	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/12/15 01:14	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 11:59	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-11-0/1-0

Lab Sample ID: 180-41935-6

Date Collected: 03/10/15 13:15

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 19:31	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 01:29	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/12/15 01:45	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:05	CNF	TAL PIT
	Instrument ID: M									

Client Sample ID: HD-COD-SW-11-0/1-0

Lab Sample ID: 180-41935-6

Date Collected: 03/10/15 13:15

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-12-0/1-0

Lab Sample ID: 180-41935-7

Date Collected: 03/10/15 13:40

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 19:55	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 02:01	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/12/15 02:16	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:09	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-13-0/1-0

Lab Sample ID: 180-41935-8

Date Collected: 03/10/15 10:15

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 20:19	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 04:05	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:13	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-15-0/1-0

Lab Sample ID: 180-41935-9

Date Collected: 03/10/15 14:00

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 20:44	DLF	TAL PIT
	Instrument ID: CHHP5									

Client Sample ID: HD-COD-SW-15-0/1-0

Lab Sample ID: 180-41935-9

Date Collected: 03/10/15 14:00

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 02:32	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/12/15 02:47	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:27	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-16-0/1-0

Lab Sample ID: 180-41935-10

Date Collected: 03/10/15 10:40

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 21:08	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 20:18	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:31	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-17-0/1-0

Lab Sample ID: 180-41935-11

Date Collected: 03/10/15 11:00

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 15:30	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 21:52	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:35	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-20-0/1-0

Lab Sample ID: 180-41935-12

Date Collected: 03/10/15 11:30

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 21:32	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 03:03	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/12/15 03:18	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:54	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-26-0/1-0

Lab Sample ID: 180-41935-13

Date Collected: 03/10/15 11:55

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135984	03/19/15 19:09	KLG	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 20:34	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 12:57	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-27-0/1-0

Lab Sample ID: 180-41935-14

Date Collected: 03/10/15 14:10

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 22:19	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 20:49	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 13:01	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-28-0/1-0

Lab Sample ID: 180-41935-15

Date Collected: 03/10/15 13:00

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 22:43	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/12/15 04:52	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		5	1 mL		135268	03/12/15 05:07	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 13:15	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-COD-SW-29-0/1-0

Lab Sample ID: 180-41935-16

Date Collected: 03/10/15 09:25

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 23:07	DLF	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 21:05	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 13:19	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: HD-QC1-0/1-1

Lab Sample ID: 180-41935-17

Date Collected: 03/10/15 08:00

Matrix: Water

Date Received: 03/11/15 08:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135984	03/19/15 19:33	KLG	TAL PIT
	Instrument ID: CHHP5									
Total/NA	Analysis	300.0		1	1 mL		135268	03/11/15 23:56	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Analysis	300.0		10	1 mL		135268	03/12/15 00:12	JMO	TAL PIT
	Instrument ID: CHIC25									
Total/NA	Prep	3005A			50 mL	50 mL	135569	03/16/15 09:13	AB1	TAL PIT
Total/NA	Analysis	6020A		1	50 mL	50 mL	136203	03/20/15 13:23	CNF	TAL PIT
	Instrument ID: M									
Total/NA	Analysis	SM 2320B		1	50 mL	50 mL	136070	03/21/15 09:33	CLL	TAL PIT
	Instrument ID: NOEQUIP									

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Client Sample ID: HD-QC1-0/1-2
Date Collected: 03/10/15 12:00
Date Received: 03/11/15 08:50

Lab Sample ID: 180-41935-18
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	5 mL	5 mL	135719	03/17/15 15:06	DLF	TAL PIT
	Instrument ID: CHHP5									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

AB1 = Ashwin Baikadi

Batch Type: Analysis

CLL = Cheryl Loheyde

CNF = Caitlin Ferguson

DLF = Donald Ferguson

JMO = John Oravec

KLG = Kathy Gordon

Certification Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Laboratory: TestAmerica Pittsburgh

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-15 *

* Certification renewal pending - certification considered valid.

Method Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
300.0	Anions, Ion Chromatography	MCAWW	TAL PIT
6020A	Metals (ICP/MS)	SW846	TAL PIT
SM 2320B	Alkalinity	SM	TAL PIT

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Sample Summary

Client: Groundwater Sciences Corporation
Project/Site: Harley Davidson

TestAmerica Job ID: 180-41935-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-41935-1	HD-COD-SW-6-0/1-0	Water	03/10/15 11:25	03/11/15 08:50
180-41935-2	HD-COD-SW-7-0/1-0	Water	03/10/15 12:25	03/11/15 08:50
180-41935-3	HD-COD-SW-8-0/1-0	Water	03/10/15 08:50	03/11/15 08:50
180-41935-4	HD-COD-SW-9-0/1-0	Water	03/10/15 12:50	03/11/15 08:50
180-41935-5	HD-COD-SW-10-0/1-0	Water	03/10/15 10:05	03/11/15 08:50
180-41935-6	HD-COD-SW-11-0/1-0	Water	03/10/15 13:15	03/11/15 08:50
180-41935-7	HD-COD-SW-12-0/1-0	Water	03/10/15 13:40	03/11/15 08:50
180-41935-8	HD-COD-SW-13-0/1-0	Water	03/10/15 10:15	03/11/15 08:50
180-41935-9	HD-COD-SW-15-0/1-0	Water	03/10/15 14:00	03/11/15 08:50
180-41935-10	HD-COD-SW-16-0/1-0	Water	03/10/15 10:40	03/11/15 08:50
180-41935-11	HD-COD-SW-17-0/1-0	Water	03/10/15 11:00	03/11/15 08:50
180-41935-12	HD-COD-SW-20-0/1-0	Water	03/10/15 11:30	03/11/15 08:50
180-41935-13	HD-COD-SW-26-0/1-0	Water	03/10/15 11:55	03/11/15 08:50
180-41935-14	HD-COD-SW-27-0/1-0	Water	03/10/15 14:10	03/11/15 08:50
180-41935-15	HD-COD-SW-28-0/1-0	Water	03/10/15 13:00	03/11/15 08:50
180-41935-16	HD-COD-SW-29-0/1-0	Water	03/10/15 09:25	03/11/15 08:50
180-41935-17	HD-QC1-0/1-1	Water	03/10/15 08:00	03/11/15 08:50
180-41935-18	HD-QC1-0/1-2	Water	03/10/15 12:00	03/11/15 08:50

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 135593

Lab Sample ID: IC 180-135593/4 Client Sample ID:

Date Analyzed: 03/16/15 12:41 Lab File ID: 50316004.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Bromomethane	2.25	Baseline	fergusond	03/17/15 09:42

Lab Sample ID: ICIS 180-135593/5 Client Sample ID:

Date Analyzed: 03/16/15 13:05 Lab File ID: 50316005.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.06	Peak Tail	fergusond	03/17/15 09:27

Lab Sample ID: IC 180-135593/6 Client Sample ID:

Date Analyzed: 03/16/15 13:29 Lab File ID: 50316006.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.95	Peak Tail	fergusond	03/17/15 09:45

Lab Sample ID: IC 180-135593/7 Client Sample ID:

Date Analyzed: 03/16/15 13:53 Lab File ID: 50316007.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Isobutyl alcohol	6.94	Peak Tail	fergusond	03/17/15 09:48

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 135593

Lab Sample ID: IC 180-135593/13 Client Sample ID:

Date Analyzed: 03/16/15 16:17 Lab File ID: 50316013.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloromethane	1.77	Poor chromatography	fergusond	03/17/15 10:01
Acrolein	3.25	Poor chromatography	fergusond	03/17/15 10:01
2-Hexanone	9.66	Poor chromatography	fergusond	03/17/15 10:01
trans-1,4-Dichloro-2-butene	11.74	Poor chromatography	fergusond	03/17/15 10:01

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 135719

Lab Sample ID: 180-41935-18 Client Sample ID: HD-QC1-0/1-2

Date Analyzed: 03/17/15 15:06 Lab File ID: 50317006.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.51	Split Peak	fergusond	03/17/15 16:05

Lab Sample ID: 180-41935-4 Client Sample ID: HD-COD-SW-9-0/1-0

Date Analyzed: 03/17/15 18:43 Lab File ID: 50317015.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	7.68	Split Peak	fergusond	03/18/15 10:21
Toluene	9.01	Split Peak	fergusond	03/18/15 10:21

Lab Sample ID: 180-41935-7 Client Sample ID: HD-COD-SW-12-0/1-0

Date Analyzed: 03/17/15 19:55 Lab File ID: 50317018.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.34	Split Peak	fergusond	03/18/15 10:25

Lab Sample ID: 180-41935-8 Client Sample ID: HD-COD-SW-13-0/1-0

Date Analyzed: 03/17/15 20:19 Lab File ID: 50317019.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toluene	9.00	Split Peak	fergusond	03/18/15 10:30

Lab Sample ID: 180-41935-10 Client Sample ID: HD-COD-SW-16-0/1-0

Date Analyzed: 03/17/15 21:08 Lab File ID: 50317021.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
cis-1,2-Dichloroethene	5.95	Split Peak	fergusond	03/18/15 10:33
Tetrachloroethene	9.54	Split Peak	fergusond	03/18/15 10:33

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 135719

Lab Sample ID: 180-41935-12 Client Sample ID: HD-COD-SW-20-0/1-0

Date Analyzed: 03/17/15 21:32 Lab File ID: 50317022.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	7.65	Split Peak	fergusond	03/18/15 10:35

Lab Sample ID: 180-41935-15 Client Sample ID: HD-COD-SW-28-0/1-0

Date Analyzed: 03/17/15 22:43 Lab File ID: 50317025.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.35	Poor chromatography	fergusond	03/18/15 11:21
Tetrachloroethene	9.52	Poor chromatography	fergusond	03/18/15 11:21

Lab Sample ID: 180-41935-16 Client Sample ID: HD-COD-SW-29-0/1-0

Date Analyzed: 03/17/15 23:07 Lab File ID: 50317026.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.49	Poor chromatography	fergusond	03/18/15 11:22

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Analysis Batch Number: 135984

Lab Sample ID: LCS 180-135984/10 Client Sample ID:

Date Analyzed: 03/19/15 15:55 Lab File ID: 50319010.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
1,4-Dioxane	8.06	Peak Tail	fergusond	03/19/15 16:17

Lab Sample ID: 180-41935-13 Client Sample ID: HD-COD-SW-26-0/1-0

Date Analyzed: 03/19/15 19:09 Lab File ID: 50319018.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Trichloroethene	7.69	Split Peak	fergusond	03/20/15 07:56

Lab Sample ID: 180-41935-17 Client Sample ID: HD-QC1-0/1-1

Date Analyzed: 03/19/15 19:33 Lab File ID: 50319019.D GC Column: DB-624 ID: 0.18(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloroform	6.36	Split Peak	fergusond	03/20/15 07:58

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Analysis Batch Number: 133669

Lab Sample ID: IC 180-133669/2 Client Sample ID:

Date Analyzed: 02/17/15 15:57 Lab File ID: 02-17A-201502.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.44	Baseline	hartmanm	02/17/15 17:10
Nitrite as N	3.93	Baseline	hartmanm	02/17/15 17:10
Bromide	4.77	Baseline	hartmanm	02/17/15 17:09
Nitrate as N	5.39	Baseline	hartmanm	02/17/15 17:09
Orthophosphate as P	6.87	Baseline	hartmanm	02/17/15 17:09
Sulfate	8.34	Baseline	hartmanm	02/17/15 17:09

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Analysis Batch Number: 135268

Lab Sample ID: CCB 180-135268/28 Client Sample ID:

Date Analyzed: 03/11/15 18:29 Lab File ID: 03-11-201528.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.53	Split Peak	oravecj	03/12/15 10:42

Lab Sample ID: MB 180-135268/33 Client Sample ID:

Date Analyzed: 03/11/15 19:47 Lab File ID: 03-11-201533.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.52	Instrument noise	oravecj	03/12/15 10:43

Lab Sample ID: CCB 180-135268/40 Client Sample ID:

Date Analyzed: 03/11/15 21:36 Lab File ID: 03-11-201540.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.45	Split Peak	oravecj	03/12/15 10:43

Lab Sample ID: CCB 180-135268/52 Client Sample ID:

Date Analyzed: 03/12/15 00:43 Lab File ID: 03-11-201552.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.46	Instrument noise	oravecj	03/12/15 10:44

Lab Sample ID: CCB 180-135268/64 Client Sample ID:

Date Analyzed: 03/12/15 03:50 Lab File ID: 03-11-201564.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.46	Instrument noise	oravecj	03/12/15 10:45

HPLC/IC MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Analysis Batch Number: 135268

Lab Sample ID: CCB 180-135268/71 Client Sample ID:

Date Analyzed: 03/12/15 05:38 Lab File ID: 03-11-201571.0000.d GC Column: AS-14 ID:

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Chloride	3.47	Instrument noise	oravecj	03/12/15 10:46

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
icccv_01188	03/12/15	03/11/15	DI Water, Lot 0	15 mL	ICPRIMARYSTA_00006	0.3 mL	Chloride	50 ug/mL
							Nitrate as N	2.5 ug/mL
							Sulfate	50 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Chloride	2500 ug/mL
							Nitrate as N	125 ug/mL
							Sulfate	2500 ug/mL
icicv_01221	03/12/15	03/11/15	DI Water, Lot NA	5 mL	ICSECONDSTD1_00005	0.6 mL	Chloride	60 ug/mL
							Nitrate as N	3 ug/mL
							Sulfate	60 ug/mL
.ICSECONDSTD1_00005	03/01/16	inorganic ventures, Lot J2-MEB568059			(Purchased Reagent)		Chloride	500 ug/mL
							Nitrate as N	25 ug/mL
							Sulfate	500 ug/mL
ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Chloride	2500 ug/mL
							Nitrate as N	125 ug/mL
							Sulfate	2500 ug/mL
ICSTDL2_00155	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00200	0.1 mL	Bromide	0.2 ug/mL
							Chloride	1 ug/mL
							Fluoride	0.05 ug/mL
							Nitrate as N	0.05 ug/mL
							Orthophosphate as P	0.05 ug/mL
							Sulfate	1 ug/mL
							Nitrite as N	0.05 ug/mL
.ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL3_00194	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL6_00200	0.5 mL	Bromide	1 ug/mL
							Chloride	5 ug/mL
							Fluoride	0.25 ug/mL
							Nitrate as N	0.25 ug/mL
							Orthophosphate as P	0.25 ug/mL
							Sulfate	5 ug/mL
							Nitrite as N	0.25 ug/mL
.ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL4_00131	02/18/15	02/17/15	DI Water, Lot na	5 mL	ICSTDL7_00131	0.5 mL	Bromide	2 ug/mL
							Chloride	10 ug/mL
							Fluoride	0.5 ug/mL
							Nitrate as N	0.5 ug/mL
							Orthophosphate as P	0.5 ug/mL
							Sulfate	10 ug/mL
							Nitrite as N	0.5 ug/mL
.ICSTDL7_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL5_00132	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICSTDL7_00131	1 mL	Bromide	4 ug/mL
							Chloride	20 ug/mL
							Fluoride	1 ug/mL
							Nitrate as N	1 ug/mL
							Orthophosphate as P	1 ug/mL
							Sulfate	20 ug/mL
							Nitrite as N	1 ug/mL
.ICSTDL7_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
..ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
..ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL6_00200	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.1 mL	Bromide	10 ug/mL
							Chloride	50 ug/mL
							Fluoride	2.5 ug/mL
							Nitrate as N	2.5 ug/mL
							Orthophosphate as P	2.5 ug/mL
							Sulfate	50 ug/mL
					ICPRIMARYSTDB_00008	0.1 mL	Nitrite as N	2.5 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
ICSTDL7_00131	02/18/15	02/17/15	DI Water, Lot SUPER Q	5 mL	ICPRIMARYSTA_00006	0.2 mL	Bromide	20 ug/mL
							Chloride	100 ug/mL
							Fluoride	5 ug/mL
							Nitrate as N	5 ug/mL
							Orthophosphate as P	5 ug/mL
							Sulfate	100 ug/mL
					ICPRIMARYSTDB_00008	0.2 mL	Nitrite as N	5 ug/mL
.ICPRIMARYSTA_00006	10/08/15	HIGH-PURITY STDS, Lot 1427624			(Purchased Reagent)		Bromide	500 ug/mL
							Chloride	2500 ug/mL
							Fluoride	125 ug/mL
							Nitrate as N	125 ug/mL
							Orthophosphate as P	125 ug/mL
							Sulfate	2500 ug/mL
.ICPRIMARYSTDB_00008	10/08/15	HIGH-PURITY STDS, Lot 1427626			(Purchased Reagent)		Nitrite as N	125 ug/mL
MCCV1X_00073	04/19/15	02/19/15	2% Nitric Acid, Lot 1241747	500 mL	MCALSPECAREV_00005	10 mL	Calcium	50 ppm
							Magnesium	50 ppm
							Potassium	50 ppm
							Sodium	50 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MCRIX_00062	04/05/15	03/05/15	HNO3, Lot 1191081	250 mL	MMSCRI-1B_00004	1 mL	Calcium	0.1 ppm
							Magnesium	0.1 ppm
							Potassium	0.1 ppm
							Sodium	0.1 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MMSCRI-1B_00004	10/01/15	Inorganic Ventures, Lot H2-MEB549023			(Purchased Reagent)		Calcium	25 ppm
							Magnesium	25 ppm
							Potassium	25 ppm
							Sodium	25 ppm
MICSABX_00068	04/12/15	03/12/15	2% Nitric Acid, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
					M6020ICS-0B_00006	1 mL	Ag	0.02 ppm
							As	0.02 ppm
							Cd	0.02 ppm
							Co	0.02 ppm
							Cr	0.02 ppm
							Cu	0.02 ppm
							Mn	0.0225 ppm
							Ni	0.02 ppm
							Zn	0.025 ppm
					MMSICSAB-1_00007	0.2 mL	Ba	0.02 ppm
							Be	0.02 ppm
							Pb	0.02 ppm
							Sr	0.025 ppm
							Tl	0.02 ppm
							V	0.02 ppm
					MMSICSAB-2_00006	0.2 mL	B	0.05 ppm
							Sb	0.02 ppm
							Se	0.05 ppm
							Si	0.5 ppm
							Sn	0.1 ppm
.M6020ICS-0A_00005	09/01/15	Inorganic Ventures, Lot G2-MEB476152MCA			(Purchased Reagent)		Al	1000 ppm
							Calcium	1000 ppm
							Fe	1000 ppm
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
.M6020ICS-0B_00006	09/01/15	Inorganic Ventures, Lot G2-MEB463151			(Purchased Reagent)		Ag	2 ppm
							As	2 ppm
							Cd	2 ppm
							Co	2 ppm
							Cr	2 ppm
							Cu	2 ppm
							Mn	2.25 ppm

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	2 ppm
							Zn	2.5 ppm
.MMSICSAB-1_00007	05/01/15	Inorganic Ventures, Lot F2-MEB524028			(Purchased Reagent)		Ba	10 ppm
							Be	10 ppm
							Pb	10 ppm
							Sr	12.5 ppm
							Tl	10 ppm
							V	10 ppm
.MMSICSAB-2_00006	05/01/15	Inorganic Ventures, Lot G2-MEB467043			(Purchased Reagent)		B	25 ppm
							Sb	10 ppm
							Se	25 ppm
							Si	250 ppm
							Sn	50 ppm
MICSAX_00064	04/12/15	03/12/15	DI Water, Lot J38N82	100 mL	M6020ICS-0A_00005	10 mL	Al	100 ppm
							Calcium	100 ppm
							Fe	100 ppm
							Magnesium	100 ppm
							Mo	2 ppm
							Potassium	100 ppm
							Sodium	100 ppm
							Ti	2 ppm
.M6020ICS-0A_00005	09/01/15	Inorganic Ventures, Lot G2-MEB476152MCA			(Purchased Reagent)		Al	1000 ppm
							Calcium	1000 ppm
							Fe	1000 ppm
							Magnesium	1000 ppm
							Mo	20 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
							Ti	20 ppm
MICVX_00030	04/05/15	03/05/15	2% Nitric Acid, Lot 25106	250 mg/L	MICPMSICV_00018	10 mg/L	Calcium	40 mg/L
							Magnesium	40 mg/L
							Potassium	40 mg/L
							Sodium	40 mg/L
.MICPMSICV_00018	11/30/15	SPEX CertiPrep, Lot 7-230WL			(Purchased Reagent)		Calcium	1000 ppm
							Magnesium	1000 ppm
							Potassium	1000 ppm
							Sodium	1000 ppm
MSTD2X_00042	04/19/15	02/19/15	DI Water, Lot 1241717	250 mL	MCALSPECAREV_00005	10 mg/L	Calcium	100 ppm
							Magnesium	100 ppm
							Potassium	100 ppm
							Sodium	100 ppm
.MCALSPECAREV_00005	05/01/15	Inorganic Ventures, Lot F2-MEB524026			(Purchased Reagent)		Calcium	2500 ppm
							Magnesium	2500 ppm
							Potassium	2500 ppm
							Sodium	2500 ppm
MTAPITTICPMS_00020	07/01/15	INORGANIC VENTURES, Lot H2-MEB532047			(Purchased Reagent)		Ag	5 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Al	200 ug/mL
							As	4 ug/mL
							B	100 ug/mL
							Ba	200 ug/mL
							Be	5 ug/mL
							Cd	5 ug/mL
							Co	50 ug/mL
							Cr	20 ug/mL
							Cu	25 ug/mL
							Fe	100 ug/mL
							Mn	50 ug/mL
							Ni	50 ug/mL
							Pb	2 ug/mL
							Se	1 ug/mL
							Sr	100 ug/mL
							Tl	5 ug/mL
							V	50 ug/mL
							Zn	50 ug/mL
MTAPITTMSA_00023	12/01/15		INORGANIC VENTURES, Lot H2-MEB532044		(Purchased Reagent)		Calcium	5000 ug/mL
							Magnesium	5000 ug/mL
							Potassium	5000 ug/mL
							Sodium	5000 ug/mL
MTAPITTMSC_00029	12/01/15		Inorganic Ventures, Lot H2-MEB532046		(Purchased Reagent)		Mo	100 ug/mL
							Sb	50 ug/mL
							Si	1000 ug/mL
							SiO2	2140 ug/mL
							Sn	200 ug/mL
							Ti	100 ug/mL
VOA8260INT_00030	04/10/15	03/10/15	Methanol, Lot 85233	10 mL	VOA8260INTRES_00091	1 mL	1,4-Dichlorobenzene-d4	25 ug/mL
							Chlorobenzene-d5	25 ug/mL
							Fluorobenzene (IS)	25 ug/mL
							TBA-d9 (IS)	500 ug/mL
.VOA8260INTRES_00091	07/31/19		Restek, Lot A0104742		(Purchased Reagent)		1,4-Dichlorobenzene-d4	250 ug/mL
							Chlorobenzene-d5	250 ug/mL
							Fluorobenzene (IS)	250 ug/mL
							TBA-d9 (IS)	5000 ug/mL
VOA8260SURR_00032	04/10/15	03/10/15	Methanol, Lot 85233	100 mL	VOA8260SURRES_00063	1 mL	1,2-Dichloroethane-d4 (Surr)	25 ug/mL
							4-Bromofluorobenzene (Surr)	25 ug/mL
							Dibromofluoromethane (Surr)	25 ug/mL
							Toluene-d8 (Surr)	25 ug/mL
.VOA8260SURRES_00063	01/31/19		Restek, Lot A0100424		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
VOA8260VOA2ND_00106	03/20/15	03/13/15	Methanol, Lot 85233	8 mL	VOA8260GAS2ND_00088	0.08 mL	Bromomethane	25 ug/mL
							Chloroethane	25 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Chloromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOA2ND_00103	1 mL	1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,4-Dioxane	500 ug/mL
							Acrylonitrile	250 ug/mL
							Benzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Ethylbenzene	25 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylene Chloride	25 ug/mL
							Styrene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							Trichloroethene	25 ug/mL
							Xylenes, Total	50 ug/mL
.VOA8260GAS2ND_00088	11/30/15		Restek, Lot A0108226		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOA2ND_00103	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA2_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,4-Dioxane	4000 ug/mL

REAGENT TRACEABILITY SUMMARY

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Dibromochloromethane	200 ug/mL
							Ethylbenzene	200 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylene Chloride	200 ug/mL
							Styrene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							Trichloroethene	200 ug/mL
							Xylenes, Total	400 ug/mL
..VOA8260MEGA2_00027	02/28/16		Restek, Lot A093733		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							Styrene	2000 ug/mL

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SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrachloroethene	2000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							Trichloroethene	2000 ug/mL
							Xylenes, Total	4000 ug/mL
VOA8260VOAPRI_00105	03/20/15	03/13/15	Methanol, Lot 85233	8 mL	VOA8260GAS1ST_00091	0.08 mL	Bromomethane	25 ug/mL
							Butadiene	25 ug/mL
							Chloroethane	25 ug/mL
							Chloromethane	25 ug/mL
							Dichlorodifluoromethane	25 ug/mL
							Dichlorofluoromethane	25 ug/mL
							Trichlorofluoromethane	25 ug/mL
							Vinyl chloride	25 ug/mL
					VOA8260VOAPRI_00101	1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
							1,1,1,2-Tetrachloroethane	25 ug/mL
							1,1,1-Trichloroethane	25 ug/mL
							1,1,2,2-Tetrachloroethane	25 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	25 ug/mL
							1,1,2-Trichloroethane	25 ug/mL
							1,1-Dichloroethane	25 ug/mL
							1,1-Dichloroethene	25 ug/mL
							1,1-Dichloropropene	25 ug/mL
							1,2,3-Trichlorobenzene	25 ug/mL
							1,2,3-Trichloropropane	25 ug/mL
							1,2,4-Trichlorobenzene	25 ug/mL
							1,2,4-Trimethylbenzene	25 ug/mL
							1,2-Dibromo-3-Chloropropane	25 ug/mL
							1,2-Dibromoethane (EDB)	25 ug/mL
							1,2-Dichlorobenzene	25 ug/mL
							1,2-Dichloroethane	25 ug/mL
							1,2-Dichloropropane	25 ug/mL
							1,3,5-Trimethylbenzene	25 ug/mL
							1,3-Dichlorobenzene	25 ug/mL
							1,3-Dichloropropane	25 ug/mL
							1,4-Dichlorobenzene	25 ug/mL
							1,4-Dioxane	500 ug/mL
							2,2-Dichloropropane	25 ug/mL
							2-Chlorotoluene	25 ug/mL
							2-Methyl-2-propanol	250 ug/mL
							3-Chloro-1-propene	25 ug/mL
							4-Chlorotoluene	25 ug/mL
							4-Isopropyltoluene	25 ug/mL
							Acrylonitrile	250 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Benzene	25 ug/mL
							Bromobenzene	25 ug/mL
							Bromochloromethane	25 ug/mL
							Bromodichloromethane	25 ug/mL
							Bromoform	25 ug/mL
							Carbon disulfide	25 ug/mL
							Carbon tetrachloride	25 ug/mL
							Chlorobenzene	25 ug/mL
							Chloroform	25 ug/mL
							cis-1,2-Dichloroethene	25 ug/mL
							cis-1,3-Dichloropropene	25 ug/mL
							Cyclohexane	25 ug/mL
							Dibromochloromethane	25 ug/mL
							Dibromomethane	25 ug/mL
							Ethyl ether	25 ug/mL
							Ethyl methacrylate	25 ug/mL
							Ethylbenzene	25 ug/mL
							Hexachlorobutadiene	25 ug/mL
							Hexane	25 ug/mL
							Iodomethane	25 ug/mL
							Isobutyl alcohol	625 ug/mL
							Isopropylbenzene	25 ug/mL
							m-Xylene & p-Xylene	25 ug/mL
							Methyl acetate	125 ug/mL
							Methyl tert-butyl ether	25 ug/mL
							Methylcyclohexane	25 ug/mL
							Methylene Chloride	25 ug/mL
							n-Butylbenzene	25 ug/mL
							n-Heptane	25 ug/mL
							N-Propylbenzene	25 ug/mL
							Naphthalene	25 ug/mL
							o-Xylene	25 ug/mL
							sec-Butylbenzene	25 ug/mL
							Styrene	25 ug/mL
							tert-Butylbenzene	25 ug/mL
							Tetrachloroethene	25 ug/mL
							Tetrahydrofuran	50 ug/mL
							Toluene	25 ug/mL
							trans-1,2-Dichloroethene	25 ug/mL
							trans-1,3-Dichloropropene	25 ug/mL
							trans-1,4-Dichloro-2-butene	25 ug/mL
							Trichloroethene	25 ug/mL
.VOA8260GAS1ST_00091	09/30/16		Restek, Lot A0108198		(Purchased Reagent)		Bromomethane	2500 ug/mL
							Butadiene	2500 ug/mL
							Chloroethane	2500 ug/mL
							Chloromethane	2500 ug/mL
							Dichlorodifluoromethane	2500 ug/mL
							Dichlorofluoromethane	2500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Trichlorofluoromethane	2500 ug/mL
							Vinyl chloride	2500 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260KET1ST_00036	0.2 mL	2-Butanone (MEK)	200 ug/mL
							2-Hexanone	200 ug/mL
							4-Methyl-2-pentanone (MIBK)	200 ug/mL
							Acetone	200 ug/mL
					VOA8260MEGA1_00027	1 mL	1,1,1,2-Tetrachloroethane	200 ug/mL
							1,1,1-Trichloroethane	200 ug/mL
							1,1,2,2-Tetrachloroethane	200 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	200 ug/mL
							1,1,2-Trichloroethane	200 ug/mL
							1,1-Dichloroethane	200 ug/mL
							1,1-Dichloroethene	200 ug/mL
							1,1-Dichloropropene	200 ug/mL
							1,2,3-Trichlorobenzene	200 ug/mL
							1,2,3-Trichloropropane	200 ug/mL
							1,2,4-Trichlorobenzene	200 ug/mL
							1,2,4-Trimethylbenzene	200 ug/mL
							1,2-Dibromo-3-Chloropropane	200 ug/mL
							1,2-Dibromoethane (EDB)	200 ug/mL
							1,2-Dichlorobenzene	200 ug/mL
							1,2-Dichloroethane	200 ug/mL
							1,2-Dichloropropane	200 ug/mL
							1,3,5-Trimethylbenzene	200 ug/mL
							1,3-Dichlorobenzene	200 ug/mL
							1,3-Dichloropropane	200 ug/mL
							1,4-Dichlorobenzene	200 ug/mL
							1,4-Dioxane	4000 ug/mL
							2,2-Dichloropropane	200 ug/mL
							2-Chlorotoluene	200 ug/mL
							2-Methyl-2-propanol	2000 ug/mL
							3-Chloro-1-propene	200 ug/mL
							4-Chlorotoluene	200 ug/mL
							4-Isopropyltoluene	200 ug/mL
							Acrylonitrile	2000 ug/mL
							Benzene	200 ug/mL
							Bromobenzene	200 ug/mL
							Bromochloromethane	200 ug/mL
							Bromodichloromethane	200 ug/mL
							Bromoform	200 ug/mL
							Carbon disulfide	200 ug/mL
							Carbon tetrachloride	200 ug/mL
							Chlorobenzene	200 ug/mL
							Chloroform	200 ug/mL
							cis-1,2-Dichloroethene	200 ug/mL
							cis-1,3-Dichloropropene	200 ug/mL
							Cyclohexane	200 ug/mL

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dibromochloromethane	200 ug/mL
							Dibromomethane	200 ug/mL
							Ethyl ether	200 ug/mL
							Ethyl methacrylate	200 ug/mL
							Ethylbenzene	200 ug/mL
							Hexachlorobutadiene	200 ug/mL
							Hexane	200 ug/mL
							Iodomethane	200 ug/mL
							Isobutyl alcohol	5000 ug/mL
							Isopropylbenzene	200 ug/mL
							m-Xylene & p-Xylene	200 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl tert-butyl ether	200 ug/mL
							Methylcyclohexane	200 ug/mL
							Methylene Chloride	200 ug/mL
							n-Butylbenzene	200 ug/mL
							n-Heptane	200 ug/mL
							N-Propylbenzene	200 ug/mL
							Naphthalene	200 ug/mL
							o-Xylene	200 ug/mL
							sec-Butylbenzene	200 ug/mL
							Styrene	200 ug/mL
							tert-Butylbenzene	200 ug/mL
							Tetrachloroethene	200 ug/mL
							Tetrahydrofuran	400 ug/mL
							Toluene	200 ug/mL
							trans-1,2-Dichloroethene	200 ug/mL
							trans-1,3-Dichloropropene	200 ug/mL
							trans-1,4-Dichloro-2-butene	200 ug/mL
							Trichloroethene	200 ug/mL
..VOA8260KET1ST_00036	02/28/16		Restek, Lot A093365		(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	2000 ug/mL
							1,1,1-Trichloroethane	2000 ug/mL
							1,1,2,2-Tetrachloroethane	2000 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	2000 ug/mL
							1,1,2-Trichloroethane	2000 ug/mL
							1,1-Dichloroethane	2000 ug/mL
							1,1-Dichloroethene	2000 ug/mL
							1,1-Dichloropropene	2000 ug/mL
							1,2,3-Trichlorobenzene	2000 ug/mL
							1,2,3-Trichloropropane	2000 ug/mL
							1,2,4-Trichlorobenzene	2000 ug/mL
							1,2,4-Trimethylbenzene	2000 ug/mL
							1,2-Dibromo-3-Chloropropane	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							1,2-Dibromoethane (EDB)	2000 ug/mL
							1,2-Dichlorobenzene	2000 ug/mL
							1,2-Dichloroethane	2000 ug/mL
							1,2-Dichloropropane	2000 ug/mL
							1,3,5-Trimethylbenzene	2000 ug/mL
							1,3-Dichlorobenzene	2000 ug/mL
							1,3-Dichloropropane	2000 ug/mL
							1,4-Dichlorobenzene	2000 ug/mL
							1,4-Dioxane	40000 ug/mL
							2,2-Dichloropropane	2000 ug/mL
							2-Chlorotoluene	2000 ug/mL
							2-Methyl-2-propanol	20000 ug/mL
							3-Chloro-1-propene	2000 ug/mL
							4-Chlorotoluene	2000 ug/mL
							4-Isopropyltoluene	2000 ug/mL
							Acrylonitrile	20000 ug/mL
							Benzene	2000 ug/mL
							Bromobenzene	2000 ug/mL
							Bromochloromethane	2000 ug/mL
							Bromodichloromethane	2000 ug/mL
							Bromoform	2000 ug/mL
							Carbon disulfide	2000 ug/mL
							Carbon tetrachloride	2000 ug/mL
							Chlorobenzene	2000 ug/mL
							Chloroform	2000 ug/mL
							cis-1,2-Dichloroethene	2000 ug/mL
							cis-1,3-Dichloropropene	2000 ug/mL
							Cyclohexane	2000 ug/mL
							Dibromochloromethane	2000 ug/mL
							Dibromomethane	2000 ug/mL
							Ethyl ether	2000 ug/mL
							Ethyl methacrylate	2000 ug/mL
							Ethylbenzene	2000 ug/mL
							Hexachlorobutadiene	2000 ug/mL
							Hexane	2000 ug/mL
							Iodomethane	2000 ug/mL
							Isobutyl alcohol	50000 ug/mL
							Isopropylbenzene	2000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methyl acetate	10000 ug/mL
							Methyl tert-butyl ether	2000 ug/mL
							Methylcyclohexane	2000 ug/mL
							Methylene Chloride	2000 ug/mL
							n-Butylbenzene	2000 ug/mL
							n-Heptane	2000 ug/mL
							N-Propylbenzene	2000 ug/mL
							Naphthalene	2000 ug/mL
							o-Xylene	2000 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							sec-Butylbenzene	2000 ug/mL
							Styrene	2000 ug/mL
							tert-Butylbenzene	2000 ug/mL
							Tetrachloroethene	2000 ug/mL
							Tetrahydrofuran	4000 ug/mL
							Toluene	2000 ug/mL
							trans-1,2-Dichloroethene	2000 ug/mL
							trans-1,3-Dichloropropene	2000 ug/mL
							trans-1,4-Dichloro-2-butene	2000 ug/mL
							Trichloroethene	2000 ug/mL
VOA8260VOAPRI_00105	03/20/15	03/13/15	Methanol, Lot 85233	8 mL	VOA8260VOAPRI_00101	1 mL	Xylenes, Total	50 ug/mL
.VOA8260VOAPRI_00101	03/24/15	02/24/15	Methanol, Lot 85233	10 mL	VOA8260MEGA1_00027	1 mL	Xylenes, Total	400 ug/mL
..VOA8260MEGA1_00027	02/28/16		Restek, Lot A093581		(Purchased Reagent)		Xylenes, Total	4000 ug/mL
VOAACRPRI_00003	03/31/15	03/03/15	Methanol, Lot 85233	100 mL	VOAACRORES_00064	0.125 mL	Acrolein	25 ug/mL
.VOAACRORES_00064	03/31/15		Restek, Lot A0107338		(Purchased Reagent)		Acrolein	20000 ug/mL
VOAVAPRI_00005	04/13/15	03/13/15	Methanol, Lot 85233	50 mL	VOA8260VARES_00050	0.25 mL	Vinyl acetate	25 ug/mL
.VOA8260VARES_00050	07/31/15		Restek, Lot A0108225		(Purchased Reagent)		Vinyl acetate	5000 ug/mL
voaWEEpri Res_00003	03/30/15	03/02/15	Methanol, Lot 85233	25 mL	VOARESEE1ST_00008	0.125 mL	1,2-dichloro-4-(trifluoromethyl)benzene	25 ug/mL
							2,3,6-Trichlorotoluene	25 ug/mL
							2,4,5-Trichlorotoluene	25 ug/mL
							2,4-Dichloro-1-(triflouromethyl)-benzene	25 ug/mL
							2,5-Dichlorobenzotrifluoride	25 ug/mL
							2-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorobenzotrifluoride	25 ug/mL
							3-Chlorotoluene	25 ug/mL
							4-Chlorobenzotrifluoride	25 ug/mL
.VOARESEE1ST_00008	02/28/15		Restek, Lot A097285		(Purchased Reagent)		1,2-dichloro-4-(trifluoromethyl)benzene	5000 ug/mL
							2,3,6-Trichlorotoluene	5000 ug/mL
							2,4,5-Trichlorotoluene	5000 ug/mL
							2,4-Dichloro-1-(triflouromethyl)-benzene	5000 ug/mL
							2,5-Dichlorobenzotrifluoride	5000 ug/mL
							2-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorobenzotrifluoride	5000 ug/mL
							3-Chlorotoluene	5000 ug/mL
							4-Chlorobenzotrifluoride	5000 ug/mL
voaWKet2 Rest_00002	04/16/15	03/16/15	Methanol, Lot 85233	50 mL	VOA8260KET2ND_00042	0.1 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET2ND_00042	01/31/18		Restek, Lot A0108157		(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
voaWKetpri Re_00003	03/26/15	02/24/15	Methanol, Lot 85233	50 mL	VOA8260KET1ST_00037	0.125 mL	2-Butanone (MEK)	25 ug/mL
							2-Hexanone	25 ug/mL
							4-Methyl-2-pentanone (MIBK)	25 ug/mL
							Acetone	25 ug/mL
.VOA8260KET1ST_00037	02/28/16	Restek, Lot A093365			(Purchased Reagent)		2-Butanone (MEK)	10000 ug/mL
							2-Hexanone	10000 ug/mL
							4-Methyl-2-pentanone (MIBK)	10000 ug/mL
							Acetone	10000 ug/mL
WALK125PPMCCV_00082	09/19/15	03/19/15	DI Water, Lot SUPERQ	1000 mL	WNa2CO3P_00007	0.125 g	Total Alkalinity as CaCO3 to pH 4.5	125 mg/L
.WNa2CO3P_00007	07/09/18	Fisher Scientific, Lot 138124			(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	1 g/g
WALK250PPMPi_00091	09/19/15	03/19/15	DI Water, Lot Super Q	1000 mL	WNa2CO3P_00007	0.25 g	Total Alkalinity as CaCO3 to pH 4.5	250 mg/L
.WNa2CO3P_00007	07/09/18	Fisher Scientific, Lot 138124			(Purchased Reagent)		Total Alkalinity as CaCO3 to pH 4.5	1 g/g

Reagent

ICPRIMARYSTA_00006

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Name:	IC Spike
Part Number:	**SM-606-005 Solution A**
Lot Number:	**1427624**
Matrix:	H_2O
Purity:	99.1+%

Certified Values:

Component	Certified Value (µg/mL)	NIST SRM ID	NIST SRM Lot #
Bromide	500 ± 5	3184	020701
Chloride	2500 ± 25	3182	060925
Fluoride	125.00 ± 1.25	3183	050721
NO_3 as N	125.00 ± 1.25	3185	050517
PO_4 as P	125.00 ± 1.25	3186	090723
Sulfate	2500 ± 25	3181	080603

The Certified values are based on gravimetric and volumetric preparation, and verified against SRM 3100 series developed by National Institute of Standards and Technology (NIST) via ion chromatography (IC) using an internal laboratory developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

Custom standard is generally prepared from single element standard solutions that are ISO Guide 34 certified reference materials. Highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by IC for conformity prior to use. The matrix is 18 megohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards**
The Calibration Standards are traceable to SRM 3100 Series Spectrometric Standard Solutions.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Preparation Date:	**October 3, 2014**
Shipped Date:	**October 8, 2014**
Expiration Date:	**October 8, 2015**
Certificate Issue Date:	**October 8, 2014**

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers,
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Reagent

ICPRIMARYSTDB_00008

HIGH-PURITY STANDARDS
www.highpuritystandards.com

P.O. Box 41727
Charleston, SC 29423
Phone (843) 767-7900
Fax (843) 767-7906

Certificate of Analysis

Product Description:

Name:	IC Spike	Source Material:	Sodium Nitrite
Part Number:	**SM-606-005 Solution B**	Material Purity:	100%
Lot Number:	**1427626**	Matrix:	H_2O

Certified Value:

NO_2 as N 125.00 µg/mL ± 1.25 µg/mL

The Certified value is based on gravimetric preparation and verified against a second source or independent lot via ion chromatography (IC) using an internal laboratory-developed method. The uncertainty in the certified value is calculated for a 95% confidence interval and coverage factor *k* is about 2.

Preparation Information:

The highest purity source materials were purchased from qualified vendors per ISO 9001:2008 guidelines and assayed by analytical methods for conformity prior to use. This standard was prepared using methods developed at NIST for the preparation of SRM Spectrometric Standard Solutions. The matrix is 18 megohm deionized water.

Traceability Information:

The traceability of this standard is maintained through an unbroken chain of comparisons to appropriate standards with suitable procedure and measurement uncertainties. The maintenance of the base and derived units of International System of Units (SI) with traceability of measurement results (contemporary metrology) to SI ensures their comparability over time as follows.

a. **Standard Weight and Analytical Balance**
The standard weights (NBS weights Inventory No 20231A) are calibrated every two years by South Carolina Metrology Laboratory that is a participant in "NIST Weights and Measures Measurement Assurance Program" with a certificate of measurement traceability to NIST primary standards.
The balances are calibrated yearly by the ISO 17025 accredited metrology service, and are verified weekly by an in-house method using standard weights.

b. **Volumetric Device**
The calibration of volumetric vessels is checked annually using the ASTM method E542.

c. **Thermometer**
The standard thermometers are calibrated every year by the ISO 17025 accredited metrology service. The thermometers used in-house are verified against the standard thermometers yearly.

d. **Calibration Standards:**
The Calibration Standard is traceable to a second source or independent lot.

Packaging and Storage Conditions:

The standard is packaged in a pre-cleaned polyethylene bottle. To maintain the integrity of this product, the solution should be kept tightly capped and stored under normal laboratory conditions.

Refer to Material Safety Datasheet (MSDS) for hazardous information.

High-Purity Standards is certified to ISO 9001:2008 and accredited to ISO/IEC 17025:2005 and ISO Guide 34:2009.

Expiration Information:

The expiry date is guaranteed to be valid for twelve months from the shipping date provided.

Preparation Date:	October 3, 2014
Shipped Date:	October 8, 2014
Expiration Date:	October 8, 2015
Certificate Issue Date:	October 8, 2014

Quality Information:

ISO/IEC 17025:2005 Accreditation
Certificate Number AT-1529

Angel Sellers,
Quality Manager

NOTICE: HPS products are intended for laboratory use only. All products should be handled and used by trained professional personnel. The responsibility for the safe handling and use of these products rests solely with the buyer and/or user. The data and information as stated was furnished by the manufacturer of the product. The information provided in this certificate pertains only to the lot number specified. None of the information provided in this certificate may be used, reproduced or transmitted in any form or by any means without written approval from High Purity Standards.

Reagent

ICSECONDSTD1_00005

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 • USA
inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 • 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution

Catalog Number: TA-17

Lot Number: J2-MEB568059

Matrix: H2O

Value / Analyte(s): 500 mg/L ea:
Chloride, Sulfate,
100 mg/L ea:
Bromide,
25 mg/L ea:
Fluoride, Nitrate_as_N, oPhosphate_as_P

Second Source: Whenever possible, this solution was manufactured from a second set of concentrates in our manufacturing facility.

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide	100.0 ± 0.6 mg/L	Chloride	500.1 ± 2.9 mg/L		
Fluoride	25.01 ± 0.13 mg/L	Nitrate as N	25.00 ± 0.14 mg/L		
o-Phosphate as P	25.00 ± 0.12 mg/L	Sulfate	500.1 ± 2.6 mg/L		

Certified Density: 0.999 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Bromide	IC Assay	3184	020701
Bromide	Volhard	999b	999b
Chloride	IC Assay	194	392607
Chloride	Volhard	999b	999b
Fluoride	Calculated		See Sec. 4.2
Fluoride	IC Assay	3183	050721
Nitrate_as_N	IC Assay	3185	050517
oPhosphate_as_P	IC Assay	3186	090723
Sulfate	Calculated		See Sec. 4.2
Sulfate	IC Assay	3181	080603

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = 2 [$\Sigma(s_i)^2$]$^{1/2}$ 2 = the coverage factor.

[$\Sigma(s_i)^2$]$^{1/2}$ = The square root of the sum of the squares of the most common errors (where's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM

- N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at 20 ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

February 18, 2015

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date EXPIRES: 1 MAR 2016

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Christy Shortridge
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

M6020ICS-0A_00005

INORGANIC VENTURES™

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CERTIFICATE OF ANALYSIS

1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 863.01

ACCREDITED Reference Material Producer Certificate 863.02

2.0 **DESCRIPTION OF CRM** **Stock Solution**

Catalog No.: 6020ICS-0A

Lot Number: **G2-MEB476152MCA**

Matrix: 1.4% HNO3(v/v)

10,000 µg/mL ea:
Chloride,

2,000 µg/mL ea:
C,

1,000 µg/mL ea:
Al, Ca, Fe, K, Mg, Na, P, S,

20 µg/mL ea:
Mo, Ti

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	1,002 ± 6 µg/mL	Calcium, Ca	1,002 ± 6 µg/mL	Carbon, C	2,004 ± 13 µg/mL
Chloride, Chloride	10,020.0 ± 50.0 µg/mL	Iron, Fe	1,002 ± 7 µg/mL	Magnesium, Mg	1,002 ± 4 µg/mL
Molybdenum, Mo	20.04 ± 0.14 µg/mL	Phosphorus, P	1,002 ± 7 µg/mL	Potassium, K	1,002 ± 4 µg/mL
Sodium, Na	1,002 ± 7 µg/mL	Sulfur, S	1,002 ± 5 µg/mL	Titanium, Ti	20.04 ± 0.13 µg/mL

Certified Density: 1.034 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\Sigma x_i}{n}$$

$$\text{Uncertainty } (\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)
· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.
- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
C	Gravimetric		See Sec. 4.2
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Chloride	Acidimetric	84L	84L
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	010728
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
S	Acidimetric	84k	84k
Ti	ICP Assay	3162a	060808

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL

Custom-Grade solutions are tested for trace metallic impurities by Axial ICP-OES and ICP-MS. The result from the most sensitive method for each element, is reported below. Solutions tested by ICP-MS were analyzed in an ULPA-Filtered Clean Room. An ULPA-Filter is 99.9985% efficient for the removal of particles down to 0.3 µm.

s	Al		M	Dy	< 0.000100	O	Li	0.002000	M	Pr	< 0.000100	M	Te	< 0.012007
M	Sb	< 0.000600	M	Er	< 0.000100	M	Lu	< 0.000100	M	Re	< 0.000100	M	Tb	< 0.000100
O	As	< 0.020000	M	Eu	< 0.000100	s	Mg		M	Rh	< 0.000100	M	Tl	< 0.000100
O	Ba	< 0.000200	M	Gd	< 0.000100	O	Mn	0.003000	M	Rb	< 0.020012	M	Th	< 0.000100
O	Be	< 0.000090	M	Ga	< 0.001001	O	Hg	< 0.005000	M	Ru	< 0.000100	M	Tm	< 0.000100
M	Bi	< 0.005003	O	Ge	< 0.015000	s	Mo		M	Sm	< 0.000100	M	Sn	< 0.003002
O	B	< 0.005000	M	Au	< 0.001001	M	Nd	< 0.000100	O	Sc	< 0.000700	s	Ti	
O	Cd	0.003400	M	Hf	< 0.002001	O	Ni	< 0.002000	M	Se	< 0.050029	O	W	< 0.007000
s	Ca		M	Ho	< 0.000100	M	Nb	< 0.002001	n	Si		M	U	< 0.000100
M	Ce	< 0.000500	M	In	< 0.001001	n	Os		M	Ag	< 0.001001	O	V	< 0.004000
M	Cs	< 0.001001	M	Ir	< 0.000100	M	Pd	< 0.003002	s	Na		M	Yb	< 0.000100
O	Cr	< 0.010000	s	Fe		s	P		O	Sr	0.005000	M	Y	< 0.000100
M	Co	< 0.001001	M	La	< 0.000200	M	Pt	< 0.000100	s	S		M	Zn	0.016610
O	Cu	< 0.020000	M	Pb	0.002001	s	K		M	Ta	< 0.001001	M	Zr	< 0.004002

M - Checked by ICP-MS O - Checked by ICP-OES i - Spectral Interference n - Not Checked For s - Solution Standard Element

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: July 12, 2013

Expiration Date: EXPIRES 01 SEP 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Zach Saunders
Product Documentation Technician

Zachary Saunders

Certificate Approved By: Allyson Guilliams
Quality Control Supervisor

Allyson Guilliams

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Paul R Gaines

Reagent

M6020ICS-0B_00006

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 DESCRIPTION OF CRM **Stock Solution**

Catalog No.: 6020ICS-0B

Lot Number: **G2-MEB463151**

Matrix: 3% HNO3(v/v)

2 µg/mL ea:
Ag, As, Cd, Co, Cr3, Cu, Mn, Ni, Zn

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Arsenic, As	2.000 ± 0.013 µg/mL	Cadmium, Cd	2.000 ± 0.013 µg/mL	Chromium+3, Cr3	2.000 ± 0.013 µg/mL
Cobalt, Co	2.000 ± 0.013 µg/mL	Copper, Cu	2.000 ± 0.013 µg/mL	Manganese, Mn	2.000 ± 0.013 µg/mL
Nickel, Ni	2.000 ± 0.013 µg/mL	Silver, Ag	2.000 ± 0.013 µg/mL	Zinc, Zn	2.000 ± 0.013 µg/mL

Certified Density: 1.012 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\Sigma x_i}{n}$$

$$\text{Uncertainty } (\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$$

($\bar{x}$) = mean
x_i = individual results
n = number of measurements
2 = the coverage factor.
$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked dally using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

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- SAI Global File Number 010105

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- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 25, 2013

Expiration Date: EXPIRES 01 SEP 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Zach Saunders
Product Documentation Technician

Certificate Approved By: Allyson Guilliams
Quality Control Supervisor

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Reagent

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CERTIFICATE OF ANALYSIS

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ACCREDITED Testing Laboratory Certificate 883.01

ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Custom Solution**

Catalog No.: TAPITT-CAL-SPECA-REV

Lot Number: **H2-MEB524026**

Matrix: 3% HNO3(v/v)

2,500 µg/mL ea:
Ca, K, Mg, Na,

1,250 µg/mL ea:
Fe,

25 µg/mL ea:
Al, Mn,

5 µg/mL ea:
Ag, As, Ba, Be, Cd, Co, Cr3, Cu, Ni,
Pb, Se, Sr, Tl, V, Zn

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	24.99 ± 0.18 µg/mL	Arsenic, As	4.998 ± 0.032 µg/mL	Barium, Ba	5.000 ± 0.032 µg/mL
Beryllium, Be	5.000 ± 0.028 µg/mL	Cadmium, Cd	4.998 ± 0.032 µg/mL	Calcium, Ca	2,500 ± 11 µg/mL
Chromium+3, Cr3	5.000 ± 0.028 µg/mL	Cobalt, Co	4.999 ± 0.032 µg/mL	Copper, Cu	4.999 ± 0.032 µg/mL
Iron, Fe	1,250 ± 6 µg/mL	Lead, Pb	4.998 ± 0.025 µg/mL	Magnesium, Mg	2,500 ± 16 µg/mL
Manganese, Mn	24.99 ± 0.17 µg/mL	Nickel, Ni	5.003 ± 0.028 µg/mL	Potassium, K	2,500 ± 11 µg/mL
Selenium, Se	5.002 ± 0.028 µg/mL	Silver, Ag	5.000 ± 0.036 µg/mL	Sodium, Na	2,499 ± 11 µg/mL
Strontium, Sr	5.000 ± 0.032 µg/mL	Thallium, Tl	5.000 ± 0.032 µg/mL	Vanadium, V	5.000 ± 0.032 µg/mL
Zinc, Zn	5.004 ± 0.032 µg/mL				

Certified Density: 1.051 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$

($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

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- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	ICP Assay	3113	00630
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715
Ni	ICP Assay	3136	000612
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	080123
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

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4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
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This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 **ISO 9001 Quality Management System Registration**
- SAI Global File Number 010105

10.2 **ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"**
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 **ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"**
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 **10CFR50 Appendix B - Nuclear Regulatory Commission**
- Domestic Licensing of Production and Utilization Facilities

10.5 **10CFR21 - Nuclear Regulatory Commission**
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: April 04, 2014

Expiration Date: EXPIRES 01 MAY 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Brenda Francis
Product Documentation Technician

Certificate Approved By: Brian Alexander
PhD., Technical Process Director

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Reagent

MICPMSICV_00018

Reference Materials Producer
Cert #2495.01

SPEXertificate®

Certificate of Reference Material

Chemical Testing
Cert #2495.02

Catalog Number: ZCAL-60-250 **Lot No.** 7-230WL

Description: Custom Claritas Standard

Matrix: 5% HNO_3 / Tr. Tart. Acid / Tr. HF

This **CLARITAS PPT®** Certified Reference Material, CRM, is intended primarily for use as a calibration standard or quality control standard for inorganic spectroscopic instrumentation such as ICP-OES, DCP, AA, ICP-MS, and XRF. It can be employed in USEPA, ASTM and other methods relevant to the certified properties listed below.

The CRM is prepared from high purity single element concentrates of individual elements using Class A laboratory ware to give precise concentrations.

Instrumental Analysis by ICP Spectrometer:

Analyte	Labeled	Uncertainty	SRM	Analyte	Labeled	Uncertainty	SRM
Ca	1000 µg/mL	±5 µg/mL	3109a*	Co	2 µg/mL	±0.01 µg/mL	3113*
K	1000 µg/mL	±5 µg/mL	3141a*	Cr	2 µg/mL	±0.01 µg/mL	3112a*
Mg	1000 µg/mL	±5 µg/mL	3131a*	Cu	2 µg/mL	±0.01 µg/mL	3114*
Na	1000 µg/mL	±5 µg/mL	3152a*	Mo	2 µg/mL	±0.01 µg/mL	3134*
Fe	500 µg/mL	±3 µg/mL	3126a*	Ni	2 µg/mL	±0.01 µg/mL	3136*
Si	100 µg/mL	±0.5 µg/mL	3150*	Pb	2 µg/mL	±0.01 µg/mL	3128*
Al	10 µg/mL	±0.05 µg/mL	3101a*	Sb	2 µg/mL	±0.01 µg/mL	3102a*
Mn	10 µg/mL	±0.05 µg/mL	3132*	Se	2 µg/mL	±0.01 µg/mL	3149*
Ag	2 µg/mL	±0.01 µg/mL	3151*	Sn	2 µg/mL	±0.01 µg/mL	3161a*
As	2 µg/mL	±0.01 µg/mL	3103a*	Sr	2 µg/mL	±0.01 µg/mL	3153a*
B	2 µg/mL	±0.01 µg/mL	3107*	Ti	2 µg/mL	±0.01 µg/mL	3162a*
Ba	2 µg/mL	±0.01 µg/mL	3104a*	Tl	2 µg/mL	±0.01 µg/mL	3158*
Be	2 µg/mL	±0.01 µg/mL	3105a*	V	2 µg/mL	±0.01 µg/mL	3165*
Cd	2 µg/mL	±0.01 µg/mL	3108*	Zn	2 µg/mL	±0.01 µg/mL	3168a*

* - indicates NIST SRM † - Indicates SPEX CertiPrep CRM (when NIST SRM is not available)

SPEX CertiPrep Reference Multi: Lot# ALL 8

Trace Metallic Impurities in the Actual Solution via ICP-MS Analysis:

Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L	Element	µg/L
Au	<0.4	Ga	<2	Ir	<0.1	Pd	<1	Sc	30	Tm	5
Bi	<1	Gd	4	La	5	Pr	5	Sm	<4	U	0.08
Ce	6	Ge	<8	Li	<4	Pt	<0.1	Ta	7	W	10
Cs	<0.08	Hf	0.7	Lu	4	Rb	30	Tb	5	Y	5
Dy	4	Hg	<0.6	Nb	5	Re	4	Te	<4	Yb	4
Er	<0.4	Ho	5	Nd	<3	Rh	<0.2	Th	4	Zr	7
Eu	<0.5	In	<0.2	P	<300	Ru	<2				

Balances are calibrated regularly with weight sets traceable to NIST#s 32856, 32867 and others. This CRM is guaranteed stable and accurate to ±0.5% of the labeled value. This includes uncertainty components due to preparation, measurement, homogeneity, short-term and long-term stability, as well as transpiration loss. This guarantee is valid for a period of one year from the date of certification only when the material is unopened and stored under ambient laboratory conditions.

Date of Certification: NOV 2014 Certifying Officer:

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Report of Certification

This Certified Reference Material (CRM) has been prepared and certified under an ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 quality system consistent with the following guides:

- ISO 9001: Quality management systems – Requirements – certified by UL-DQS
- ISO 17025: General requirements for the competence of testing and calibration laboratories – accredited by A2LA
- ISO Guide 34: General requirements for the competence of reference material producers – accredited by A2LA
- ISO Guide 31: Reference Materials – Contents of certificates and labels
- ISO Guide 35: Reference Materials – General & Statistical Principals for Certification
- Guide To The Expression Of Uncertainty In Measurement 1997
- EURACHEM/CITAC Guide: Quantifying Uncertainty in Analytical Measurement – Second Edition
- ASTM Guide D6362-98
- NIST Technical Note 1297
- ILAC-G12-2000: Guidelines for the requirements for the competence of reference materials producers
- ISO/REMCO N280

Material Source:
All analytes and matrix materials are obtained and verified by SPEX CertiPrep from pre-qualified vendors as per ISO 9001:2008, ISO 17025:2005, and ISO Guide 34:2009 guidelines. Vendor identifications are proprietary, however sources of all materials used in the preparation and testing of SPEX CertiPrep CRMs are tracked and documented. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Instructions for Use:
Primary usage of this CRM is in neat form or diluted serially with matrix of a purity at or greater than the purity of the original matrix solution. If dilution is required the diluent must be compatible with all certified analytes and contain stabilizers appropriate for the period of intended use. The CRM can also be used as a spike or with a spike, again with appropriate compatibility considerations. All solutions should be thoroughly mixed, by shaking, prior to use and never pipetted directly from the bottle. All surfaces that come in contact with the solution must be thoroughly cleaned and leached prior to use. Dilutions should be performed only with Class A volumetric glassware.

Method of Preparation:
Clean laboratory procedures and techniques have been used throughout the preparation. All materials, equipment, analytical instrumentation and personnel have been qualified prior to use. The highest purity acids applicable, 18 megohm, double deionized water, acid-leached triple-rinsed bottles (where appropriate), and Class A/calibrated volumetrics have been used in all preparations.

Homogeneity:
The homogeneity of the CRM has been confirmed by procedures consistent with ISO 17025:2005, ISO Guide 34:2009, and ASTM D6362-98 Appendix X2. Random, replicate samples of the final, packaged material have been analyzed to prove homogeneity in accordance with our internal procedure 4600-HOMOGEN-1A. Since the product is highly homogeneous, any sample size taken for analysis would be within the uncertainty budget. This is consistent with the intended use of the CRM.

Statistical Estimator and Confidence Limits:
The certified value 'X' listed on the reverse of this document is at the 95% level of confidence and can be expressed as:

- $X = x \pm U$ where X = certified value, U = expanded uncertainty, x = property value
- $U = ku_c$ where $k = 2$ is the coverage factor at the 95% confidence level
- u_c is obtained by combining the individual element standard uncertainty components u_i, and $u_c = \sqrt{\sum u_i^2}$

Certification Traveler Report:
All certified values reported were derived from the Traveler Report (SPEX CertiPrep's traceability documentation) identified by the lot number of this CRM. During the stated period of validity, the purchaser will be notified if this product is recalled due to any significant changes in the stability of the solution. For further assistance, please contact the Sales Support Department at crmsales@spexcsp.com.

Legal Notice:
SPEX CertiPrep reference materials are not for any cosmetic, drug or household application and are to be used only by qualified individuals who are trained in appropriate procedures. No claims against SPEX CertiPrep, Inc. of any kind whatsoever, whether based on breach of warranty, alleged negligence, or otherwise, with respect to this Reference Material shall be greater than the purchase price. In no event shall SPEX CertiPrep, Inc. be liable for any loss of profits or any incidental, special, or consequential damages.

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Reagent

MMSICSAB-1_00007

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CERTIFICATE OF ANALYSIS

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1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Custom Solution**

Catalog No.: TAPITT-MSICSAB-1

Lot Number: **H2-MEB524028**

Matrix: 3% HNO3(v/v)

10 µg/mL ea:

Ba, Be, Pb, Sr, Tl, V

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Barium, Ba	9.99 ± 0.06 µg/mL	Beryllium, Be	10.00 ± 0.06 µg/mL	Lead, Pb	10.01 ± 0.05 µg/mL
Strontium, Sr	10.00 ± 0.06 µg/mL	Thallium, Tl	10.00 ± 0.06 µg/mL	Vanadium, V	9.99 ± 0.06 µg/mL

Certified Density: 1.022 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

$$\text{Certified Value } (\bar{x}) = \frac{\Sigma x_i}{n}$$

$$\text{Uncertainty } (\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$$

$(\bar{x})$ = mean

x_i = individual results

n = number of measurements

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 **TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS**

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	993012
V	ICP Assay	3165	992706
V	EDTA	928	928

4.2 **BALANCE CALIBRATION** - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 **THERMOMETER CALIBRATION** - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 **GLASSWARE CALIBRATION** - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4ºC. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element: Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous.

Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
- Reference Materials Production - Accredited A2LA Certificate Number 883.02

10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

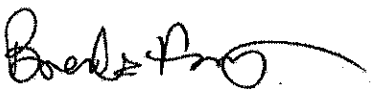
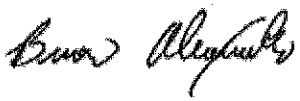
11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: April 04, 2014

Expiration Date: EXPIRES 01 MAY 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:	Brenda Francis Product Documentation Technician	
Certificate Approved By:	Brian Alexander PhD., Technical Process Director	
Certifying Officer:	Paul Gaines PhD., Senior Technical Director	

Reagent

MMSICSAB-2_00006

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CERTIFICATE OF ANALYSIS

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1.0 **INORGANIC VENTURES** is an ISO Guide 34 "General Requirements for the Competence of Reference Material Producers" and ISO 9001 registered manufacturer. Our manufacturing laboratory is accredited to ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories."

ACCREDITED Testing Laboratory Certificate 883.01 — ACCREDITED Reference Material Producer Certificate 883.02

2.0 **DESCRIPTION OF CRM** **Custom Solution**

Catalog No.: TAPITT-MSICSAB-2

Lot Number: **G2-MEB467043**

Matrix: 3% HNO3(v/v), tr. HF

250 µg/mL ea:
Si,

50 µg/mL ea:
Sn,

25 µg/mL ea:
B, Se,

10 µg/mL ea:
Sb

3.0 **CERTIFIED VALUES AND UNCERTAINTIES**

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Antimony, Sb	10.00 ± 0.06 µg/mL	Boron, B	24.98 ± 0.17 µg/mL	Selenium, Se	25.01 ± 0.21 µg/mL
Silicon, Si	249.9 ± 1.6 µg/mL	Tin, Sn	50.04 ± 0.36 µg/mL		

Certified Density: 1.018 g/mL (measured at 20 ± 1° C)

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$ 2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEBILITY TO NIST AND VALUES OBTAINED BY INDEPENDENT METHODS

· "Property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties." (ISO VIM, 2nd ed., 1993, definition 6.10)

· This product is Traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRMs are available, the term 'in-house std.' is specified.

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a NIST SRM/RM. See section 4.2 for balance traceability.

4.1 ASSAY INFORMATION

ELEMENT	METHOD	NIST SRM#	SRM LOT#
B	ICP Assay	3107	070514
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	992106
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330

4.2 BALANCE CALIBRATION - All analytical balances are calibrated yearly by an accredited calibration laboratory and are traceable to a class E 2 analytical weight set with NIST Traceability. All balances are checked daily using an in-house procedure. The weights used for testing are annually compared to master weights and are traceable to the National Institute of Standards and Technology (NIST).

4.3 THERMOMETER CALIBRATION - All thermometers are NIST traceable through thermometers that are calibrated by an A2LA accredited calibration laboratory.

4.4 GLASSWARE CALIBRATION - An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM's.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES IN µg/mL - N/A

6.0 INTENDED USE

For the calibration of analytical instruments including but not limited to the following:
HPLC, IC, TLC, ISE, IR, NMR, UV/VIS, MS, Capillary Electrophoresis, Potentiometry, Wet Chemistry and Voltammetry
For the validation of analytical methods
For the preparation of "working reference samples"
For interference studies and the determination of correction coefficients
For detection limit and linearity studies
For additional intended uses, contact Technical Staff

This CRM was manufactured using 18 megohm doubly deionized water that has been filtered through a 0.2 micron filter.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

Storage & Handling - Keep **Tightly** sealed when not in use. Store and use at 20 ± 4°C. **Do Not** pipette from the container. **Do Not** return portions removed from pipetting to container.

Element Specific Information - For specific information regarding any element; Contact technical staff.

Uranium Note: If uranium is present in this standard, it is natural abundance unless specified in Section 3.0.

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION - Please refer to the enclosed Material Safety Data sheet for information regarding this CRM.

9.0 HOMOGENEITY - This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Inorganic Ventures homogeneity data indicate that the end user should take a minimum sample size of 0.2mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration
- SAI Global File Number 010105

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration"
- Chemical Testing - Accredited A2LA Certificate Number 883.01

10.3 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"
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10.4 10CFR50 Appendix B - Nuclear Regulatory Commission
- Domestic Licensing of Production and Utilization Facilities

10.5 10CFR21 - Nuclear Regulatory Commission
- Reporting Defects and Non-Compliance

11.0 DATE OF CERTIFICATION AND PERIOD OF VALIDITY

11.1 Shelf Life - The period of time during which the concentration of the analyte(s) in a properly packaged, unopened, and unused standard stored under environmentally controlled and monitored conditions will remain within the specified uncertainty range. Shelf life is limited primarily by transpiration (loss of water from the solution) and infrequently, by chemical instability. Transpiration studies of chemically-stable solutions performed at the manufacturer's facility show a CRM shelf-life of twenty one months for solutions packaged in 125-mL low density polyethylene bottles. When stored under special conditions that minimize transpiration and instability, the shelf life can be extended past this limit.

11.2 Expiration Date - The date after which a CRM should not be used. Routine laboratory use of a CRM increases transpiration losses and the chance of contamination which affect the integrity of the CRM and limit its useful life. Manufacturer concurs with state and federal regulatory agencies' recommendations that solution standards be assigned a one-year expiration date.

11.3 Chemical Stability - Studies have been conducted on this or similar CRMs and it has been demonstrated that this CRM is chemically stable for a period of not less than two years provided the "Storage & Handling" conditions are followed that are described in section 7.0.

Certification Date: March 08, 2013

Expiration Date: EXPIRES 01 May 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By: Donna Senn
Product Documentation Technician

Certificate Approved By: Brian Alexander
PhD., Technical Process Director

Certifying Officer: Paul Gaines
PhD., Senior Technical Director

Reagent

MTAPITTICPMS_00020

1222800

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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

A2LA ACCREDITED Testing Laboratory Certificate 883.01 — A2LA ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Rec'd 6/17/14 RJR

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MS-ICPMS
Lot Number:	H2-MEB532047
Matrix:	0.7% (v/v) HNO3
Value / Analyte(s):	200 µg/mL ea: Al, Ba, 100 µg/mL ea: B, Fe, Sr, 50 µg/mL ea: Co, Mn, Ni, V, Zn, 25 µg/mL ea: Cu, 20 µg/mL ea: Cr3, 5 µg/mL ea: Ag, Be, Cd, Tl, 4 µg/mL ea: As, 2 µg/mL ea: Pb, 1 µg/mL ea: Se

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE	ELEMENT	CERTIFIED VALUE
Aluminum, Al	200.0 ± 1.0 µg/mL	Arsenic, As	4.002 ± 0.028 µg/mL	Barium, Ba	200.0 ± 1.0 µg/mL
Beryllium, Be	5.000 ± 0.029 µg/mL	Boron, B	100.0 ± 0.7 µg/mL	Cadmium, Cd	5.000 ± 0.024 µg/mL
Chromium+3, Cr3	20.00 ± 0.10 µg/mL	Cobalt, Co	50.02 ± 0.25 µg/mL	Copper, Cu	25.00 ± 0.17 µg/mL
Iron, Fe	100.0 ± 0.5 µg/mL	Lead, Pb	2.000 ± 0.010 µg/mL	Manganese, Mn	49.99 ± 0.22 µg/mL
Nickel, Ni	50.02 ± 0.24 µg/mL	Selenium, Se	1.001 ± 0.006 µg/mL	Silver, Ag	5.002 ± 0.032 µg/mL
Strontium, Sr	100.0 ± 0.6 µg/mL	Thallium, Tl	5.002 ± 0.033 µg/mL	Vanadium, V	50.00 ± 0.24 µg/mL
Zinc, Zn	50.02 ± 0.28 µg/mL				

Certified Density: 1.003 g/mL (measured at 20 ± 1 °C)

Assay Information:

ELEMENT	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	060502
Al	EDTA	928	928
As	Calculated		See Sec. 4.2
As	ICP Assay	3103a	100818
B	ICP Assay	3107	070514
Ba	Gravimetric		See Sec. 4.2
Ba	ICP Assay	3104a	070222
Be	Calculated		See Sec. 4.2
Be	ICP Assay	3105a	090514
Cd	ICP Assay	3108	080531
Cd	EDTA	928	928
Co	ICP Assay	3113	000630 Co
Co	EDTA	928	928
Cr3	Calculated		See Sec. 4.2
Cr3	ICP Assay	3112a	030730
Cu	ICP Assay	3114	011017
Cu	EDTA	928	928
Fe	ICP Assay	3126a	051031
Fe	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	ICP Assay	3153a	990906
Sr	EDTA	928	928
Tl	Calculated		See Sec. 4.2
Tl	ICP Assay	3168	993012
V	ICP Assay	3165	992706
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\Sigma x_i}{n}$

$(\bar{x})$ = mean
x_i = individual results
n = number of measurements

Uncertainty $(\pm) = 2\,[\,\Sigma(s_i)^2\,]^{1/2}$

2 = the coverage factor.

$[\,\Sigma(s_i)^2\,]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at 20 ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

Low Silver Note: This solution contains "LOW" levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirments for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 06, 2014

11.2 Expiration Date

EXPIRES
01/2015

11.3 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.2. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

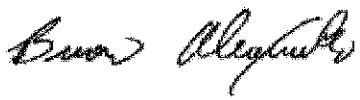
12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director



Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTAPITTMSA_00023

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INORGANIC VENTURES

300 Technology Drive
Christiansburg, VA 24073 · USA
inorganicventures.com

tel: 800.669.6799 · 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

rec. 11/13/14 SLB

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MS-A
Lot Number:	H2-MEB532044
Matrix:	3% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea: Ca, K, Mg, Na

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Calcium	5 000 ± 22 µg/mL	Magnesium	5 000 ± 23 µg/mL
Potassium	5 000 ± 22 µg/mL	Sodium	5 000 ± 22 µg/mL

Certified Density: 1.071 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ca	ICP Assay	3109a	050825
Ca	EDTA	928	928
K	Gravimetric		See Sec. 4.2
K	ICP Assay	3141a	051220
Mg	ICP Assay	3131a	050302
Mg	EDTA	928	928
Na	Gravimetric		See Sec. 4.2
Na	ICP Assay	3152a	120715

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean

x_i = individual results

n = number of measurements

Uncertainty (±) = $2\ [\ \Sigma(s_i)^2\ ]^{1/2}$ 2 = the coverage factor.

$[\ \Sigma(s_i)^2\ ]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

- N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at 20 ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date

EXPIRES
01 02 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

MTAPITTMSC_00029

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INORGANIC VENTURES™

300 Technology Drive
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inorganicventures.com

CERTIFICATE OF ANALYSIS

tel: 800.669.6799 540.585.3030
fax: 540.585.3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (SAI Global File Number (010105).

ACCREDITED Testing Laboratory Certificate 883.01 ACCREDITED Reference Material Producer Certificate 883.02

rec'd 11/3/14 SLB

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	TAPITT-MS-C
Lot Number:	H2-MEB532046
Matrix:	3% (v/v) HNO3 tr. HF
Value / Analyte(s):	1 000 µg/mL ea: Si, 200 µg/mL ea: Sn, 100 µg/mL ea: Mo, Ti, 50 µg/mL ea: Sb

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony	49.98 ± 0.38 µg/mL	Molybdenum	100.0 ± 0.5 µg/mL
Silicon	1 000 ± 7 µg/mL	Tin	200.0 ± 1.4 µg/mL
Titanium	100.0 ± 0.7 µg/mL		

Certified Density: 1.017 g/mL (measured at 20 ± 1 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	Calculated		See Sec. 4.2
Mo	ICP Assay	3134	891307
Sb	Calculated		See Sec. 4.2
Sb	ICP Assay	3102A	061229
Si	Calculated		See Sec. 4.2
Si	ICP Assay	3150	071204
Sn	Calculated		See Sec. 4.2
Sn	ICP Assay	3161a	070330
Tl	ICP Assay	3162a	060808

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Certified Value $(\bar{x}) = \frac{\sum x_i}{n}$ ($\bar{x}$) = mean
x_i = individual results
n = number of measurements

Uncertainty (±) = $2\ [\ \Sigma(s_i)^2\ ]^{1/2}$ 2 = the coverage factor.
$[\ \Sigma(s_i)^2\ ]^{1/2}$ = The square root of the sum of the squares of the most common errors (where 's' stands for the standard deviation) from instrumental measurement, density, NIST SRM uncertainty, weighing, dilution to volume, homogeneity, long term stability and short term stability.

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

- N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Keep tightly sealed when not in use. Store and use at 20 ± 4°C. Do not pipette from the container. Do not return removed aliquots to container.

- HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- SAI Global File Number 010105

10.4 ISO/IEC Guide 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO/IEC Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

11.0 CERTIFICATION, EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 05, 2014

11.2 Period of Validity

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is handled and stored in accordance with instructions given in Sec 7.0 and used prior to the date given in Sec 11.3. This certification is nullified if the CRM/RM is damaged, contaminated, or otherwise modified.

11.3 Expiration Date EXPIRES 01 DEC 2015

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Donna Senn
Product Documentation Technician

Certificate Approved By:

Brian Alexander
PhD., Technical Process Director

Certifying Officer:

Paul Gaines
PhD., Senior Technical Director

Reagent

VOA8260GAS1ST_00091

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CERTIFIED REFERENCE MATERIAL

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ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

Certificate of Analysis

ilac-MRA

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722 **Lot No.:** A0108198

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12) **CAS #** 75-71-8 (Lot Q167-08) **Purity** 99%	2,504.8 µg/mL	+/- 21.9788 µg/mL +/- 32.6918 µg/mL +/- 36.4326 µg/mL	Gravimetric Unstressed Stressed
2	Chloromethane (methyl chloride) **CAS #** 74-87-3 (Lot SHBC8470V) **Purity** 99%	2,509.8 µg/mL	+/- 19.6377 µg/mL +/- 31.2039 µg/mL +/- 35.1185 µg/mL	Gravimetric Unstressed Stressed
3	Vinyl chloride **CAS #** 75-01-4 (Lot 17542) **Purity** 99%	2,515.3 µg/mL	+/- 22.1368 µg/mL +/- 32.8734 µg/mL +/- 36.6254 µg/mL	Gravimetric Unstressed Stressed
4	1,3-Butadiene **CAS #** 106-99-0 (Lot SHBD5808V) **Purity** 99%	2,498.0 µg/mL	+/- 23.6713 µg/mL +/- 33.8065 µg/mL +/- 37.4176 µg/mL	Gravimetric Unstressed Stressed
5	Bromomethane (methyl bromide) **CAS #** 74-83-9 (Lot 101604) **Purity** 99%	2,503.7 µg/mL	+/- 30.8470 µg/mL +/- 39.2011 µg/mL +/- 42.3685 µg/mL	Gravimetric Unstressed Stressed
6	Chloroethane (ethyl chloride) **CAS #** 75-00-3 (Lot SHBD1717V) **Purity** 99%	2,507.7 µg/mL	+/- 21.9404 µg/mL +/- 32.6873 µg/mL +/- 36.4370 µg/mL	Gravimetric Unstressed Stressed
7	Dichlorofluoromethane (CFC-21) **CAS #** 75-43-4 (Lot Q9B-58) **Purity** 99%	2,500.7 µg/mL	+/- 26.0039 µg/mL +/- 35.4965 µg/mL +/- 38.9583 µg/mL	Gravimetric Unstressed Stressed

8	Trichlorofluoromethane (CFC-11)		2,501.9	µg/mL	+/-	21.5914	µg/mL	Gravimetric
	CAS # 75-69-4	(Lot SHBD5121V)			+/-	32.4119	µg/mL	Unstressed
	Purity 99%				+/-	36.1734	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

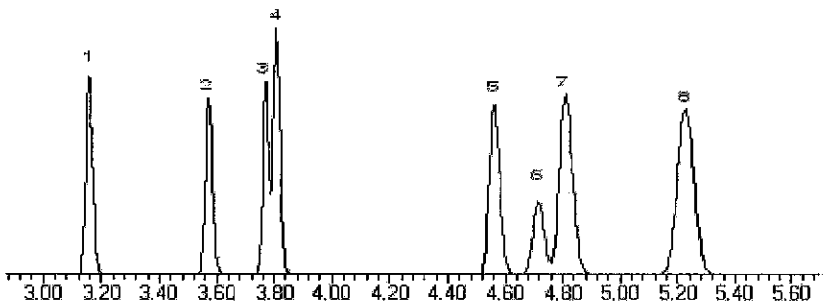
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Kendra Swope - Mix Technician

Date Mixed: 08-Jan-2015 **Balance:** 1125113331

Jennifer L. Pollino - QC Analyst

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008 Registered Quality System Certificate #FM 80397

Reagent

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CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569722.sec **Lot No.:** A0108226

Description : 8260 List 1 / Std #3 Gases (2015)

8260 List 1 / Std #3 Gases (2015) 2,000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,494.8 µg/mL	+/- 23.5521	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 19630)		+/- 33.7009	µg/mL	Unstressed
	Purity 99%		+/- 37.3133	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,505.6 µg/mL	+/- 26.4745	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 35.8743	µg/mL	Unstressed
	Purity 99%		+/- 39.3156	µg/mL	Stressed
3	Vinyl chloride	2,499.8 µg/mL	+/- 25.3054	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 34.9816	µg/mL	Unstressed
	Purity 99%		+/- 38.4872	µg/mL	Stressed
4	1,3-Butadiene	2,505.4 µg/mL	+/- 23.1450	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 18349)		+/- 33.4914	µg/mL	Unstressed
	Purity 99%		+/- 37.1536	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,495.4 µg/mL	+/- 25.3762	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot Q119-46)		+/- 35.0038	µg/mL	Unstressed
	Purity 99%		+/- 38.4957	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,499.5 µg/mL	+/- 21.8687	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot Q18B-13)		+/- 32.5806	µg/mL	Unstressed
	Purity 99%		+/- 36.3180	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,511.0 µg/mL	+/- 21.9690	µg/mL	Gravimetric
	CAS # 75-43-4.SEC (Lot SHBC0858V)		+/- 32.7299	µg/mL	Unstressed
	Purity 99%		+/- 36.4846	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,504.4	µg/mL	+/-	25.2390	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot Q158-102)			+/-	34.9647	µg/mL	Unstressed
	Purity 99%				+/-	38.4843	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

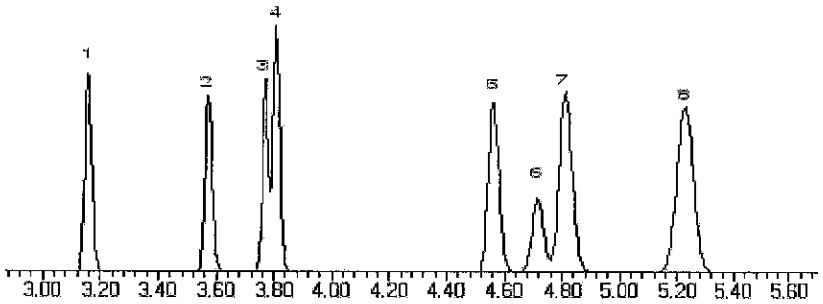
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



This chromatogram represents a general set of testing conditions chosen for product acceptance. For optimal results in your lab, conditions should be adjusted for your specific instrument, method, and application.

Michael J Maye

Date Mixed: 12-Jan-2015 **Balance:** 1127510105

Jennifer L Pollino

Jennifer L. Pollino - QC Analyst

Date Passed: 14-Jan-2015

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

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RESTEK® CERTIFIED REFERENCE MATERIAL

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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567649 **Lot No.:** A0104742

Description : 8260 Internal Standard

8260 Internal Standard 250-5,000 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : July 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	tert-Butyl-d9-alcohol **CAS #** 25725-11-5 (Lot I201P5) **Purity** 99%	5,003.0 µg/mL	+/- 29.0879 µg/mL +/- 106.1005 µg/mL +/- 106.5713 µg/mL	Gravimetric Unstressed Stressed
2	Fluorobenzene **CAS #** 462-06-6 (Lot 1380033) **Purity** 99%	250.8 µg/mL	+/- 1.4795 µg/mL +/- 5.3247 µg/mL +/- 5.3483 µg/mL	Gravimetric Unstressed Stressed
3	1,4-Dioxane-d8 **CAS #** 17647-74-4 (Lot 11C-596) **Purity** 99%	5,009.6 µg/mL	+/- 29.1262 µg/mL +/- 106.2405 µg/mL +/- 106.7119 µg/mL	Gravimetric Unstressed Stressed
4	Chlorobenzene-d5 **CAS #** 3114-55-4 (Lot PR-22736) **Purity** 99%	250.8 µg/mL	+/- 1.4795 µg/mL +/- 5.3247 µg/mL +/- 5.3483 µg/mL	Gravimetric Unstressed Stressed
5	1,4-Dichlorobenzene-d4 **CAS #** 3855-82-1 (Lot PR-18488) **Purity** 99%	250.8 µg/mL	+/- 1.4795 µg/mL +/- 5.3247 µg/mL +/- 5.3483 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VOA8260KET1ST_00036

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567642 **Lot No.:** A093365

Description : 8260 List 1 / Std #2 Ketones

8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 2016 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260KET1ST_00037

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567642 **Lot No.:** A093365

Description : 8260 List 1 / Std #2 Ketones

8260 List 1 / Std #2 Ketones 10,000 ug/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 2016 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acetone	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 67-64-1		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed
2	2-Butanone (MEK)	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 78-93-3		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 108-10-1		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed
4	2-Hexanone	10,000.0 µg/mL	+/- 58.1378	µg/mL	Gravimetric
	CAS # 591-78-6		+/- 798.6896	µg/mL	Unstressed
	Purity 99%		+/- 799.0807	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260KET2ND_00042

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Catalog No. : 569721.SEC **Lot No.:** A0108157

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500 µg/ml, P&T Methanol/Water (90:10), 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : January 31, 2018 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)		Expanded Uncertainty (95% C.L.; K=2)			
1	Acetone		12,504.0	µg/mL	+/- 73.2137	µg/mL	Gravimetric
	CAS # 67-64-1.SEC	(Lot 0902033)			+/- 665.4917	µg/mL	Unstressed
	Purity 99%				+/- 666.2255	µg/mL	Stressed
2	2-Butanone (MEK)		12,506.0	µg/mL	+/- 73.2254	µg/mL	Gravimetric
	CAS # 78-93-3.SEC	(Lot VEGGI)			+/- 665.5981	µg/mL	Unstressed
	Purity 99%				+/- 666.3320	µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)		12,537.3	µg/mL	+/- 73.4088	µg/mL	Gravimetric
	CAS # 108-10-1.SEC	(Lot E29T040)			+/- 667.2658	µg/mL	Unstressed
	Purity 99%				+/- 668.0015	µg/mL	Stressed
4	2-Hexanone		12,508.7	µg/mL	+/- 73.2410	µg/mL	Gravimetric
	CAS # 591-78-6.SEC	(Lot ZSVCD-FF)			+/- 665.7401	µg/mL	Unstressed
	Purity 99%				+/- 666.4741	µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

Reagent

VOA8260MEGA1_00027

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FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567641 **Lot No.:** A093581

Description : 8260 List 1 / Std #1 MegaMix

8260 List 1 / Std #1 MegaMix 1000-50,000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 2016 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 **Purity** 97%	1,999.9 µg/mL	+/- 11.6279 +/- 44.2519 +/- 44.4323	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
3	1,1-dichloroethene **CAS #** 75-35-4 **Purity** 98%	2,000.0 µg/mL	+/- 11.6281 +/- 44.2527 +/- 44.4331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 **Purity** 99%	20,000.0 µg/mL	+/- 116.2756 +/- 442.5291 +/- 444.3332	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 -/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
6	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 **Purity** 98%	2,000.0 µg/mL	+/- 11.6281 +/- 44.2527 +/- 44.4331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
7	Methyl acetate **CAS #** 79-20-9 **Purity** 99%	10,000.0 µg/mL	+/- 58.1378 +/- 221.2646 +/- 222.1666	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
8	Carbon disulfide **CAS #** 75-15-0 **Purity** 98%	2,000.0 µg/mL	+/- 11.6281 +/- 44.2527 +/- 44.4331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
9	Methylene chloride (dichloromethane) **CAS #** 75-09-2 **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

10	Acrylonitrile	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 107-13-1			+/-	442.5291	µg/mL	Unstressed
	Purity 99%			+/-	444.3332	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 1634-04-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
12	cis-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-59-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
13	n-Hexane (C6)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 110-54-3			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
14	1,1-Dichloroethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 75-34-3			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
15	2,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 594-20-7			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
16	trans-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-60-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
17	chloroform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 67-66-3			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
	CAS # 78-83-1			+/-	1,106.3228	µg/mL	Unstressed
	Purity 99%			+/-	1,110.8331	µg/mL	Stressed
19	Bromochloromethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-97-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
20	Tetrahydrofuran	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
	CAS # 109-99-9			+/-	88.5061	µg/mL	Unstressed
	Purity 99%			+/-	88.8670	µg/mL	Stressed
21	1,1,1-trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-55-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
22	Cyclohexane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-82-7			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
23	1,1-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 563-58-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
24	carbon tetrachloride	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 56-23-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
25	n-Heptane (C7)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 142-82-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
26	Benzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-43-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
27	1,2-Dichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 107-06-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
28	Trichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-01-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

29	Methylcyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-87-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
30	1,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 78-87-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
31	1,4-Dioxane	40,000.0	µg/mL	+/-	232.5513	µg/mL	Gravimetric
	CAS # 123-91-1			+/-	885.0582	µg/mL	Unstressed
	Purity 99%			+/-	888.6665	µg/mL	Stressed
32	Dibromomethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-95-3			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
33	bromodichloromethane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 75-27-4			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
34	cis-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 10061-01-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
35	Toluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-88-3			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
36	Ethyl methacrylate	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 97-63-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
37	trans-1,3-Dichloropropene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 10061-02-6			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
38	1,1,2-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-00-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
39	1,3-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 142-28-9			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
40	Tetrachloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 127-18-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
41	dibromochloromethane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 124-48-1			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
42	1,2-Dibromoethane (EDB)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-93-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
43	Chlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-90-7			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
44	1,1,1,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 630-20-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
45	m-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 108-38-3			+/-	22.1265	µg/mL	Unstressed
	Purity 99%			+/-	22.2167	µg/mL	Stressed
46	p-Xylene	1,000.0	µg/mL	+/-	5.8141	µg/mL	Gravimetric
	CAS # 106-42-3			+/-	22.1265	µg/mL	Unstressed
	Purity 99%			+/-	22.2167	µg/mL	Stressed
47	o-Xylene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-47-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
51	bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 96-18-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
54	trans-1,4-dichloro-2-butene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 110-57-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 95-63-6			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-Cymene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 99-87-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-50-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 96-12-8			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
69	1,2,4-Trichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 120-82-1			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
70	Hexachlorobutadiene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 87-68-3			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
71	Naphthalene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 91-20-3			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
72	1,2,3-Trichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 87-61-6			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x .25mm x 1.4um
Rtx-502.2 (cat.#10916)

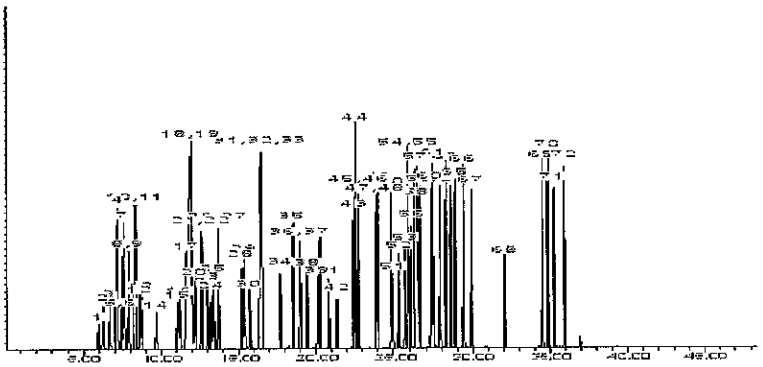
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013 **Balance:** B251644995

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VOA8260MEGA2_00027

RESTEK

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Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ MSDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567641.sec **Lot No.:** A093733

Description : 8260 List 1 / Std #1 MegaMix

8260 List 1 / Std #1 MegaMix 1,000-50,000 µg/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 2016 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Diethyl ether (ethyl ether) **CAS #** 60-29-7.SEC **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 44.2531 µg/mL +/- 44.4335 µg/mL	Gravimetric Unstressed Stressed
2	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1.SEC **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 44.2531 µg/mL +/- 44.4335 µg/mL	Gravimetric Unstressed Stressed
3	1,1-Dichloroethene **CAS #** 75-35-4.SEC **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 44.2531 µg/mL +/- 44.4335 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0.SEC **Purity** 99%	20,000.0 µg/mL	+/- 116.2756 µg/mL +/- 442.5291 µg/mL +/- 444.3332 µg/mL	Gravimetric Unstressed Stressed
5	Iodomethane (methyl iodide) **CAS #** 74-88-4.SEC **Purity** 97%	2,000.0 µg/mL	+/- 11.6284 µg/mL +/- 44.2540 µg/mL +/- 44.4344 µg/mL	Gravimetric Unstressed Stressed
6	Allyl chloride (3-chloropropene) **CAS #** 107-05-1.SEC **Purity** 98%	2,000.0 µg/mL	+/- 11.6281 µg/mL +/- 44.2527 µg/mL +/- 44.4331 µg/mL	Gravimetric Unstressed Stressed
7	Methyl acetate **CAS #** 79-20-9.SEC **Purity** 99%	10,000.0 µg/mL	+/- 58.1378 µg/mL +/- 221.2646 µg/mL +/- 222.1666 µg/mL	Gravimetric Unstressed Stressed
8	Carbon disulfide **CAS #** 75-15-0.SEC **Purity** 98%	2,000.0 µg/mL	+/- 11.6281 µg/mL +/- 44.2527 µg/mL +/- 44.4331 µg/mL	Gravimetric Unstressed Stressed
9	Methylene chloride (dichloromethane) **CAS #** 75-09-2.SEC **Purity** 99%	2,000.0 µg/mL	+/- 11.6282 µg/mL +/- 44.2531 µg/mL +/- 44.4335 µg/mL	Gravimetric Unstressed Stressed

10	Acrylonitrile	20,000.0	µg/mL	+/-	116.2756	µg/mL	Gravimetric
	CAS # 107-13-1.SEC			+/-	442.5291	µg/mL	Unstressed
	Purity 99%			+/-	444.3332	µg/mL	Stressed
11	Methyl-tert-butyl ether (MTBE)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 1634-04-4.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
12	cis-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 156-59-2.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
13	n-Hexane (C6)	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric
	CAS # 110-54-3.SEC			+/-	44.2549	µg/mL	Unstressed
	Purity 98%			+/-	44.4353	µg/mL	Stressed
14	1,1-Dichloroethane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 75-34-3.SEC			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
15	2,2-Dichloropropane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 594-20-7.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
16	trans-1,2-Dichloroethene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 156-60-5.SEC			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
17	Chloroform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 67-66-3.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
18	Isobutanol (2-Methyl-1-propanol)	50,000.0	µg/mL	+/-	290.6891	µg/mL	Gravimetric
	CAS # 78-83-1.SEC			+/-	1,106.3228	µg/mL	Unstressed
	Purity 99%			+/-	1,110.8331	µg/mL	Stressed
19	Bromochloromethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 74-97-5.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
20	Tetrahydrofuran	4,000.0	µg/mL	+/-	23.2563	µg/mL	Gravimetric
	CAS # 109-99-9.SEC			+/-	88.5061	µg/mL	Unstressed
	Purity 99%			+/-	88.8670	µg/mL	Stressed
21	1,1,1-Trichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-55-6.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
22	Cyclohexane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 110-82-7.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
23	1,1-Dichloropropene	2,010.5	µg/mL	+/-	11.6890	µg/mL	Gravimetric
	CAS # 563-58-6.SEC			+/-	44.4847	µg/mL	Unstressed
	Purity 98%			+/-	44.6661	µg/mL	Stressed
24	Carbon tetrachloride	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric
	CAS # 56-23-5.SEC			+/-	44.2549	µg/mL	Unstressed
	Purity 98%			+/-	44.4353	µg/mL	Stressed
25	n-Heptane (C7)	2,000.1	µg/mL	+/-	11.6288	µg/mL	Gravimetric
	CAS # 142-82-5.SEC			+/-	44.2553	µg/mL	Unstressed
	Purity 99%			+/-	44.4357	µg/mL	Stressed
26	Benzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 71-43-2.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
27	1,2-Dichloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 107-06-2.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
28	Trichloroethene	2,000.1	µg/mL	+/-	11.6286	µg/mL	Gravimetric
	CAS # 79-01-6.SEC			+/-	44.2549	µg/mL	Unstressed
	Purity 98%			+/-	44.4353	µg/mL	Stressed

29	Methylcyclohexane **CAS #** 108-87-2.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
30	1,2-Dichloropropane **CAS #** 78-87-5.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
31	1,4-Dioxane **CAS #** 123-91-1.SEC **Purity** 99%	40,000.0	µg/mL	+/- 232.5513 +/- 885.0582 +/- 888.6665	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
32	Dibromomethane **CAS #** 74-95-3.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
33	Bromodichloromethane **CAS #** 75-27-4.SEC **Purity** 97%	2,000.1	µg/mL	+/- 11.6290 +/- 44.2562 +/- 44.4366	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
34	cis-1,3-Dichloropropene **CAS #** 10061-01-5.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
35	Toluene **CAS #** 108-88-3.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
36	Ethyl methacrylate **CAS #** 97-63-2.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
37	trans-1,3-Dichloropropene **CAS #** 10061-02-6.SEC **Purity** 98%	2,000.0	µg/mL	+/- 11.6281 +/- 44.2527 +/- 44.4331	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
38	1,1,2-Trichloroethane **CAS #** 79-00-5.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
39	1,3-Dichloropropane **CAS #** 142-28-9.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
40	Tetrachloroethene **CAS #** 127-18-4.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
41	Dibromochloromethane **CAS #** 124-48-1.SEC **Purity** 97%	2,000.1	µg/mL	+/- 11.6290 +/- 44.2562 +/- 44.4366	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
42	1,2-Dibromoethane (EDB) **CAS #** 106-93-4.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
43	Chlorobenzene **CAS #** 108-90-7.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
44	1,1,1,2-Tetrachloroethane **CAS #** 630-20-6.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
45	m-Xylene **CAS #** 108-38-3.SEC **Purity** 99%	1,000.0	µg/mL	+/- 5.8141 +/- 22.1265 +/- 22.2167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
46	p-Xylene **CAS #** 106-42-3.SEC **Purity** 99%	1,000.0	µg/mL	+/- 5.8141 +/- 22.1265 +/- 22.2167	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed
47	o-Xylene **CAS #** 95-47-6.SEC **Purity** 99%	2,000.0	µg/mL	+/- 11.6282 +/- 44.2531 +/- 44.4335	µg/mL µg/mL µg/mL	Gravimetric Unstressed Stressed

48	Ethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-41-4.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
49	Styrene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 100-42-5.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
50	Isopropylbenzene (cumene)	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-82-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
51	Bromoform	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 75-25-2.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
52	1,1,2,2-Tetrachloroethane	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 79-34-5.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
53	1,2,3-Trichloropropane	2,000.0	µg/mL	+/-	11.6281	µg/mL	Gravimetric
	CAS # 96-18-4.SEC			+/-	44.2527	µg/mL	Unstressed
	Purity 98%			+/-	44.4331	µg/mL	Stressed
54	trans-1,4-Dichloro-2-butene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 110-57-6.SEC			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
55	n-Propylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 103-65-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
56	Bromobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-86-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
57	1,3,5-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 108-67-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
58	2-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-49-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
59	4-Chlorotoluene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-43-4.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
60	tert-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 98-06-6.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
61	1,2,4-Trimethylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-63-6.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
62	sec-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 135-98-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
63	4-Isopropyltoluene (p-cymene)	2,000.1	µg/mL	+/-	11.6285	µg/mL	Gravimetric
	CAS # 99-87-6.SEC			+/-	44.2545	µg/mL	Unstressed
	Purity 96%			+/-	44.4349	µg/mL	Stressed
64	1,3-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 541-73-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
65	1,4-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 106-46-7.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
66	n-Butylbenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 104-51-8.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

67	1,2-Dichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 95-50-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
68	1,2-Dibromo-3-chloropropane	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 96-12-8.SEC			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
69	1,2,4-Trichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 120-82-1.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
70	Hexachlorobutadiene	2,000.0	µg/mL	+/-	11.6284	µg/mL	Gravimetric
	CAS # 87-68-3.SEC			+/-	44.2540	µg/mL	Unstressed
	Purity 97%			+/-	44.4344	µg/mL	Stressed
71	Naphthalene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 91-20-3.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed
72	1,2,3-Trichlorobenzene	2,000.0	µg/mL	+/-	11.6282	µg/mL	Gravimetric
	CAS # 87-61-6.SEC			+/-	44.2531	µg/mL	Unstressed
	Purity 99%			+/-	44.4335	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Column:
60m x .25mm x 1.4um
Rtx-502.2 (cat.#10916)

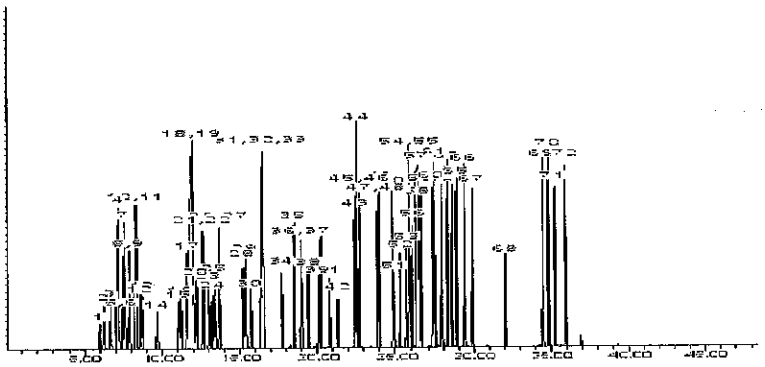
Carrier Gas:
helium-constant pressure 30 psi

Temp. Program:
40°C (hold 6 min.) to 240°C
@ 6°C/min. (hold 10 min.)

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



Jennifer L. Pollino - QC Analyst

Date Passed: 01-Mar-2013 **Balance:** 1127510105

Manufactured under Restek's ISO 9001:2008
Registered Quality System
Certificate #FM 80397

Reagent

VOA8260SURRES_00063

RESTEK® CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
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Certificate #3222.02

Certificate of Analysis

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 567650 **Lot No.:** A0100424

Description : 8260 Surrogate Standard

8260 Surrogate Standard 2,500 ug/ml, P&T Methanol, 5 ml/ampul

Container Size : 5 mL **Pkg Amt:** > 5 mL

Expiration Date : January 31, 2019 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dibromofluoromethane **CAS #** 1868-53-7 (Lot 022012) **Purity** 99%	2,502.2 µg/mL	+/- 14.5480 µg/mL +/- 28.2159 µg/mL +/- 32.4683 µg/mL	Gravimetric Unstressed Stressed
2	1,2-Dichloroethane-d4 **CAS #** 17060-07-0 (Lot 12K-027) **Purity** 99%	2,501.2 µg/mL	+/- 14.5422 µg/mL +/- 28.2046 µg/mL +/- 32.4554 µg/mL	Gravimetric Unstressed Stressed
3	Toluene-d8 **CAS #** 2037-26-5 (Lot 13I-050) **Purity** 99%	2,500.8 µg/mL	+/- 14.5399 µg/mL +/- 28.2001 µg/mL +/- 32.4502 µg/mL	Gravimetric Unstressed Stressed
4	1-Bromo-4-fluorobenzene (BFB) **CAS #** 460-00-4 (Lot 01127COV) **Purity** 99%	2,501.4 µg/mL	+/- 14.5434 µg/mL +/- 28.2069 µg/mL +/- 32.4580 µg/mL	Gravimetric Unstressed Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

VOA8260VARES_00050

RESTEK®
110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO Guide 34 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 569724 **Lot No.:** A0108225

Description : 8260 List 1 / Std #6 Vinyl Acetate (2015)

8260 List 1 / Std #6 Vinyl Acetate (2015) 5000 ug/ml, P&T Methanol, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : July 31, 2015 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Vinyl acetate	5,000.0 µg/mL	+/- 29.3428	µg/mL	Gravimetric
	CAS # 108-05-4 (Lot STBC8935V)		+/- 266.1189	µg/mL	Unstressed
	Purity 99%		+/- 266.4123	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Tech Tips:

Vinyl acetate is a volatile organic ester included in the target lists of several US EPA and other methods. Under acidic conditions, esters react with alcohols to form new esters (transesterification). Methanol-based mixes containing halogenated compounds are slightly acidic, so it is important to minimize exposure of vinyl acetate to mixes of halogenated compounds in methanol. For this reason, we offer vinyl acetate in individual solution, and suggest that it be introduced into the working level calibration solution immediately before use. This will minimize problems and ensure more consistent results.

Reagent

VOAACRORES_00064

RESTEK®
110 Benner Circle
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Tel: (800)356-1688
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FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568720 **Lot No.:** A0107338

Description : 8260 List 1/Std #5 Acrolein High

8260 List 1/Std #5 Acrolein High 19,750 µg/ml, Water, 1 ml/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : March 31, 2015 **Storage:** 10°C or colder

Handling: This product is photosensitive.

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Acrolein	19,759.0 µg/mL	+/- 115.6933	µg/mL	Gravimetric
	CAS # 107-02-8 (Lot 140429JLM)		+/- 633.5357	µg/mL	Unstressed
	Purity 99%		+/- 736.4159	µg/mL	Stressed

Solvent: Water
CAS # 7732-18-5
Purity 99%

Reagent

VOARESEE1ST_00008

RESTEK CERTIFIED REFERENCE MATERIAL

110 Benner Circle
Bellefonte, PA 16823-8812
Tel: (800)356-1688
Fax: (814)353-1309

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Certificate #3222.01

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ilac-MRA

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Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

This Reference Material is intended for Laboratory Use Only as a standard for the qualitative and/or quantitative determination of the analyte(s) listed.

Catalog No. : 568363-FL **Lot No.:** A097285

Description : Custom EE Standard

Custom EE Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

Container Size : 2 mL **Pkg Amt:** > 1 mL

Expiration Date : February 28, 2015 **Storage:** 0°C or colder

CERTIFIED VALUES

Elution Order	Compound		Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	3-Chlorobenzotrifluoride		5,001.0 µg/mL	+/- 29.3487 µg/mL		Gravimetric
	CAS # 98-15-7	(Lot 21324DO)		+/- 53.0822 µg/mL		Unstressed
	Purity 99%			+/- 61.7282 µg/mL		Stressed
2	4-Chlorobenzotrifluoride		5,003.0 µg/mL	+/- 29.3604 µg/mL		Gravimetric
	CAS # 98-56-6	(Lot 08507BO)		+/- 53.1034 µg/mL		Unstressed
	Purity 99%			+/- 61.7529 µg/mL		Stressed
3	2-Chlorobenzotrifluoride		5,005.0 µg/mL	+/- 29.3721 µg/mL		Gravimetric
	CAS # 88-16-4	(Lot I0316DQ)		+/- 53.1247 µg/mL		Unstressed
	Purity 99%			+/- 61.7775 µg/mL		Stressed
4	3-Chlorotoluene		5,000.0 µg/mL	+/- 29.3428 µg/mL		Gravimetric
	CAS # 108-41-8	(Lot 13528LX)		+/- 53.0716 µg/mL		Unstressed
	Purity 99%			+/- 61.7158 µg/mL		Stressed
5	2,4-Dichlorobenzotrifluoride		5,002.0 µg/mL	+/- 29.3545 µg/mL		Gravimetric
	CAS # 320-60-5	(Lot MKBL3552V)		+/- 53.0928 µg/mL		Unstressed
	Purity 99%			+/- 61.7405 µg/mL		Stressed
6	3,4-Dichlorobenzotrifluoride		5,000.0 µg/mL	+/- 29.3428 µg/mL		Gravimetric
	CAS # 328-84-7	(Lot 11105EJV)		+/- 53.0716 µg/mL		Unstressed
	Purity 99%			+/- 61.7158 µg/mL		Stressed
7	2,5-Dichlorobenzotrifluoride		5,000.0 µg/mL	+/- 29.3428 µg/mL		Gravimetric
	CAS # 320-50-3	(Lot 04415DSV)		+/- 53.0716 µg/mL		Unstressed
	Purity 99%			+/- 61.7158 µg/mL		Stressed
8	2,4-Dichlorotoluene		5,002.0 µg/mL	+/- 29.3545 µg/mL		Gravimetric
	CAS # 95-73-8	(Lot 07715JS)		+/- 53.0928 µg/mL		Unstressed
	Purity 99%			+/- 61.7405 µg/mL		Stressed

9	2,5-Dichlorotoluene		5,000.0	µg/mL	+/- 29.3428	µg/mL	Gravimetric
	CAS # 19398-61-9	(Lot 10119CU)			+/- 53.0716	µg/mL	Unstressed
	Purity 99%				+/- 61.7158	µg/mL	Stressed
10	2,6-Dichlorotoluene		5,001.0	µg/mL	+/- 29.3487	µg/mL	Gravimetric
	CAS # 118-69-4	(Lot 16921JS)			+/- 53.0822	µg/mL	Unstressed
	Purity 99%				+/- 61.7282	µg/mL	Stressed
11	3,4-Dichlorotoluene		5,003.0	µg/mL	+/- 29.3604	µg/mL	Gravimetric
	CAS # 95-75-0	(Lot 09419AS)			+/- 53.1034	µg/mL	Unstressed
	Purity 99%				+/- 61.7529	µg/mL	Stressed
12	2,3-Dichlorotoluene		5,008.0	µg/mL	+/- 29.3897	µg/mL	Gravimetric
	CAS # 32768-54-0	(Lot 00317)			+/- 53.1565	µg/mL	Unstressed
	Purity 99%				+/- 61.8146	µg/mL	Stressed
13	2,4,5-Trichlorotoluene		5,001.0	µg/mL	+/- 29.3487	µg/mL	Gravimetric
	CAS # 6639-30-1	(Lot 1767300)			+/- 53.0822	µg/mL	Unstressed
	Purity 99%				+/- 61.7282	µg/mL	Stressed
14	2,3,6-Trichlorotoluene		5,001.0	µg/mL	+/- 29.3487	µg/mL	Gravimetric
	CAS # 2077-46-5	(Lot RM01250)			+/- 53.0822	µg/mL	Unstressed
	Purity 99%				+/- 61.7282	µg/mL	Stressed

Solvent: P&T Methanol
CAS # 67-56-1
Purity 99%

Reagent

WNa2CO3P_00007

Fisher Scientific

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Certificate of Analysis

Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2008 standard by SAI Global Certificate Number CERT - 0064970

This is to certify that units of the above mentioned lot number were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Certain products (USP/FCC/NF/EP/BP/JP grades) are sold for use in food, drug, or medical device manufacturing. Fisher does not claim regulatory coverage under 21 CFR nor maintain DMF's with the FDA. The following are the actual analytical results obtained:

Catalog Number	**S263**	**Quality Test / Release Date**	**4/8/2014**
Lot Number	**138124**		
Description	**SODIUM CARBONATE, ANHYDROUS, CERTIFIED A.C.S.**		
Country of Origin	**China**	*** Suggested Retest Date**	**Apr-2019**
Chemical Origin	**Inorganic-non animal**		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

Result name	Units	Specifications	Test Value
APPEARANCE		REPORT	White granular powder
ASSAY	%	>= 99.5	100.3
CALCIUM	%	<= 0.03	0.010
CHLORIDE	%	<= 0.001	<0.0010
HEAVY METALS (as Pb)	ppm	<= 5	<5.0
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.01	<0.010
IRON (Fe)	ppm	<= 5	<5.0
LOSS ON HEATING @ 285 DEG C	%	<= 1.0	0.1
MAGNESIUM	%	<= 0.005	<0.001
PHOSPHATE (PO4)	%	<= 0.001	0.0010
POTASSIUM (K)	%	<= 0.005	0.001
SILICA (SiO2)	%	<= 0.005	0.005
SULFUR COMPOUNDS	%	<= 0.003	<0.0030

Lab Manager Fair Lawn

1243950
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

1243948
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

1243949
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

1243947
ID: WNa2CO3P_00007
Exp:07/09/18 Prpd:HRA Opn:07/09/14
Sodium Carbonate

Note: The data listed is valid for all package sizes of this lot of this product, expressed as a extension of this catalog number listed above. If there are any questions with this certificate, please call Chemical Services at (800) 227-6701.
*Based on suggested storage condition.

Method 8260C Low Level

Volatile Organic Compounds (GC/MS) by Method 8260C Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
HD-COD-SW-6-0/1-0	180-41935-1	96	97	102	108
HD-COD-SW-7-0/1-0	180-41935-2	98	101	104	109
HD-COD-SW-8-0/1-0	180-41935-3	101	99	104	112
HD-COD-SW-9-0/1-0	180-41935-4	97	98	106	114
HD-COD-SW-10-0/1-0	180-41935-5	98	97	103	109
HD-COD-SW-11-0/1-0	180-41935-6	101	101	100	106
HD-COD-SW-12-0/1-0	180-41935-7	102	103	104	112
HD-COD-SW-13-0/1-0	180-41935-8	98	96	106	111
HD-COD-SW-15-0/1-0	180-41935-9	105	102	100	109
HD-COD-SW-16-0/1-0	180-41935-10	96	100	100	105
HD-COD-SW-17-0/1-0	180-41935-11	96	99	99	105
HD-COD-SW-20-0/1-0	180-41935-12	100	103	103	112
HD-COD-SW-26-0/1-0	180-41935-13	107	104	99	108
HD-COD-SW-27-0/1-0	180-41935-14	103	101	100	112
HD-COD-SW-28-0/1-0	180-41935-15	99	97	104	113
HD-COD-SW-29-0/1-0	180-41935-16	103	103	104	111
HD-QC1-0/1-1	180-41935-17	102	104	103	112
HD-QC1-0/1-2	180-41935-18	97	99	104	110
	MB 180-135719/4	94	94	102	109
	MB 180-135984/4	106	104	101	108
	LCS 180-135719/7	102	103	104	104
	LCS 180-135984/10	85	88	92	89
HD-COD-SW-17-0/1-0 MS	180-41935-11 MS	94	97	110	100
HD-COD-SW-17-0/1-0 MSD	180-41935-11 MSD	99	105	105	105

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	70-128
DCA = 1,2-Dichloroethane-d4 (Surr)	64-135
TOL = Toluene-d8 (Surr)	71-118
BFB = 4-Bromofluorobenzene (Surr)	70-118

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50317008.D

Lab ID: LCS 180-135719/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	11.3	113	50-139	
Vinyl chloride	10.0	10.9	109	53-138	
Bromomethane	10.0	11.5	115	33-150	
Chloroethane	10.0	10.4	104	36-142	
1,1-Dichloroethene	10.0	10.0	100	65-136	
Acetone	20.0	21.5	107	22-150	
Carbon disulfide	10.0	9.58	96	54-132	
Methylene Chloride	10.0	9.66	97	63-129	
trans-1,2-Dichloroethene	10.0	10.2	102	73-126	
Methyl tert-butyl ether	10.0	10.2	102	64-123	
1,1-Dichloroethane	10.0	10.5	105	73-126	
cis-1,2-Dichloroethene	10.0	10.2	102	70-120	
Bromochloromethane	10.0	10.3	103	70-127	
2-Butanone (MEK)	20.0	19.0	95	39-138	
Chloroform	10.0	10.3	103	72-127	
1,1,1-Trichloroethane	10.0	10.3	103	63-133	
Carbon tetrachloride	10.0	9.87	99	55-150	
Benzene	10.0	10.6	106	80-120	
1,2-Dichloroethane	10.0	10.7	107	68-132	
Trichloroethene	10.0	10.4	104	73-120	
1,2-Dichloropropane	10.0	10.5	105	76-124	
Bromodichloromethane	10.0	10.4	104	66-130	
cis-1,3-Dichloropropene	10.0	10.1	101	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	18.1	90	45-145	
Toluene	10.0	10.7	107	80-123	
trans-1,3-Dichloropropene	10.0	9.78	98	65-125	
1,1,2-Trichloroethane	10.0	10.5	105	77-127	
Tetrachloroethene	10.0	10.1	101	70-135	
2-Hexanone	20.0	15.6	78	25-132	
Dibromochloromethane	10.0	10.6	106	60-140	
1,2-Dibromoethane (EDB)	10.0	10.1	101	74-123	
Chlorobenzene	10.0	10.3	103	80-120	
1,1,1,2-Tetrachloroethane	10.0	10.4	104	63-140	
Ethylbenzene	10.0	10.5	105	72-126	
Xylenes, Total	20.0	21.0	105	76-128	
Styrene	10.0	10.6	106	71-127	
Bromoform	10.0	10.2	102	46-150	
1,1,2,2-Tetrachloroethane	10.0	10.4	104	62-125	
1,4-Dioxane	200	213	107	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50319010.D

Lab ID: LCS 180-135984/10 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Chloromethane	10.0	8.56	86	50-139	
Vinyl chloride	10.0	9.32	93	53-138	
Bromomethane	10.0	8.40	84	33-150	
Chloroethane	10.0	9.06	91	36-142	
1,1-Dichloroethene	10.0	8.60	86	65-136	
Acetone	20.0	25.5	127	22-150	
Carbon disulfide	10.0	8.61	86	54-132	
Methylene Chloride	10.0	7.82	78	63-129	
trans-1,2-Dichloroethene	10.0	8.60	86	73-126	
Methyl tert-butyl ether	10.0	8.44	84	64-123	
1,1-Dichloroethane	10.0	8.82	88	73-126	
cis-1,2-Dichloroethene	10.0	8.70	87	70-120	
Bromochloromethane	10.0	8.03	80	70-127	
2-Butanone (MEK)	20.0	16.9	85	39-138	
Chloroform	10.0	8.66	87	72-127	
1,1,1-Trichloroethane	10.0	9.28	93	63-133	
Carbon tetrachloride	10.0	8.90	89	55-150	
Benzene	10.0	9.12	91	80-120	
1,2-Dichloroethane	10.0	8.86	89	68-132	
Trichloroethene	10.0	9.09	91	73-120	
1,2-Dichloropropane	10.0	8.70	87	76-124	
Bromodichloromethane	10.0	8.81	88	66-130	
cis-1,3-Dichloropropene	10.0	8.77	88	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	17.7	88	45-145	
Toluene	10.0	9.82	98	80-123	
trans-1,3-Dichloropropene	10.0	8.19	82	65-125	
1,1,2-Trichloroethane	10.0	9.12	91	77-127	
Tetrachloroethene	10.0	9.28	93	70-135	
2-Hexanone	20.0	15.9	80	25-132	
Dibromochloromethane	10.0	9.62	96	60-140	
1,2-Dibromoethane (EDB)	10.0	9.29	93	74-123	
Chlorobenzene	10.0	9.62	96	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.02	90	63-140	
Ethylbenzene	10.0	9.53	95	72-126	
Xylenes, Total	20.0	18.6	93	76-128	
Styrene	10.0	9.63	96	71-127	
Bromoform	10.0	8.78	88	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.09	91	62-125	
1,4-Dioxane	200	175 J	87	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50317009.D

Lab ID: 180-41935-11 MS Client ID: HD-COD-SW-17-0/1-0 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Chloromethane	10.0	1.0 U	10.1	101	50-139	
Vinyl chloride	10.0	1.0 U	10.0	100	53-138	
Bromomethane	10.0	1.0 U	10.3	103	33-150	
Chloroethane	10.0	1.0 U	9.73	97	36-142	
1,1-Dichloroethene	10.0	1.0 U	8.78	88	65-136	
Acetone	20.0	2.9 J	22.9	100	22-150	
Carbon disulfide	10.0	1.0 U	8.19	82	54-132	
Methylene Chloride	10.0	1.0 U	8.13	81	63-129	
trans-1,2-Dichloroethene	10.0	1.0 U	8.88	89	73-126	
Methyl tert-butyl ether	10.0	1.0 U	8.95	89	64-123	
1,1-Dichloroethane	10.0	1.0 U	9.52	95	73-126	
cis-1,2-Dichloroethene	10.0	1.0	9.86	88	70-120	
Bromochloromethane	10.0	1.0 U	8.52	85	70-127	
2-Butanone (MEK)	20.0	5.0 U	17.2	86	39-138	
Chloroform	10.0	1.0 U	8.93	89	72-127	
1,1,1-Trichloroethane	10.0	1.0 U	9.06	91	63-133	
Carbon tetrachloride	10.0	1.0 U	8.93	89	55-150	
Benzene	10.0	1.0 U	9.26	93	80-120	
1,2-Dichloroethane	10.0	1.0 U	9.24	92	68-132	
Trichloroethene	10.0	1.0	9.91	89	73-120	
1,2-Dichloropropane	10.0	1.0 U	9.12	91	76-124	
Bromodichloromethane	10.0	1.0 U	8.75	87	66-130	
cis-1,3-Dichloropropene	10.0	1.0 U	8.41	84	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	5.0 U	18.9	94	45-145	
Toluene	10.0	1.0 U	10.1	101	80-123	
trans-1,3-Dichloropropene	10.0	1.0 U	9.10	91	65-125	
1,1,2-Trichloroethane	10.0	1.0 U	9.58	96	77-127	
Tetrachloroethene	10.0	3.6	13.2	95	70-135	
2-Hexanone	20.0	5.0 U	15.1	76	25-132	
Dibromochloromethane	10.0	1.0 U	9.42	94	60-140	
1,2-Dibromoethane (EDB)	10.0	1.0 U	9.73	97	74-123	
Chlorobenzene	10.0	1.0 U	9.81	98	80-120	
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.70	97	63-140	
Ethylbenzene	10.0	1.0 U	9.64	96	72-126	
Xylenes, Total	20.0	3.0 U	19.1	96	76-128	
Styrene	10.0	1.0 U	9.60	96	71-127	
Bromoform	10.0	1.0 U	8.84	88	46-150	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.53	95	62-125	
1,4-Dioxane	200	200 U	184 J	92	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 50317010.D

Lab ID: 180-41935-11 MSD Client ID: HD-COD-SW-17-0/1-0 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Chloromethane	10.0	10.7	107	6	35	50-139	
Vinyl chloride	10.0	10.4	104	3	35	53-138	
Bromomethane	10.0	12.0	120	15	35	33-150	
Chloroethane	10.0	10.4	104	7	35	36-142	
1,1-Dichloroethene	10.0	9.30	93	6	35	65-136	
Acetone	20.0	23.7	104	4	35	22-150	
Carbon disulfide	10.0	8.59	86	5	35	54-132	
Methylene Chloride	10.0	8.77	88	8	35	63-129	
trans-1,2-Dichloroethene	10.0	9.70	97	9	35	73-126	
Methyl tert-butyl ether	10.0	9.83	98	9	35	64-123	
1,1-Dichloroethane	10.0	10.2	102	7	35	73-126	
cis-1,2-Dichloroethene	10.0	11.0	100	11	35	70-120	
Bromochloromethane	10.0	9.45	94	10	35	70-127	
2-Butanone (MEK)	20.0	19.4	97	12	35	39-138	
Chloroform	10.0	9.82	98	9	35	72-127	
1,1,1-Trichloroethane	10.0	9.71	97	7	35	63-133	
Carbon tetrachloride	10.0	9.34	93	5	35	55-150	
Benzene	10.0	10.1	101	8	32	80-120	
1,2-Dichloroethane	10.0	10.0	100	8	32	68-132	
Trichloroethene	10.0	10.6	96	7	35	73-120	
1,2-Dichloropropane	10.0	9.87	99	8	34	76-124	
Bromodichloromethane	10.0	9.37	94	7	35	66-130	
cis-1,3-Dichloropropene	10.0	9.44	94	12	35	66-120	
4-Methyl-2-pentanone (MIBK)	20.0	18.5	93	2	35	45-145	
Toluene	10.0	9.98	100	2	35	80-123	
trans-1,3-Dichloropropene	10.0	9.54	95	5	35	65-125	
1,1,2-Trichloroethane	10.0	9.96	100	4	35	77-127	
Tetrachloroethene	10.0	12.7	91	4	35	70-135	
2-Hexanone	20.0	15.8	79	4	35	25-132	
Dibromochloromethane	10.0	9.20	92	2	35	60-140	
1,2-Dibromoethane (EDB)	10.0	9.38	94	4	35	74-123	
Chlorobenzene	10.0	9.89	99	1	29	80-120	
1,1,1,2-Tetrachloroethane	10.0	9.13	91	6	34	63-140	
Ethylbenzene	10.0	9.81	98	2	33	72-126	
Xylenes, Total	20.0	19.5	97	2	32	76-128	
Styrene	10.0	9.80	98	2	34	71-127	
Bromoform	10.0	8.95	90	1	35	46-150	
1,1,2,2-Tetrachloroethane	10.0	9.78	98	3	35	62-125	
1,4-Dioxane	200	205	103	11	35	10-160	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 50317004.D Lab Sample ID: MB 180-135719/4

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP5 Date Analyzed: 03/17/2015 14:17

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
HD-QC1-0/1-2	180-41935-18	50317006.D	03/17/2015 15:06
HD-COD-SW-17-0/1-0	180-41935-11	50317007.D	03/17/2015 15:30
	LCS 180-135719/7	50317008.D	03/17/2015 15:54
HD-COD-SW-17-0/1-0 MS	180-41935-11 MS	50317009.D	03/17/2015 16:18
HD-COD-SW-17-0/1-0 MSD	180-41935-11 MSD	50317010.D	03/17/2015 16:42
HD-COD-SW-6-0/1-0	180-41935-1	50317012.D	03/17/2015 17:31
HD-COD-SW-7-0/1-0	180-41935-2	50317013.D	03/17/2015 17:55
HD-COD-SW-8-0/1-0	180-41935-3	50317014.D	03/17/2015 18:19
HD-COD-SW-9-0/1-0	180-41935-4	50317015.D	03/17/2015 18:43
HD-COD-SW-10-0/1-0	180-41935-5	50317016.D	03/17/2015 19:07
HD-COD-SW-11-0/1-0	180-41935-6	50317017.D	03/17/2015 19:31
HD-COD-SW-12-0/1-0	180-41935-7	50317018.D	03/17/2015 19:55
HD-COD-SW-13-0/1-0	180-41935-8	50317019.D	03/17/2015 20:19
HD-COD-SW-15-0/1-0	180-41935-9	50317020.D	03/17/2015 20:44
HD-COD-SW-16-0/1-0	180-41935-10	50317021.D	03/17/2015 21:08
HD-COD-SW-20-0/1-0	180-41935-12	50317022.D	03/17/2015 21:32
HD-COD-SW-27-0/1-0	180-41935-14	50317024.D	03/17/2015 22:19
HD-COD-SW-28-0/1-0	180-41935-15	50317025.D	03/17/2015 22:43
HD-COD-SW-29-0/1-0	180-41935-16	50317026.D	03/17/2015 23:07

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 50319004.D Lab Sample ID: MB 180-135984/4

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: CHHP5 Date Analyzed: 03/19/2015 13:17

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 180-135984/10	50319010.D	03/19/2015 15:55
HD-COD-SW-26-0/1-0	180-41935-13	50319018.D	03/19/2015 19:09
HD-QC1-0/1-1	180-41935-17	50319019.D	03/19/2015 19:33

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 50316001.D BFB Injection Date: 03/16/2015

Instrument ID: CHHP5 BFB Injection Time: 10:49

Analysis Batch No.: 135593

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.7	
75	30.0 - 60.0 % of mass 95	54.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.8	(0.9)1
174	50.0 - 120.00 % of mass 95	85.5	
175	5.0 - 9.0 % of mass 174	6.4	(7.5)1
176	95.0 - 101.0 % of mass 174	83.4	(97.4)1
177	5.0 - 9.0 % of mass 176	4.9	(5.8)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 180-135593/4	50316004.D	03/16/2015	12:41
	ICIS 180-135593/5	50316005.D	03/16/2015	13:05
	IC 180-135593/6	50316006.D	03/16/2015	13:29
	IC 180-135593/7	50316007.D	03/16/2015	13:53
	IC 180-135593/8	50316008.D	03/16/2015	14:17
	IC 180-135593/9	50316009.D	03/16/2015	14:41
	IC 180-135593/10	50316010.D	03/16/2015	15:05
	IC 180-135593/13	50316013.D	03/16/2015	16:17

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 50317001.D BFB Injection Date: 03/17/2015

Instrument ID: CHHP5 BFB Injection Time: 12:22

Analysis Batch No.: 135719

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.8	
75	30.0 - 60.0 % of mass 95	50.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.7	(0.8)1
174	50.0 - 120.00 % of mass 95	84.5	
175	5.0 - 9.0 % of mass 174	5.7	(6.7)1
176	95.0 - 101.0 % of mass 174	84.0	(99.4)1
177	5.0 - 9.0 % of mass 176	5.4	(6.5)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-135719/2	50317002.D	03/17/2015	12:59
	MB 180-135719/4	50317004.D	03/17/2015	14:17
HD-QC1-0/1-2	180-41935-18	50317006.D	03/17/2015	15:06
HD-COD-SW-17-0/1-0	180-41935-11	50317007.D	03/17/2015	15:30
	LCS 180-135719/7	50317008.D	03/17/2015	15:54
HD-COD-SW-17-0/1-0 MS	180-41935-11 MS	50317009.D	03/17/2015	16:18
HD-COD-SW-17-0/1-0 MSD	180-41935-11 MSD	50317010.D	03/17/2015	16:42
HD-COD-SW-6-0/1-0	180-41935-1	50317012.D	03/17/2015	17:31
HD-COD-SW-7-0/1-0	180-41935-2	50317013.D	03/17/2015	17:55
HD-COD-SW-8-0/1-0	180-41935-3	50317014.D	03/17/2015	18:19
HD-COD-SW-9-0/1-0	180-41935-4	50317015.D	03/17/2015	18:43
HD-COD-SW-10-0/1-0	180-41935-5	50317016.D	03/17/2015	19:07
HD-COD-SW-11-0/1-0	180-41935-6	50317017.D	03/17/2015	19:31
HD-COD-SW-12-0/1-0	180-41935-7	50317018.D	03/17/2015	19:55
HD-COD-SW-13-0/1-0	180-41935-8	50317019.D	03/17/2015	20:19
HD-COD-SW-15-0/1-0	180-41935-9	50317020.D	03/17/2015	20:44
HD-COD-SW-16-0/1-0	180-41935-10	50317021.D	03/17/2015	21:08
HD-COD-SW-20-0/1-0	180-41935-12	50317022.D	03/17/2015	21:32
HD-COD-SW-27-0/1-0	180-41935-14	50317024.D	03/17/2015	22:19
HD-COD-SW-28-0/1-0	180-41935-15	50317025.D	03/17/2015	22:43
HD-COD-SW-29-0/1-0	180-41935-16	50317026.D	03/17/2015	23:07

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 50319001.D BFB Injection Date: 03/19/2015

Instrument ID: CHHP5 BFB Injection Time: 11:31

Analysis Batch No.: 135984

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.7	
75	30.0 - 60.0 % of mass 95	57.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.7	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	86.8	
175	5.0 - 9.0 % of mass 174	5.7	(6.5)1
176	95.0 - 101.0 % of mass 174	86.2	(99.3)1
177	5.0 - 9.0 % of mass 176	5.0	(5.8)2

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

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 180-135984/2	50319002.D	03/19/2015	12:15
	CCV 180-135984/3	50319003.D	03/19/2015	12:39
	MB 180-135984/4	50319004.D	03/19/2015	13:17
	LCS 180-135984/10	50319010.D	03/19/2015	15:55
HD-COD-SW-26-0/1-0	180-41935-13	50319018.D	03/19/2015	19:09
HD-QC1-0/1-1	180-41935-17	50319019.D	03/19/2015	19:33

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Sample No.: CCVIS 180-135719/2 Date Analyzed: 03/17/2015 12:59

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50317002.D Heated Purge: (Y/N) N

Calibration ID: 22457

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		164780	4.31	557085	7.27	128325	10.36
UPPER LIMIT		329560	4.81	1114170	7.77	256650	10.86
LOWER LIMIT		82390	3.81	278543	6.77	64163	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-135719/4		162094	4.30	545802	7.28	125168	10.36
180-41935-18	HD-QC1-0/1-2	142354	4.30	494258	7.28	114570	10.37
180-41935-11	HD-COD-SW-17-0/1-0	134571	4.30	497919	7.27	117209	10.37
LCS 180-135719/7		142299	4.32	512018	7.27	119994	10.36
180-41935-11 MS	HD-COD-SW-17-0/1-0 MS	158862	4.32	578620	7.27	125151	10.36
180-41935-11 MSD	HD-COD-SW-17-0/1-0 MSD	157805	4.31	548107	7.28	128124	10.36
180-41935-1	HD-COD-SW-6-0/1-0	159304	4.30	530236	7.28	121364	10.36
180-41935-2	HD-COD-SW-7-0/1-0	134879	4.30	494460	7.28	111509	10.36
180-41935-3	HD-COD-SW-8-0/1-0	143863	4.30	475411	7.28	106741	10.36
180-41935-4	HD-COD-SW-9-0/1-0	135098	4.30	472368	7.27	104578	10.36
180-41935-5	HD-COD-SW-10-0/1-0	133847	4.30	485736	7.27	107098	10.36
180-41935-6	HD-COD-SW-11-0/1-0	120416	4.29	473373	7.27	112711	10.36
180-41935-7	HD-COD-SW-12-0/1-0	121995	4.29	455479	7.28	102816	10.36
180-41935-8	HD-COD-SW-13-0/1-0	111288	4.29	446765	7.27	101309	10.36
180-41935-9	HD-COD-SW-15-0/1-0	112887	4.29	433804	7.27	98754	10.36
180-41935-10	HD-COD-SW-16-0/1-0	109634	4.31	452894	7.27	102274	10.37
180-41935-12	HD-COD-SW-20-0/1-0	98920	4.29	445869	7.27	102693	10.36
180-41935-14	HD-COD-SW-27-0/1-0	103954	4.29	417076	7.27	93927	10.36
180-41935-15	HD-COD-SW-28-0/1-0	111080	4.29	450592	7.27	101310	10.36
180-41935-16	HD-COD-SW-29-0/1-0	97648	4.29	416429	7.27	92833	10.36

TBA = TBA-d9 (IS)
FB = Fluorobenzene (IS)
CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Sample No.: CCVIS 180-135719/2 Date Analyzed: 03/17/2015 12:59

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50317002.D Heated Purge: (Y/N) N

Calibration ID: 22457

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		186222	12.68				
UPPER LIMIT		372444	13.18				
LOWER LIMIT		93111	12.18				
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 180-135719/4		207630	12.69				
180-41935-18	HD-QC1-0/1-2	188848	12.69				
180-41935-11	HD-COD-SW-17-0/1-0	185851	12.69				
LCS 180-135719/7		173292	12.68				
180-41935-11 MS	HD-COD-SW-17-0/1-0 MS	185571	12.68				
180-41935-11 MSD	HD-COD-SW-17-0/1-0 MSD	180031	12.69				
180-41935-1	HD-COD-SW-6-0/1-0	192906	12.68				
180-41935-2	HD-COD-SW-7-0/1-0	186599	12.69				
180-41935-3	HD-COD-SW-8-0/1-0	177304	12.69				
180-41935-4	HD-COD-SW-9-0/1-0	172814	12.69				
180-41935-5	HD-COD-SW-10-0/1-0	174117	12.68				
180-41935-6	HD-COD-SW-11-0/1-0	177937	12.68				
180-41935-7	HD-COD-SW-12-0/1-0	169712	12.68				
180-41935-8	HD-COD-SW-13-0/1-0	166021	12.68				
180-41935-9	HD-COD-SW-15-0/1-0	157699	12.69				
180-41935-10	HD-COD-SW-16-0/1-0	165648	12.68				
180-41935-12	HD-COD-SW-20-0/1-0	164223	12.68				
180-41935-14	HD-COD-SW-27-0/1-0	160088	12.68				
180-41935-15	HD-COD-SW-28-0/1-0	163654	12.68				
180-41935-16	HD-COD-SW-29-0/1-0	154481	12.68				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Sample No.: CCVIS 180-135984/2 Date Analyzed: 03/19/2015 12:15

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50319002.D Heated Purge: (Y/N) N

Calibration ID: 22514

		TBA		FB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		130696	4.31	465631	7.27	102605	10.36
UPPER LIMIT		261392	4.81	931262	7.77	205210	10.86
LOWER LIMIT		65348	3.81	232816	6.77	51303	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 180-135984/3		114693	4.30	456800	7.27	99993	10.36
MB 180-135984/4		134699	4.29	444732	7.27	103010	10.37
LCS 180-135984/10		138831	4.32	545539	7.27	121466	10.37
180-41935-13	HD-COD-SW-26-0/1-0	120315	4.29	437999	7.27	101333	10.36
180-41935-17	HD-QC1-0/1-1	121177	4.31	426896	7.27	97530	10.36

TBA = TBA-d9 (IS)
FB = Fluorobenzene (IS)
CBZ = Chlorobenzene-d5

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Sample No.: CCVIS 180-135984/2 Date Analyzed: 03/19/2015 12:15

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 50319002.D Heated Purge: (Y/N) N

Calibration ID: 22514

		DCB					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		153599	12.69				
UPPER LIMIT		307198	13.19				
LOWER LIMIT		76800	12.19				
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 180-135984/3		140640	12.69				
MB 180-135984/4		161259	12.69				
LCS 180-135984/10		174559	12.69				
180-41935-13	HD-COD-SW-26-0/1-0	158916	12.69				
180-41935-17	HD-QC1-0/1-1	157595	12.68				

DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 | Lab Sample ID: 180-41935-1

Matrix: Water | Lab File ID: 50317012.D

Analysis Method: 8260C | Date Collected: 03/10/2015 11:25

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 17:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	2.9	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-41935-1

Matrix: Water Lab File ID: 50317012.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:25

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	108		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317012.D
Lims ID: 180-41935-D-1 Lab Sample ID: 180-41935-1
Client ID: HD-COD-SW-6-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 17:31:30 ALS Bottle#: 12 Worklist Smp#: 12
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-1
Misc. Info.: 180-0006051-012
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:09:51 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:09:51

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.303	4.311	-0.008	85	159304	1000.0	
* 2 Fluorobenzene (IS)	96	7.278	7.274	0.004	99	530236	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.358	0.004	72	121364	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	96	192906	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.526	0.004	55	115261	47.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.897	0.004	97	154154	48.5	
$ 7 Toluene-d8 (Surr)	98	8.927	8.923	0.003	100	492372	50.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	98	188485	54.1	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.512	3.496	0.016	93	15748	14.5	
26 Carbon disulfide	76	3.707	3.654	0.053	1	4352	0.5820	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96	5.952	5.936	0.016	1	1230	0.3692	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.669				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	8.993	8.990	0.003	50	4895	0.3936	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

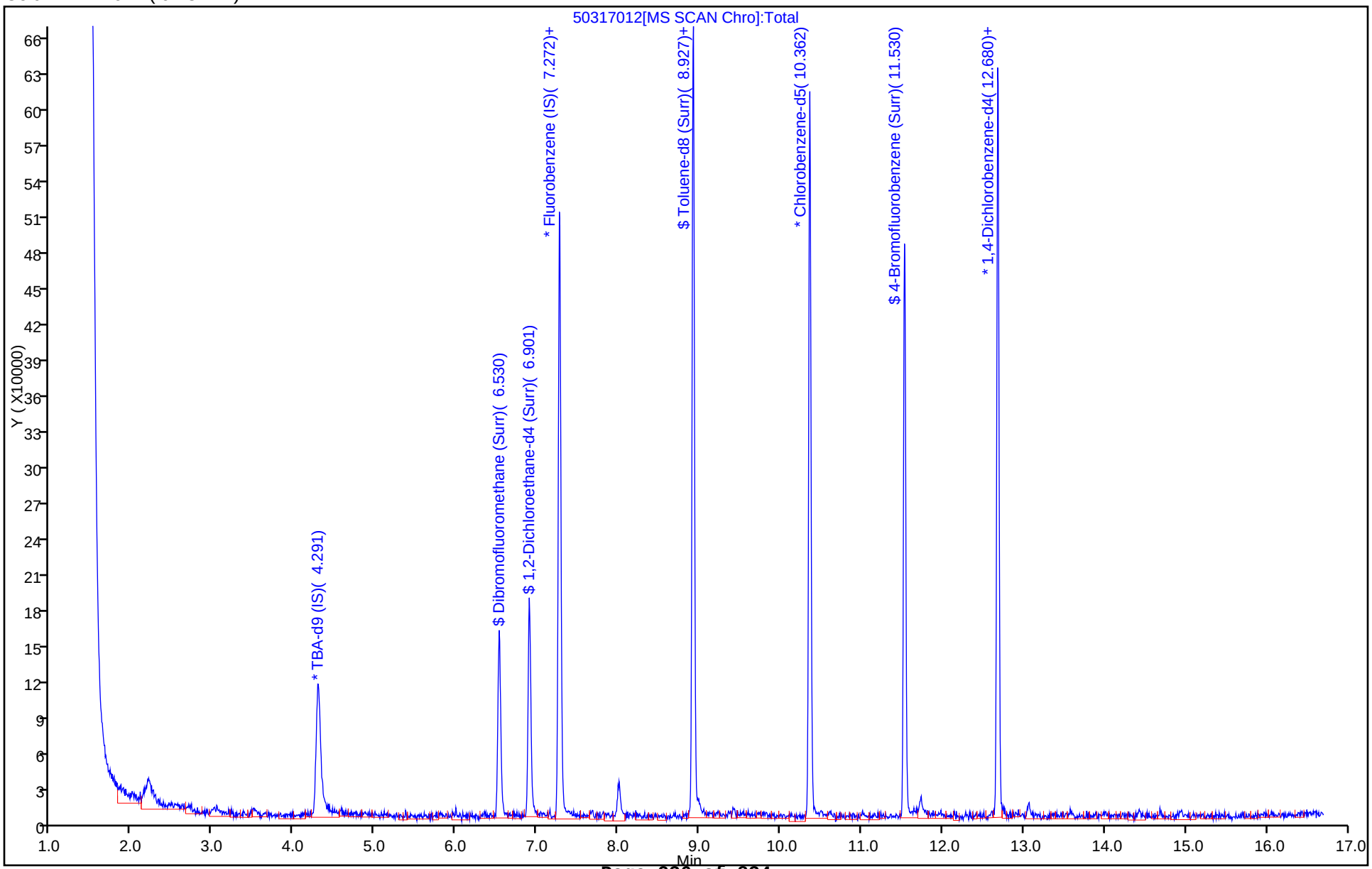
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:09:51 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317012.D				
Injection Date:	17-Mar-2015 17:31:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-1	Lab Sample ID:	180-41935-1	Worklist Smp#:	12
Client ID:	HD-COD-SW-6-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

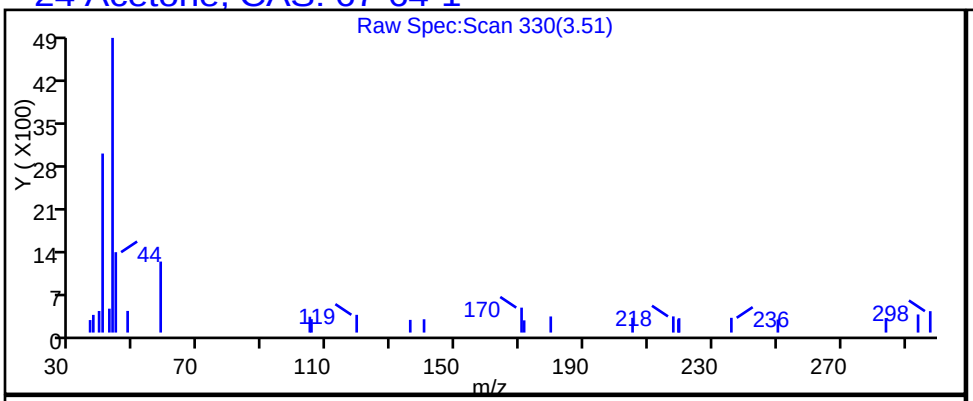


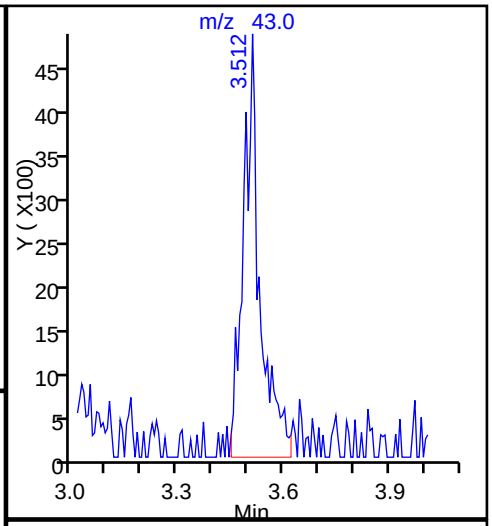
Report Date: 18-Mar-2015 10:09:51 Chrom Revision: 2.2 15-Jan-2015 13:05:58

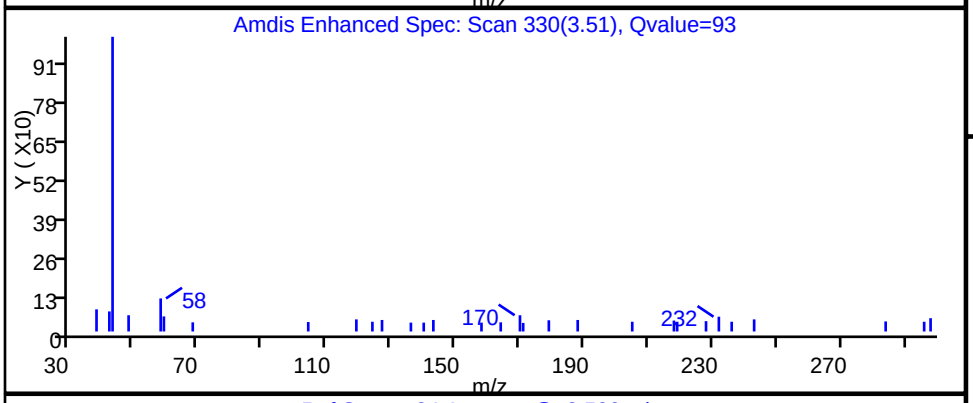
TestAmerica Pittsburgh

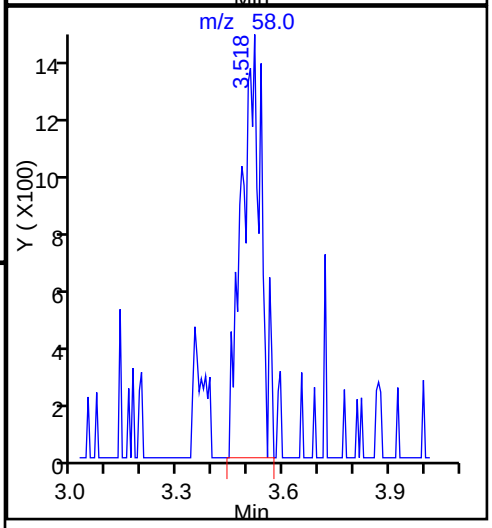
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317012.D		
Injection Date:	17-Mar-2015 17:31:30	Instrument ID:	CHHP5
Lims ID:	180-41935-D-1	Lab Sample ID:	180-41935-1
Client ID:	HD-COD-SW-6-0/1-0		
Operator ID:	001562	ALS Bottle#:	12 Worklist Smp#: 12
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

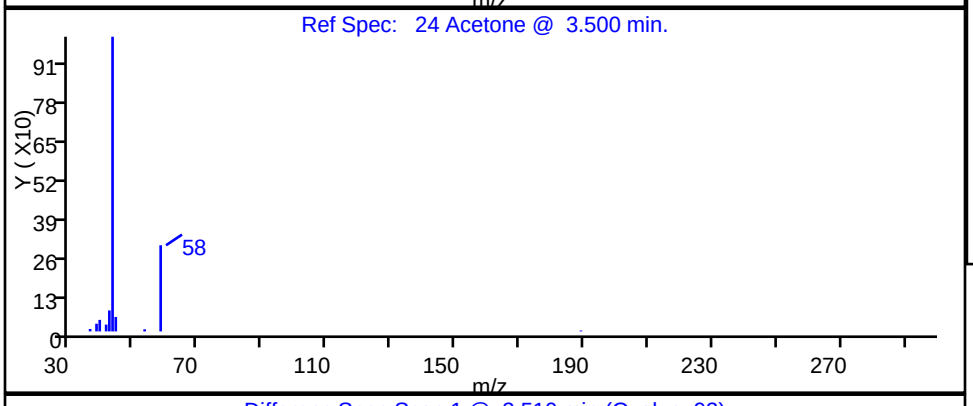
24 Acetone, CAS: 67-64-1

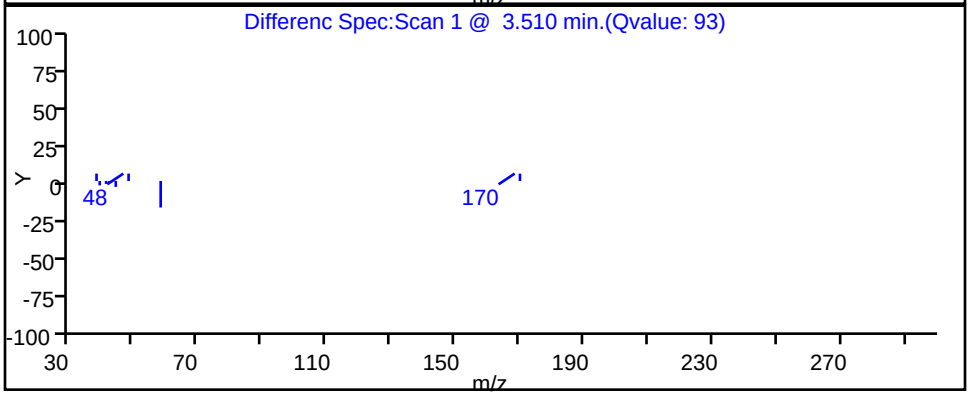












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 | Lab Sample ID: 180-41935-2

Matrix: Water | Lab File ID: 50317013.D

Analysis Method: 8260C | Date Collected: 03/10/2015 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 17:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	4.1	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-41935-2

Matrix: Water Lab File ID: 50317013.D

Analysis Method: 8260C Date Collected: 03/10/2015 12:25

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 17:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	109		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317013.D
Lims ID: 180-41935-D-2 Lab Sample ID: 180-41935-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 17:55:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-2
Misc. Info.: 180-0006051-013
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:11:10 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:11:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.311	-0.015	86	134879	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	494460	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	72	111509	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	95	186599	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	54	110728	49.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	97	149585	50.5	
$ 7 Toluene-d8 (Surr)	98	8.919	8.923	-0.004	100	461876	52.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	98	175251	54.7	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.493	3.496	-0.003	97	20949	20.7	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43	6.005	5.984	0.021	40	3902	2.41	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.660	7.669	-0.009	1	1776	0.6050	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

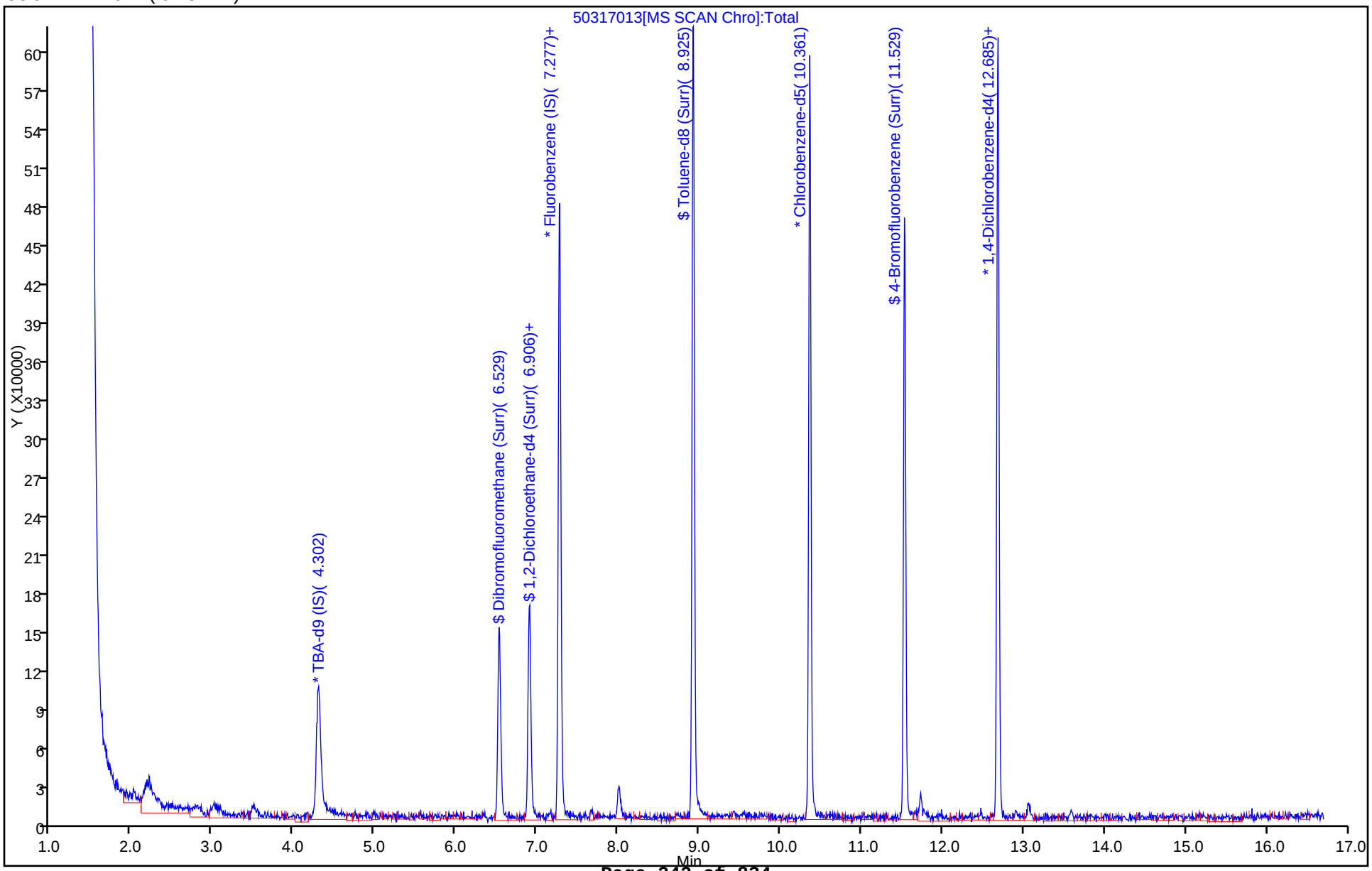
Report Date: 18-Mar-2015 10:11:10 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317013.D

Injection Date:	17-Mar-2015 17:55:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-2	Lab Sample ID:	180-41935-2	Worklist Smp#:	13
Client ID:	HD-COD-SW-7-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

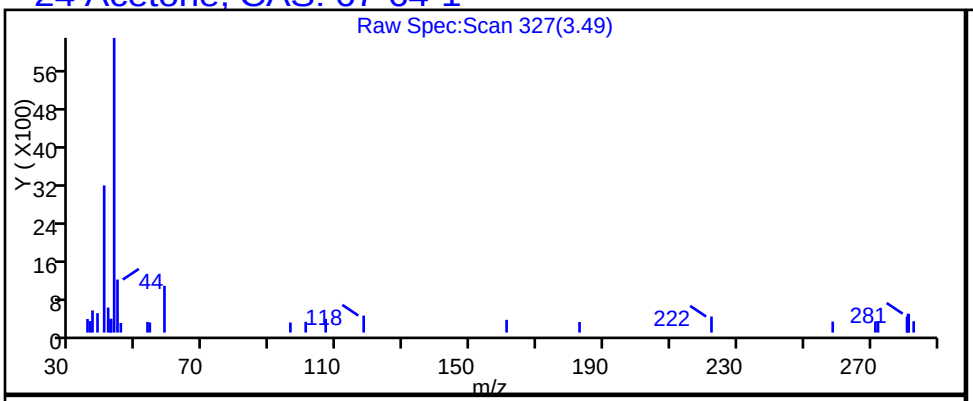


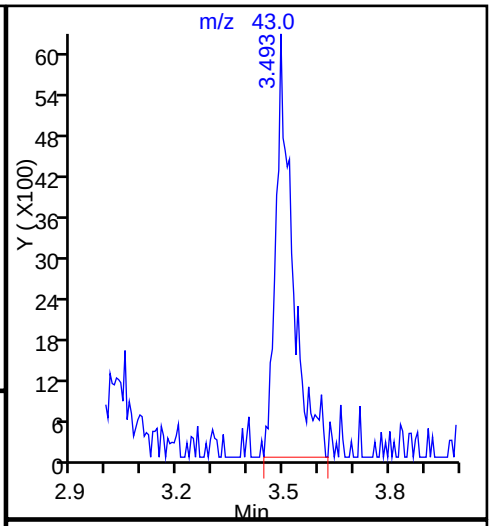
Report Date: 18-Mar-2015 10:11:10 Chrom Revision: 2.2 15-Jan-2015 13:05:58

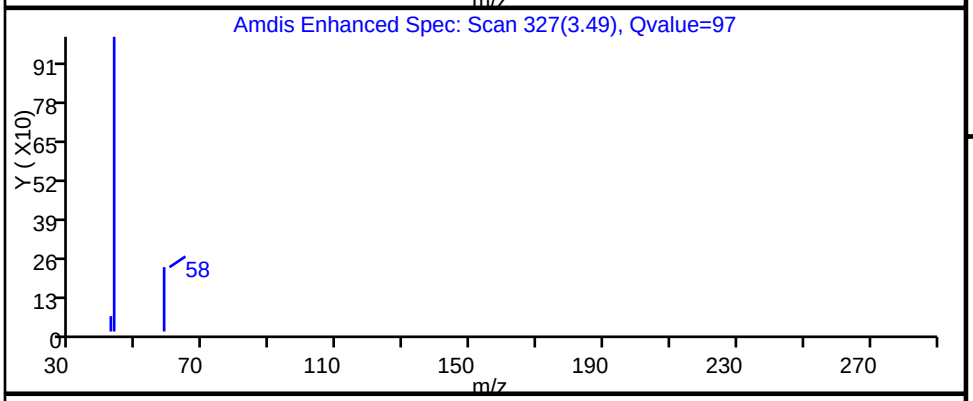
TestAmerica Pittsburgh

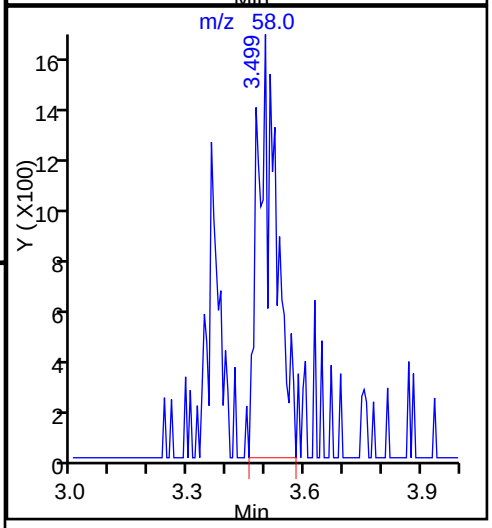
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317013.D				
Injection Date:	17-Mar-2015 17:55:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-2	Lab Sample ID:	180-41935-2		
Client ID:	HD-COD-SW-7-0/1-0				
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

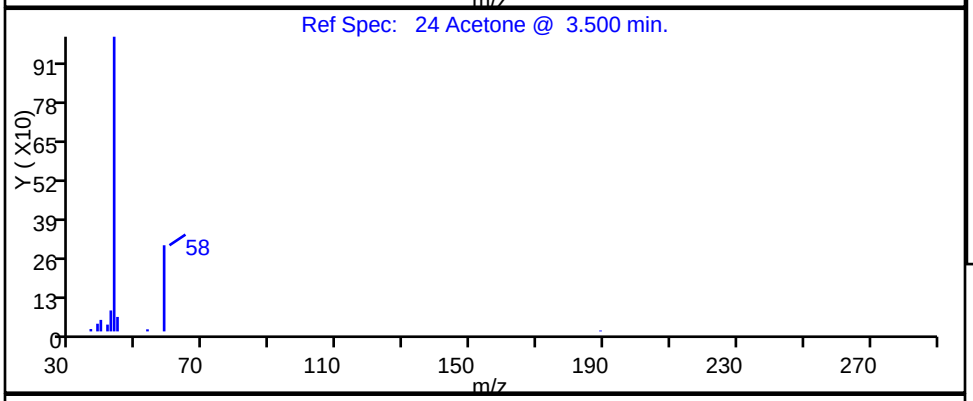
24 Acetone, CAS: 67-64-1

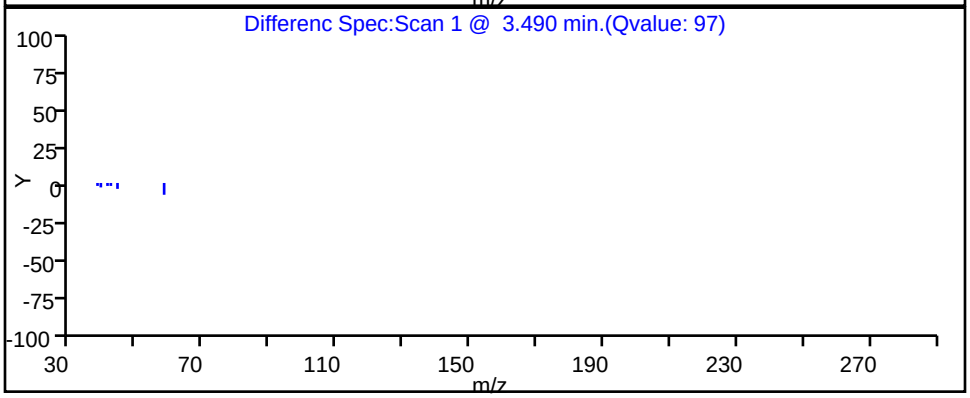












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 | Lab Sample ID: 180-41935-3

Matrix: Water | Lab File ID: 50317014.D

Analysis Method: 8260C | Date Collected: 03/10/2015 08:50

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 18:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	4.0	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-41935-3

Matrix: Water Lab File ID: 50317014.D

Analysis Method: 8260C Date Collected: 03/10/2015 08:50

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 18:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	112		70-118
1868-53-7	Dibromofluoromethane (Surr)	101		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317014.D
Lims ID: 180-41935-D-3 Lab Sample ID: 180-41935-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 18:19:30 ALS Bottle#: 14 Worklist Smp#: 14
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-3
Misc. Info.: 180-0006051-014
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:18:10 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:18:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.311	-0.015	85	143863	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	475411	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	72	106741	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	95	177304	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.526	0.008	54	108699	50.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	96	141537	49.6	
$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	100	443129	52.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	98	171019	55.8	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.505	3.496	0.009	96	19256	19.8	
26 Carbon disulfide	76	3.669	3.654	0.015	69	2837	0.4232	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.672	7.669	0.003	1	1125	0.3986	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

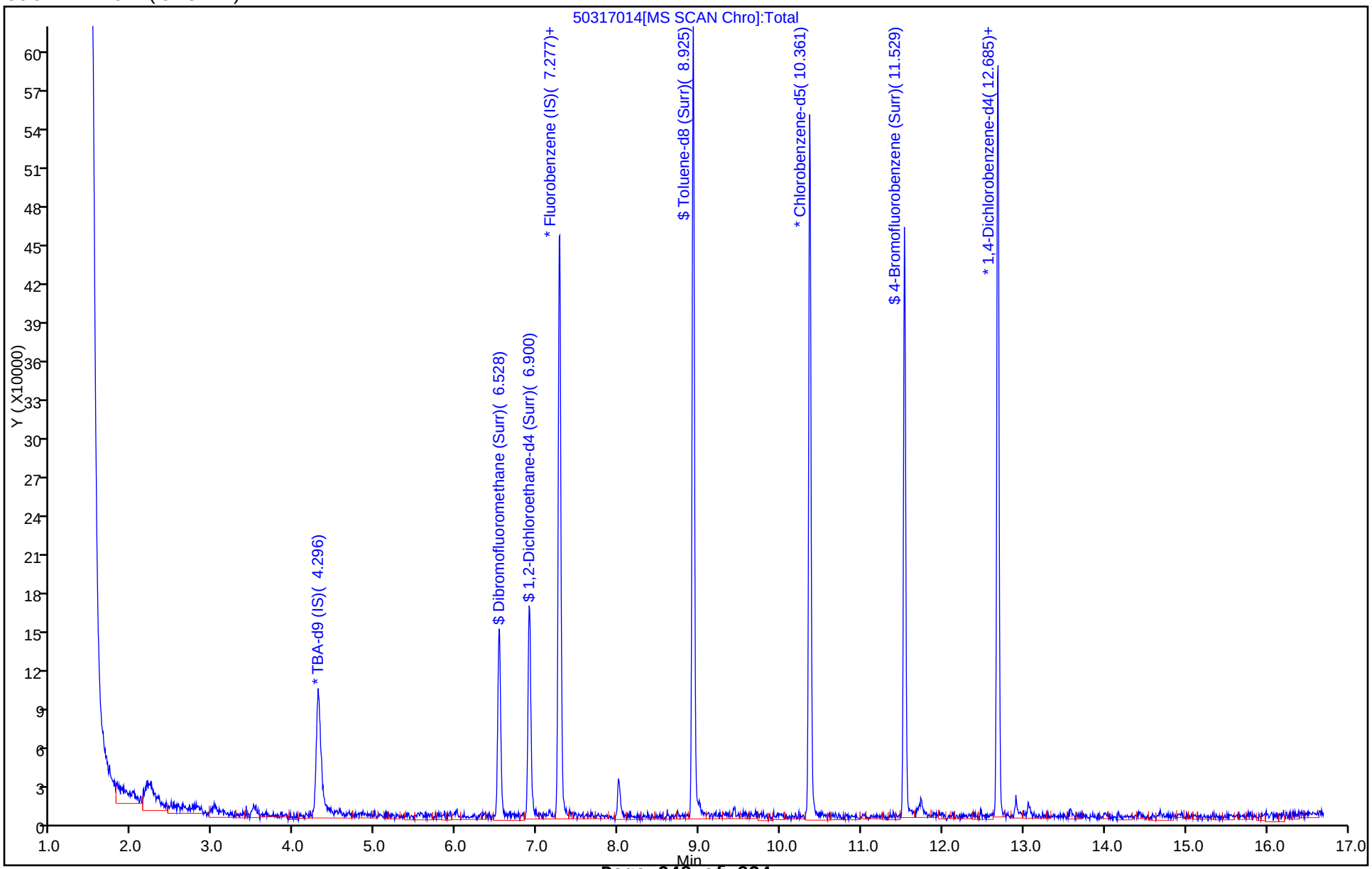
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:18:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317014.D				
Injection Date:	17-Mar-2015 18:19:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-3	Lab Sample ID:	180-41935-3	Worklist Smp#:	14
Client ID:	HD-COD-SW-8-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

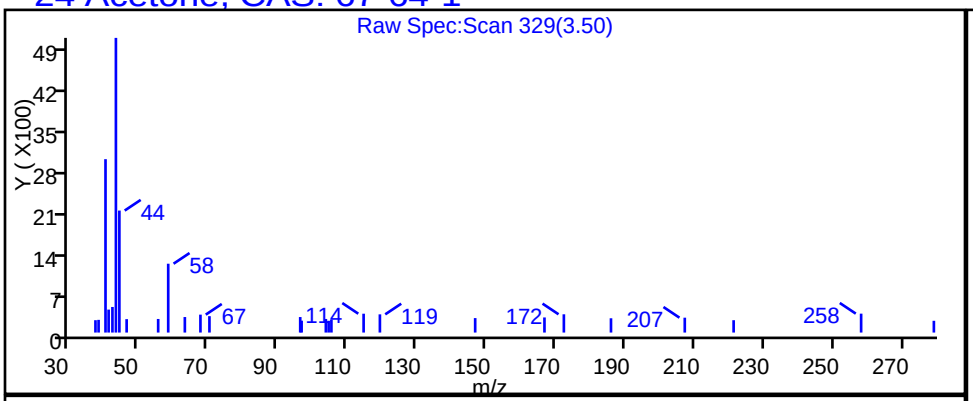


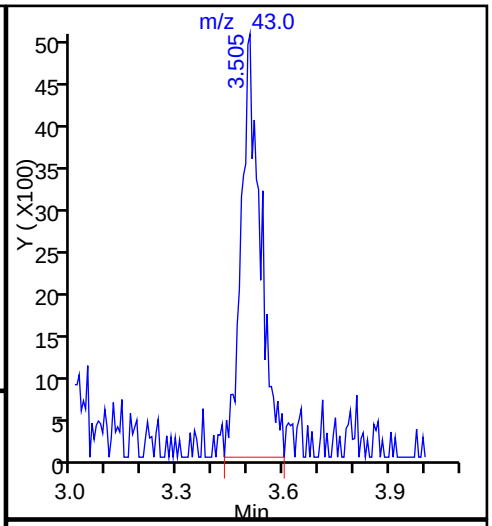
Report Date: 18-Mar-2015 10:18:11 Chrom Revision: 2.2 15-Jan-2015 13:05:58

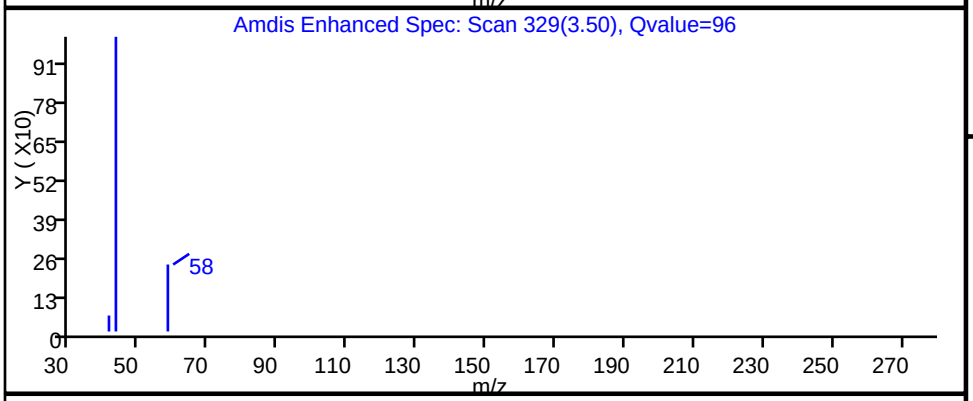
TestAmerica Pittsburgh

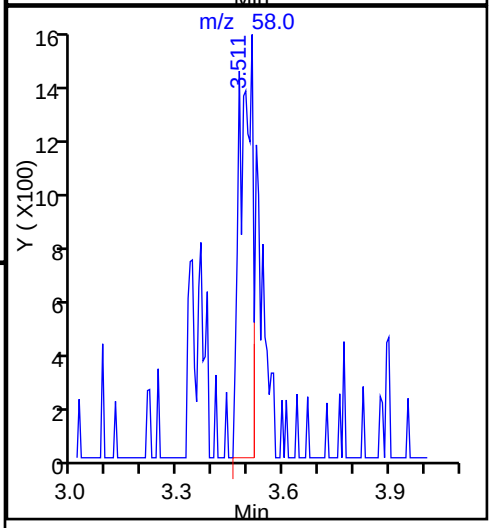
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317014.D		
Injection Date:	17-Mar-2015 18:19:30	Instrument ID:	CHHP5
Lims ID:	180-41935-D-3	Lab Sample ID:	180-41935-3
Client ID:	HD-COD-SW-8-0/1-0		
Operator ID:	001562	ALS Bottle#:	14 Worklist Smp#: 14
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

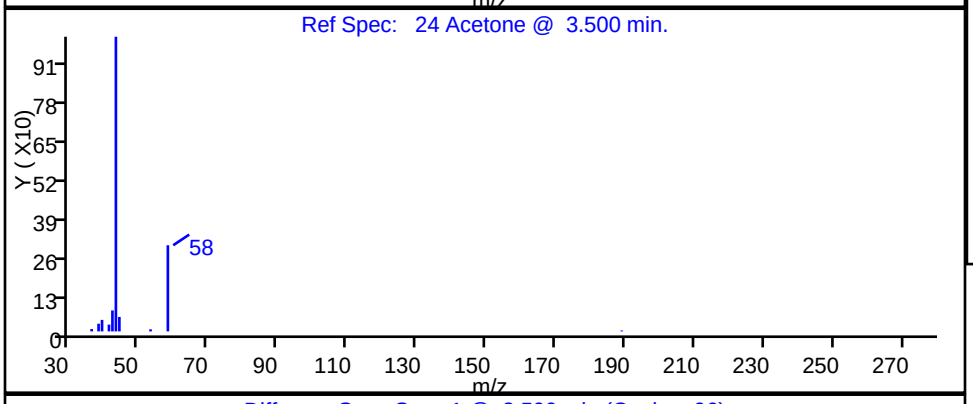
24 Acetone, CAS: 67-64-1

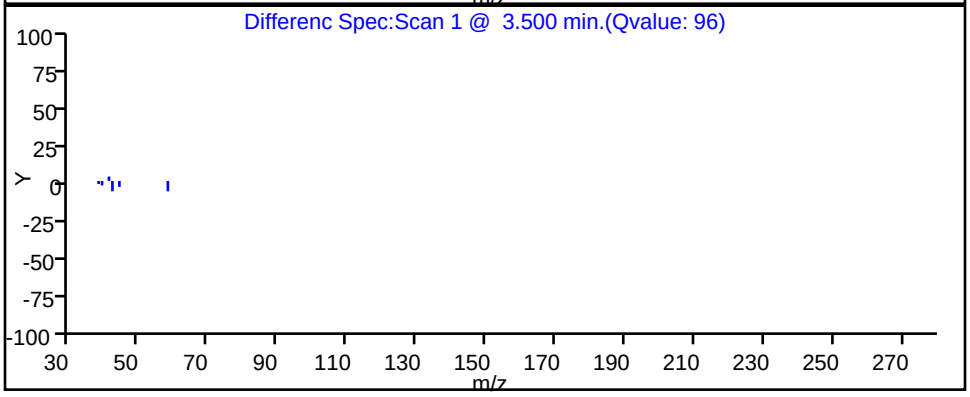












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 | Lab Sample ID: 180-41935-4

Matrix: Water | Lab File ID: 50317015.D

Analysis Method: 8260C | Date Collected: 03/10/2015 12:50

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 18:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	3.7	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	0.18	J	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-41935-4

Matrix: Water Lab File ID: 50317015.D

Analysis Method: 8260C Date Collected: 03/10/2015 12:50

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 18:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		64-135
2037-26-5	Toluene-d8 (Surr)	106		71-118
460-00-4	4-Bromofluorobenzene (Surr)	114		70-118
1868-53-7	Dibromofluoromethane (Surr)	97		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317015.D
Lims ID: 180-41935-D-4 Lab Sample ID: 180-41935-4
Client ID: HD-COD-SW-9-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 18:43:30 ALS Bottle#: 15 Worklist Smp#: 15
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-4
Misc. Info.: 180-0006051-015
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:21:48 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:21:47

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.311	-0.015	86	135098	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.274	-0.003	99	472368	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	72	104578	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	95	172814	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.523	6.526	-0.003	54	103737	48.3	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	97	139478	49.2	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	443511	53.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	98	171278	57.0	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.499	3.496	0.003	78	17715	18.3	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96	5.951	5.936	0.015	1	2008	0.6765	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83	6.340	6.343	-0.003	34	2457	0.5378	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.679	7.669	0.010	17	2492	0.8885	M
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	9.005	8.990	0.015	1	3110	0.2902	M
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.546	9.537	0.009	26	682	0.3253	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

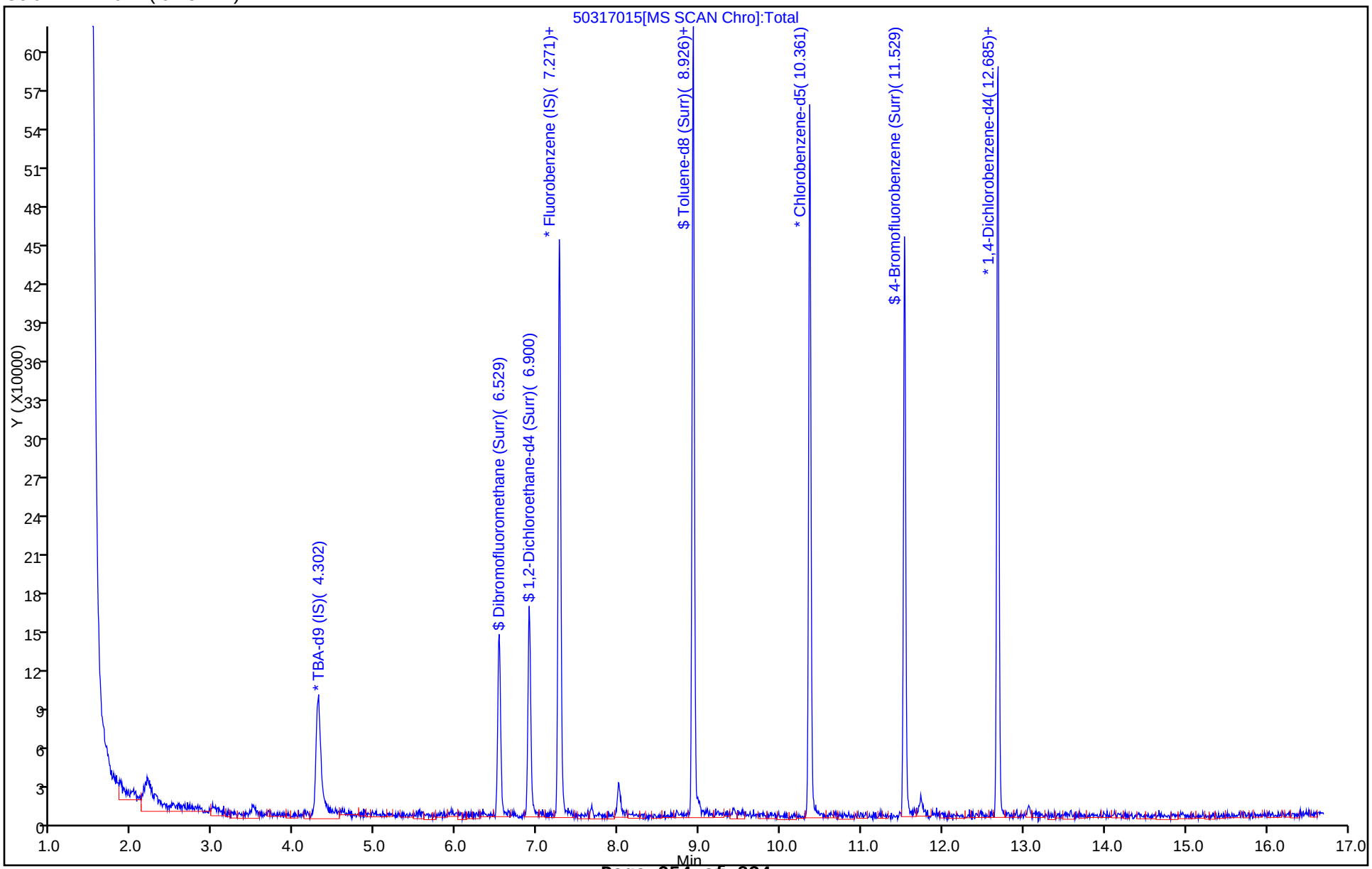
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:21:48 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317015.D				
Injection Date:	17-Mar-2015 18:43:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-4	Lab Sample ID:	180-41935-4	Worklist Smp#:	15
Client ID:	HD-COD-SW-9-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 18-Mar-2015 10:21:48 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317015.D

Injection Date: 17-Mar-2015 18:43:30 Instrument ID: CHHP5

Lims ID: 180-41935-D-4 Lab Sample ID: 180-41935-4

Client ID: HD-COD-SW-9-0/1-0

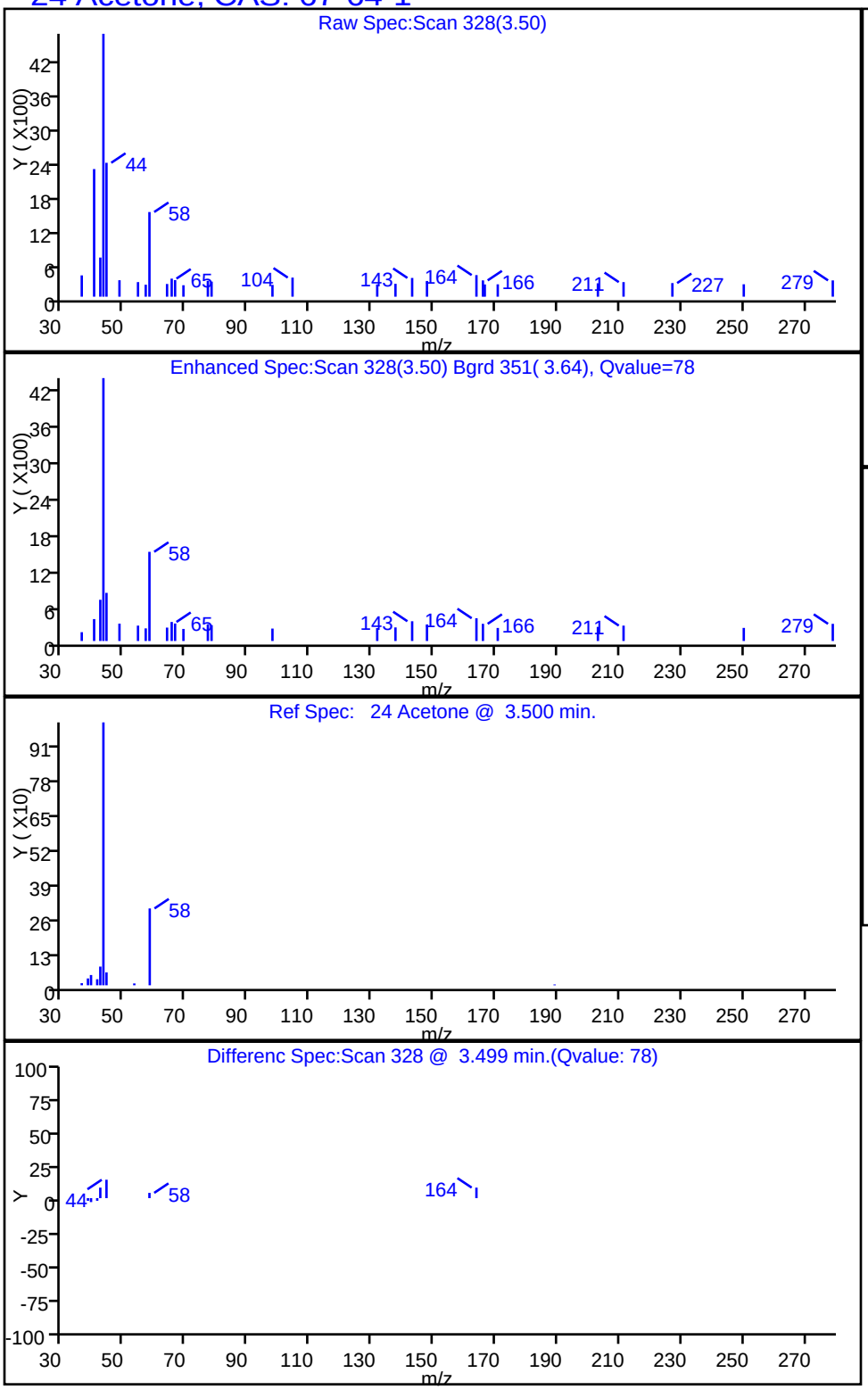
Operator ID: 001562 ALS Bottle#: 15 Worklist Smp#: 15

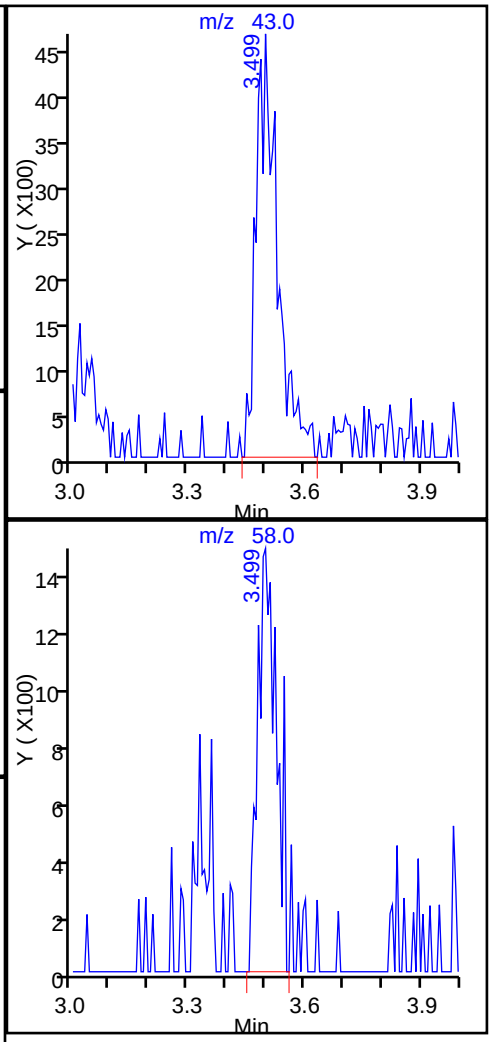
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

24 Acetone, CAS: 67-64-1





Report Date: 18-Mar-2015 10:21:48 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317015.D

Injection Date: 17-Mar-2015 18:43:30 Instrument ID: CHHP5

Lims ID: 180-41935-D-4 Lab Sample ID: 180-41935-4

Client ID: HD-COD-SW-9-0/1-0

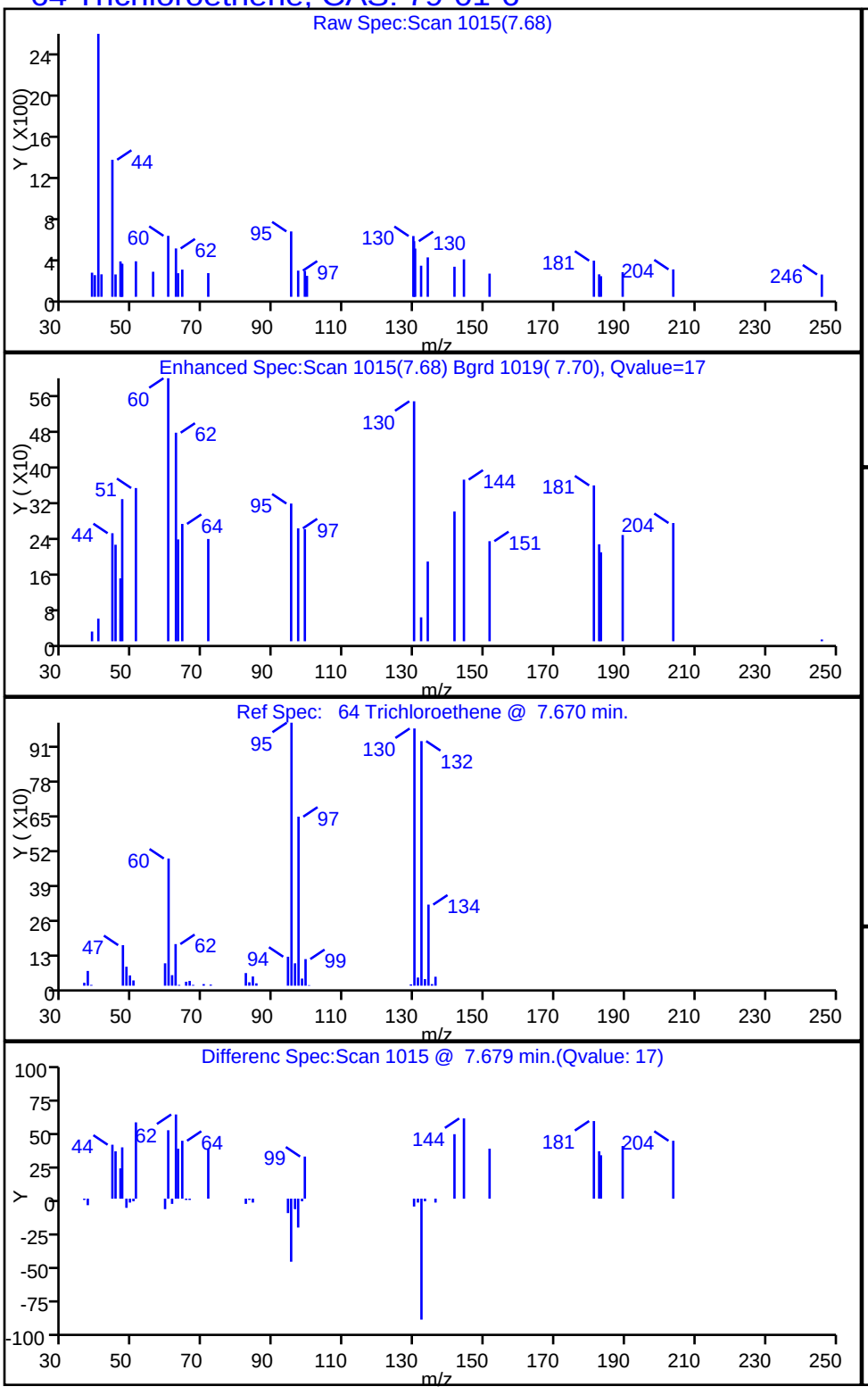
Operator ID: 001562 ALS Bottle#: 15 Worklist Smp#: 15

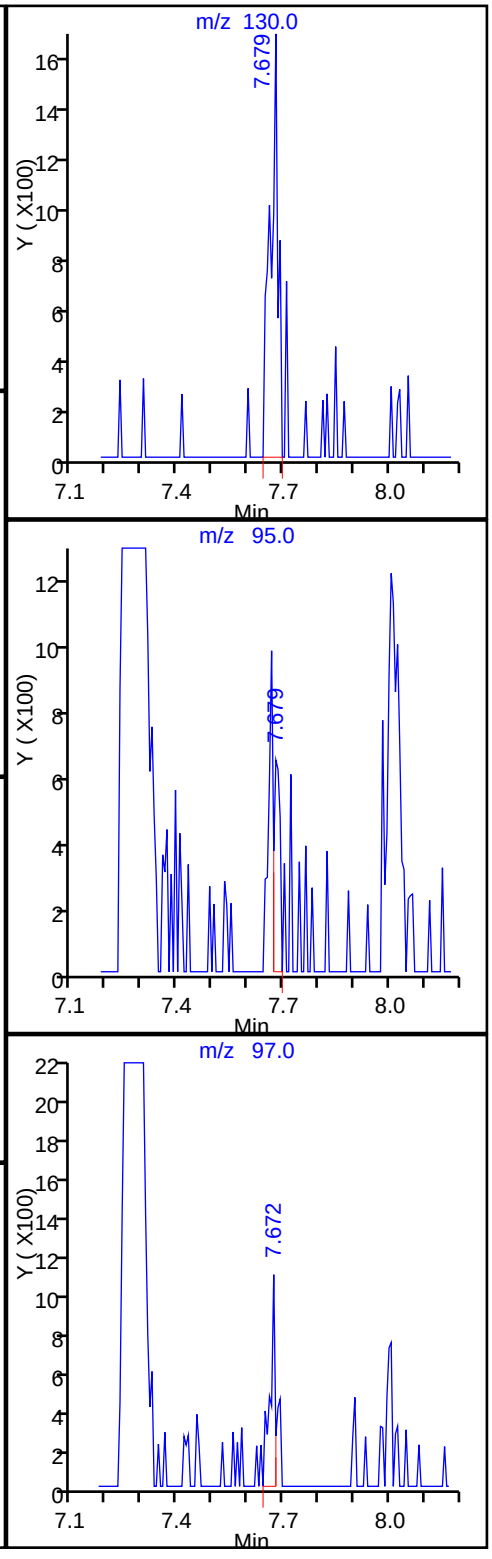
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

64 Trichloroethene, CAS: 79-01-6





Manual Integration/User Assign Peak Report

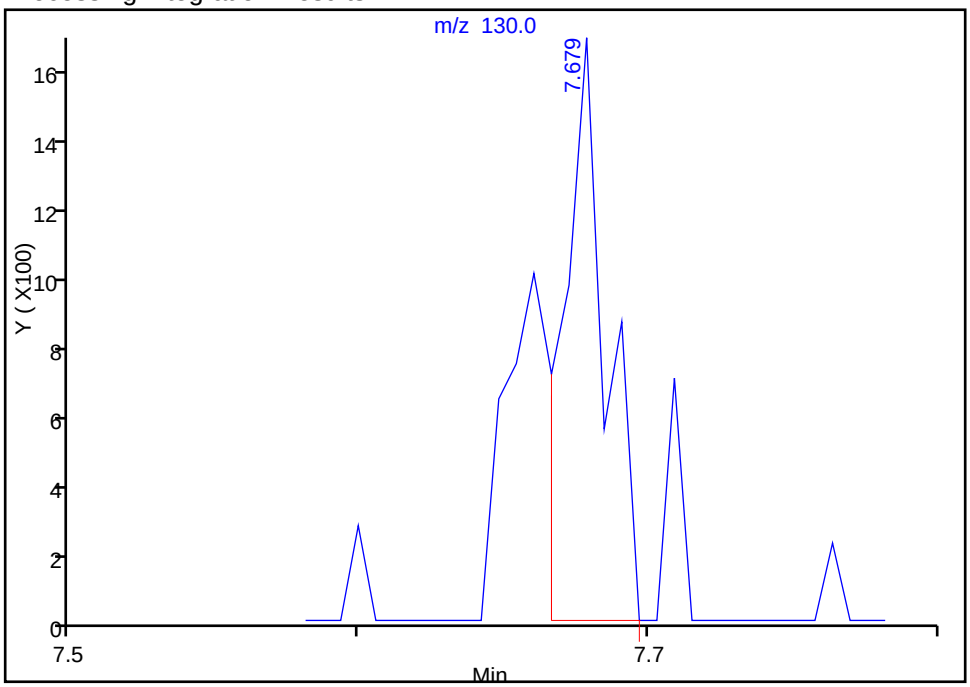
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317015.D				
Injection Date:	17-Mar-2015 18:43:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-4	Lab Sample ID:	180-41935-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	001562	ALS Bottle#:	15	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 Trichloroethene, CAS: 79-01-6

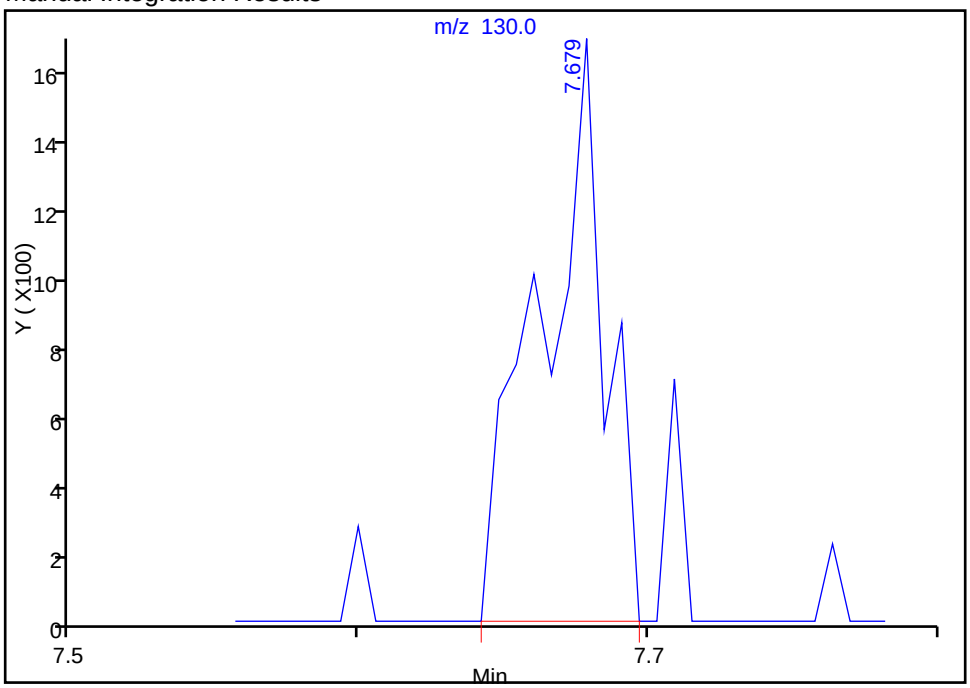
Processing Integration Results

RT: 7.68
Area: 1663
Amount: 0.592956
Amount Units: ng



Manual Integration Results

RT: 7.68
Area: 2492
Amount: 0.888543
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:21:47
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

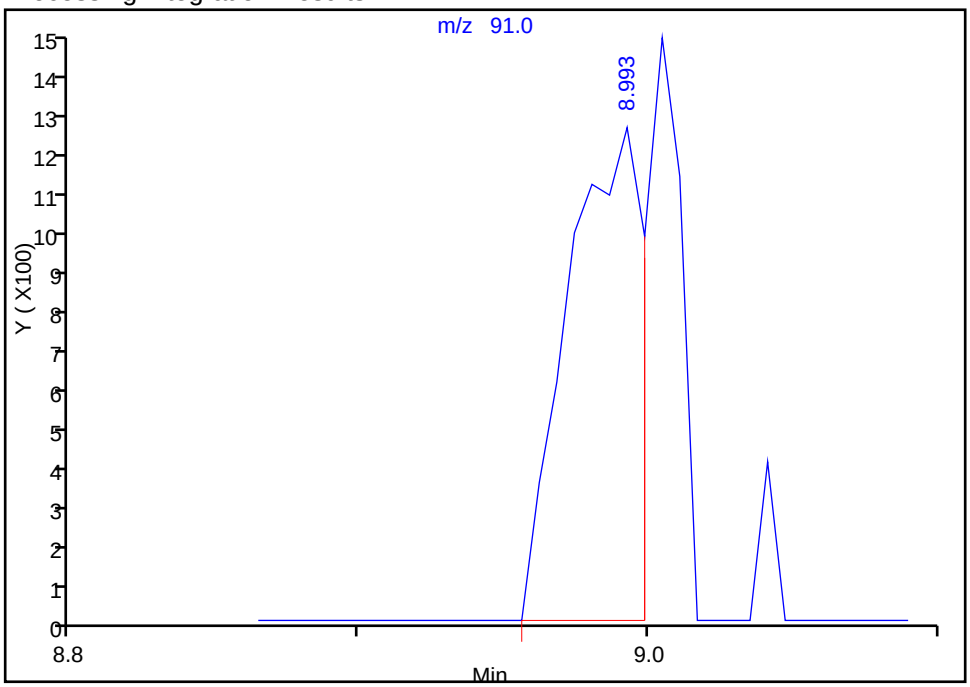
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317015.D				
Injection Date:	17-Mar-2015 18:43:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-4	Lab Sample ID:	180-41935-4		
Client ID:	HD-COD-SW-9-0/1-0				
Operator ID:	001562	ALS Bottle#:	15	Worklist Smp#:	15
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

76 Toluene, CAS: 108-88-3

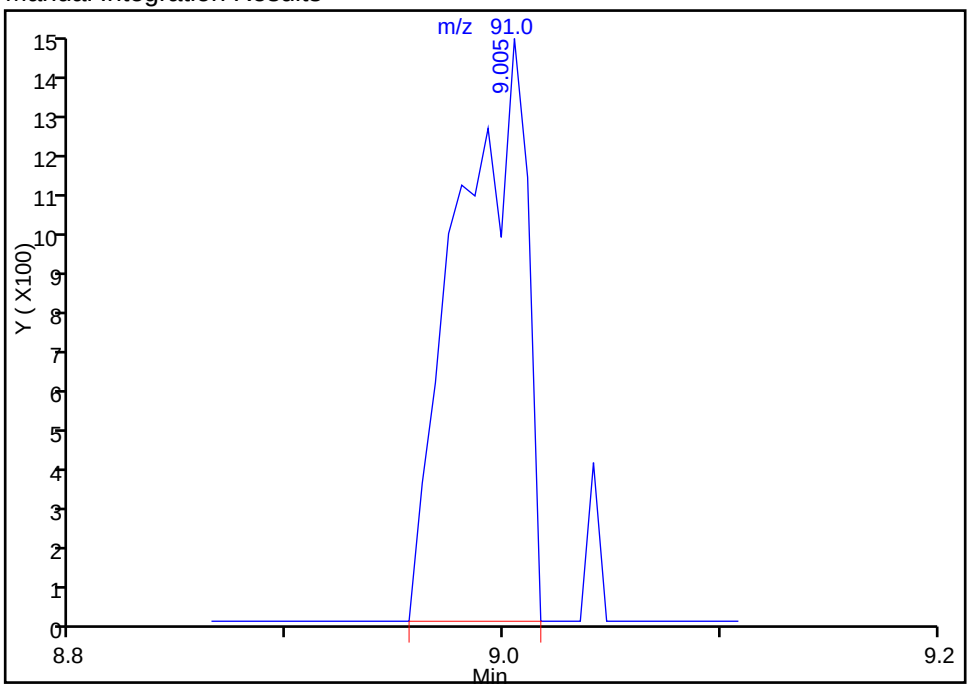
Processing Integration Results

RT: 8.99
Area: 2205
Amount: 0.205747
Amount Units: ng



Manual Integration Results

RT: 9.00
Area: 3110
Amount: 0.290193
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:21:47
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-41935-5

Matrix: Water Lab File ID: 50317016.D

Analysis Method: 8260C Date Collected: 03/10/2015 10:05

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 19:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-41935-5

Matrix: Water Lab File ID: 50317016.D

Analysis Method: 8260C Date Collected: 03/10/2015 10:05

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 19:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	109		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317016.D
Lims ID: 180-41935-D-5 Lab Sample ID: 180-41935-5
Client ID: HD-COD-SW-10-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 19:07:30 ALS Bottle#: 16 Worklist Smp#: 16
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-5
Misc. Info.: 180-0006051-016
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:23:00 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:23:00

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.299	4.311	-0.012	85	133847	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	99	485736	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.358	0.006	72	107098	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	93	174117	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.526	0.006	55	108370	49.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	97	141588	48.6	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	-0.001	98	440091	51.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	98	167896	54.6	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.514	3.496	0.018	82	12066	12.1	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96	5.929	5.936	-0.007	1	2557	0.8377	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.675	7.669	0.006	14	926	0.3211	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106	10.626	10.620	0.006	37	1559	0.3195	
92 o-Xylene	106	11.015	11.015	0.000	1	830	0.1739	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106				0		0.4934	

Reagents:

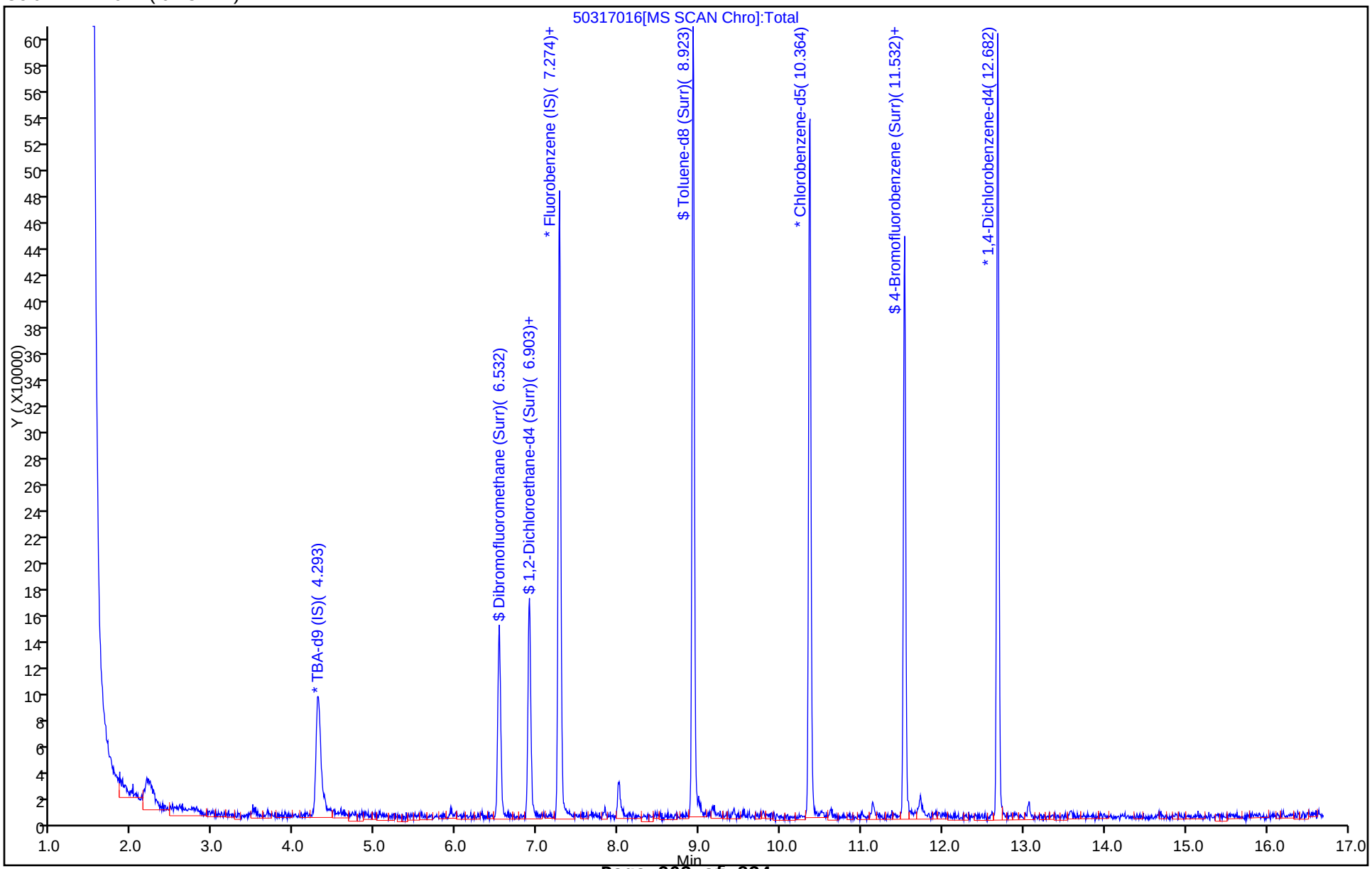
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:23:00 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317016.D				
Injection Date:	17-Mar-2015 19:07:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-5	Lab Sample ID:	180-41935-5	Worklist Smp#:	16
Client ID:	HD-COD-SW-10-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 | Lab Sample ID: 180-41935-6

Matrix: Water | Lab File ID: 50317017.D

Analysis Method: 8260C | Date Collected: 03/10/2015 13:15

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 19:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	0.18	J	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-41935-6

Matrix: Water Lab File ID: 50317017.D

Analysis Method: 8260C Date Collected: 03/10/2015 13:15

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 19:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	106		70-118
1868-53-7	Dibromofluoromethane (Surr)	101		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317017.D
Lims ID: 180-41935-D-6 Lab Sample ID: 180-41935-6
Client ID: HD-COD-SW-11-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 19:31:30 ALS Bottle#: 17 Worklist Smp#: 17
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-6
Misc. Info.: 180-0006051-017
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:23:57 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:23:57

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.291	4.311	-0.020	85	120416	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.274	-0.002	99	473373	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.358	0.004	72	112711	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	95	177937	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.524	6.526	-0.002	55	109194	50.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.897	0.004	96	143227	50.5	
$ 7 Toluene-d8 (Surr)	98	8.927	8.923	0.004	100	448101	49.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	97	170804	52.8	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.488	3.496	-0.008	74	10388	10.7	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43	5.994	5.984	0.010	35	2335	1.51	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83	6.335	6.343	-0.008	70	4041	0.8827	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.669				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

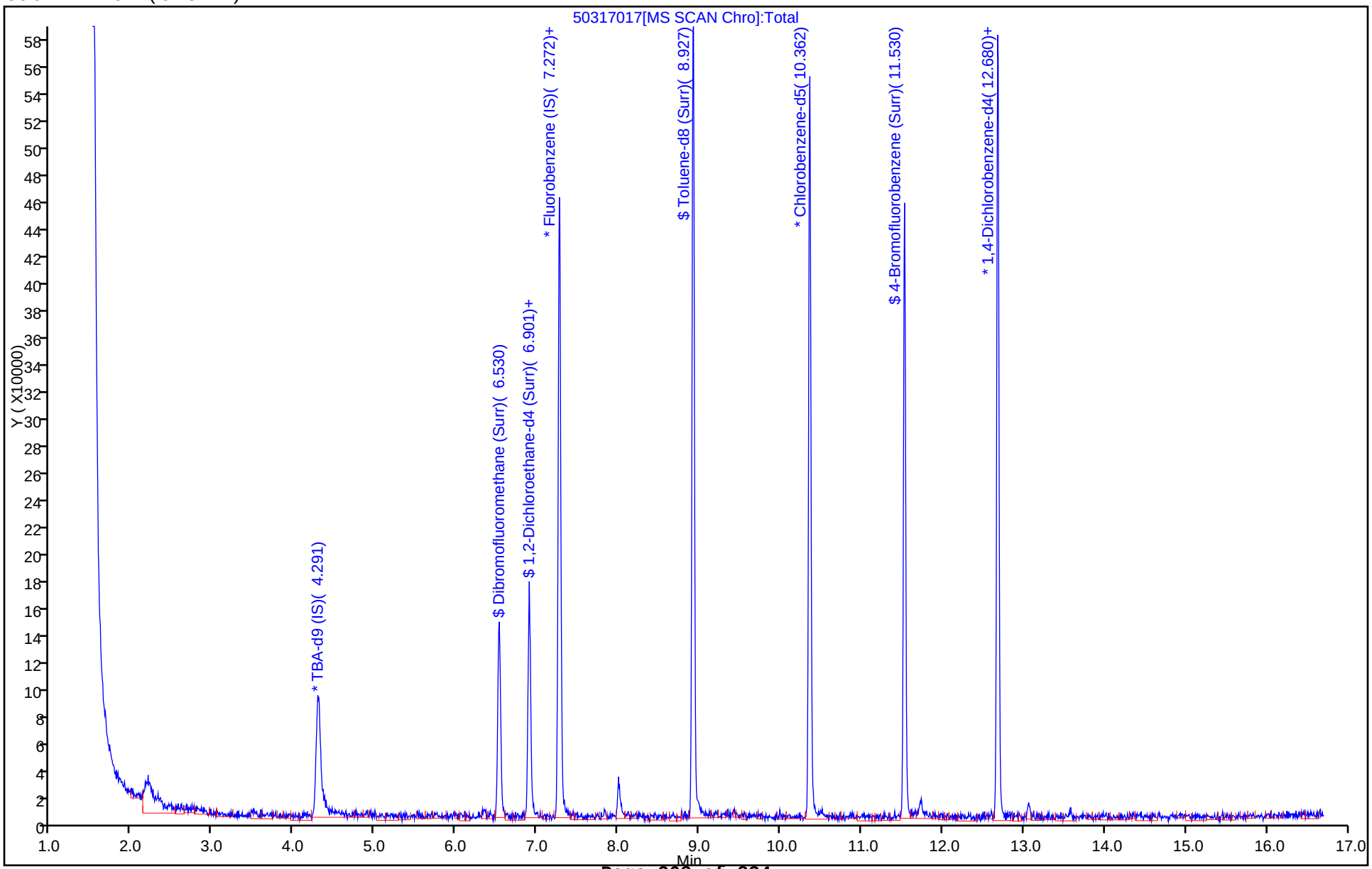
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:23:57 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317017.D				
Injection Date:	17-Mar-2015 19:31:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-6	Lab Sample ID:	180-41935-6	Worklist Smp#:	17
Client ID:	HD-COD-SW-11-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



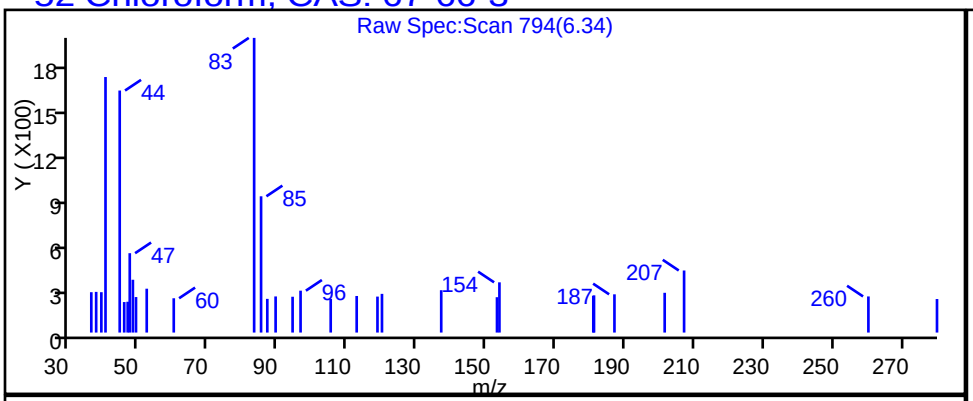
Report Date: 18-Mar-2015 10:23:58 Chrom Revision: 2.2 15-Jan-2015 13:05:58

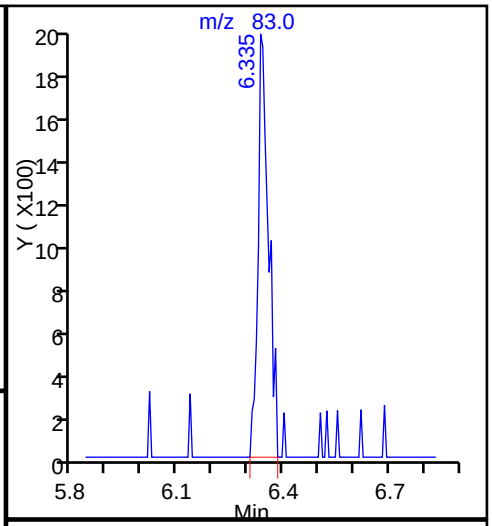
TestAmerica Pittsburgh

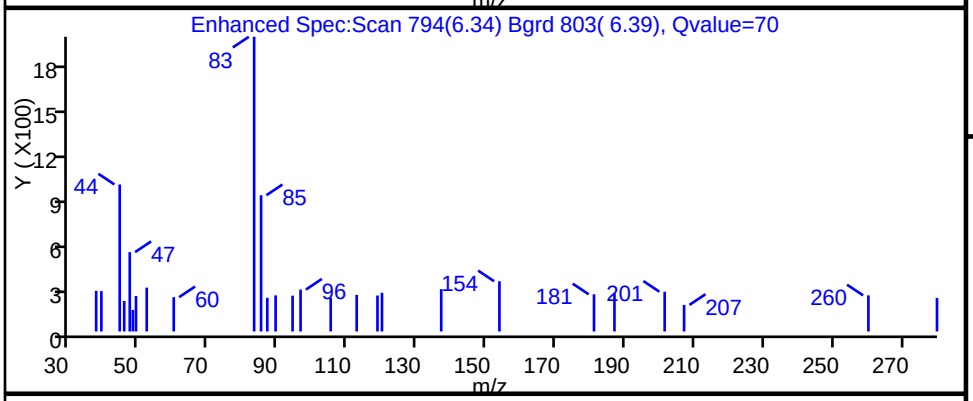
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317017.D

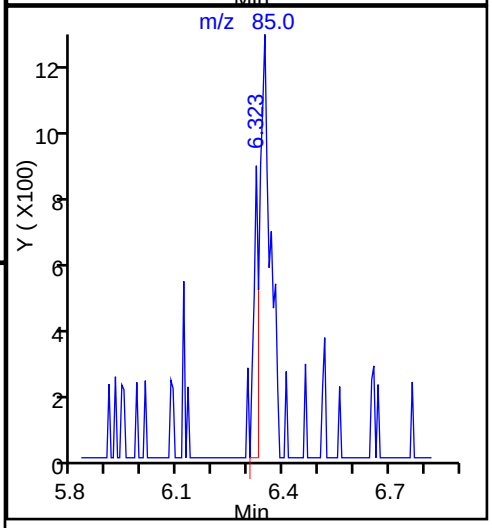
Injection Date:	17-Mar-2015 19:31:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-6	Lab Sample ID:	180-41935-6		
Client ID:	HD-COD-SW-11-0/1-0				
Operator ID:	001562	ALS Bottle#:	17	Worklist Smp#:	17
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

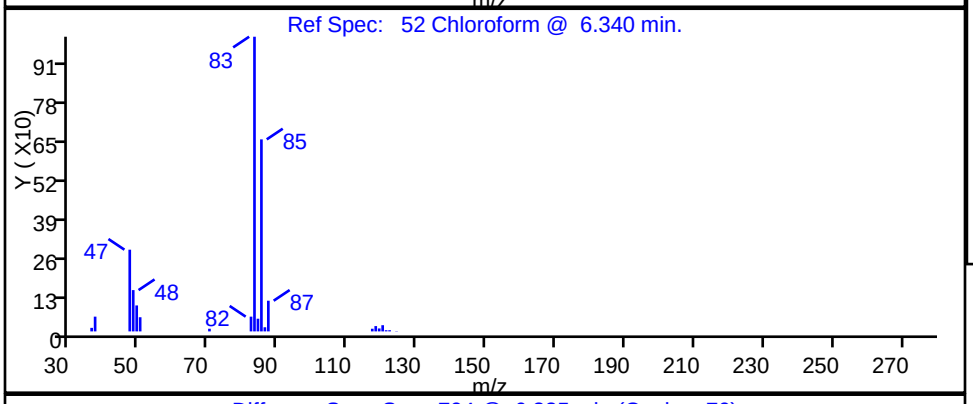
52 Chloroform, CAS: 67-66-3

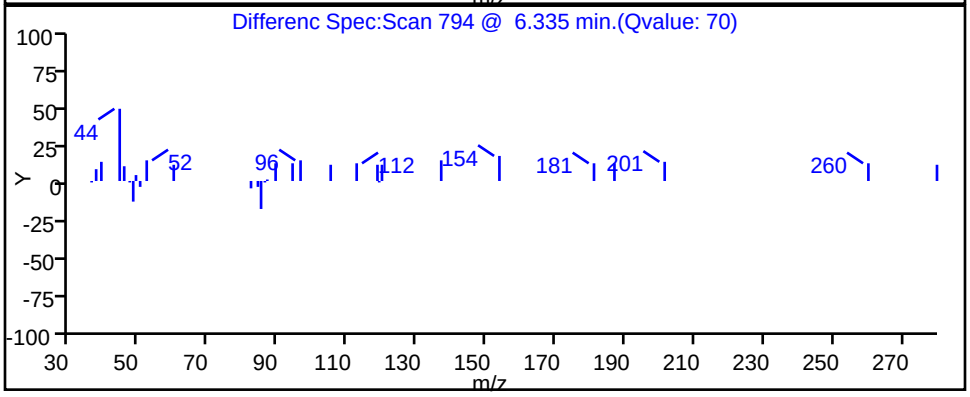












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 | Lab Sample ID: 180-41935-7

Matrix: Water | Lab File ID: 50317018.D

Analysis Method: 8260C | Date Collected: 03/10/2015 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 19:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	0.43	J	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-41935-7

Matrix: Water Lab File ID: 50317018.D

Analysis Method: 8260C Date Collected: 03/10/2015 13:40

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 19:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	112		70-118
1868-53-7	Dibromofluoromethane (Surr)	102		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317018.D
Lims ID: 180-41935-D-7 Lab Sample ID: 180-41935-7
Client ID: HD-COD-SW-12-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 19:55:30 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-7
Misc. Info.: 180-0006051-018
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:25:53 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:25:53

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.290	4.311	-0.021	85	121995	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	455479	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.358	0.004	72	102816	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	95	169712	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	55	106120	51.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.894	6.897	-0.003	98	140650	51.5	
$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	100	424724	51.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	98	165921	56.2	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.487	3.496	-0.009	65	7011	7.51	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83	6.341	6.343	-0.002	96	9363	2.13	M
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.669				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	8.987	8.990	-0.003	56	3581	0.3399	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

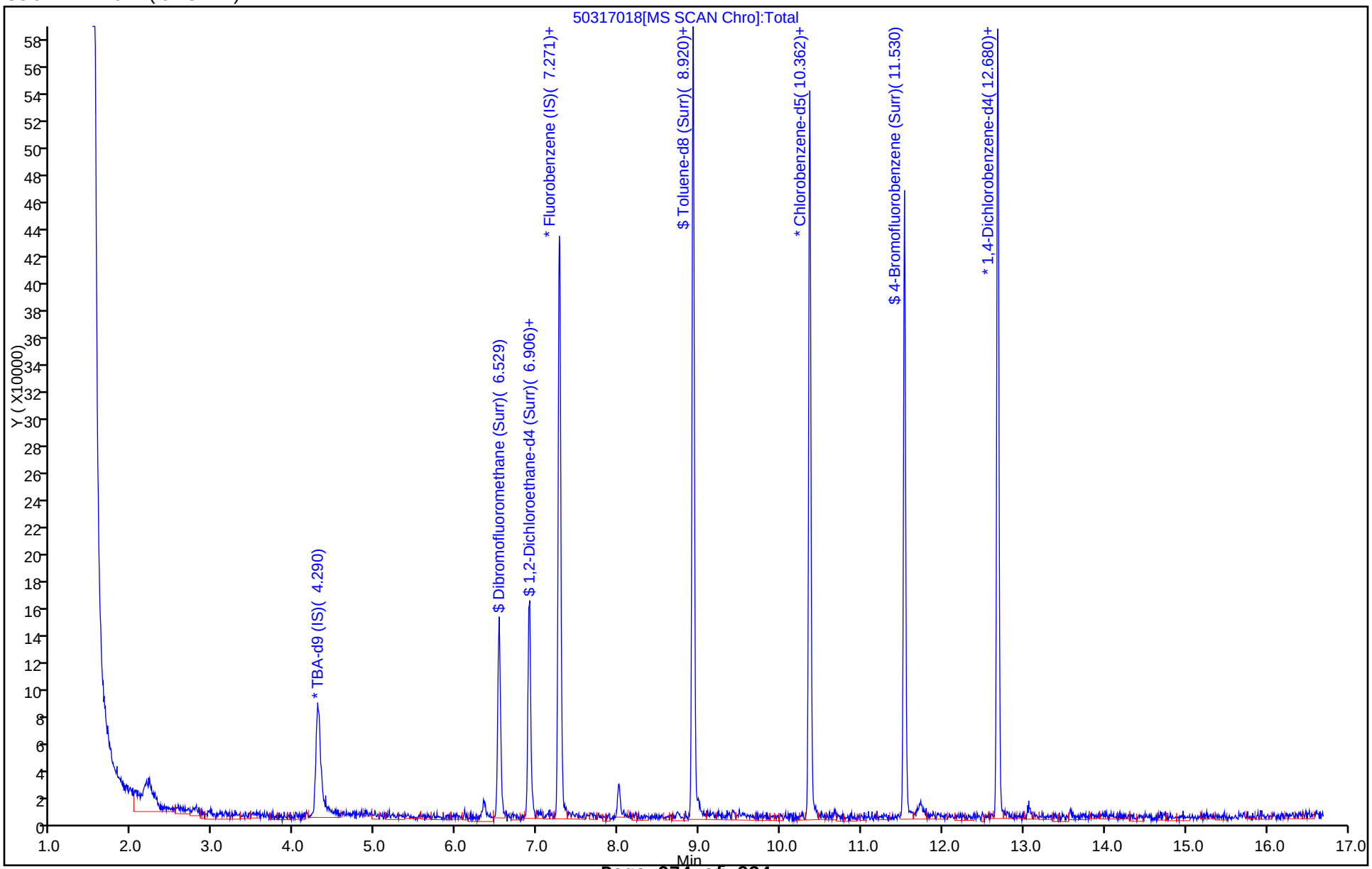
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:25:54 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317018.D				
Injection Date:	17-Mar-2015 19:55:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-7	Lab Sample ID:	180-41935-7	Worklist Smp#:	18
Client ID:	HD-COD-SW-12-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



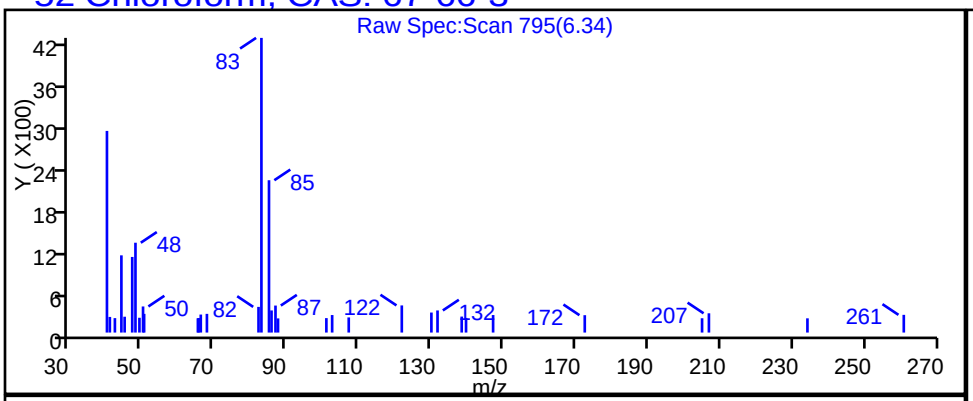
Report Date: 18-Mar-2015 10:25:54 Chrom Revision: 2.2 15-Jan-2015 13:05:58

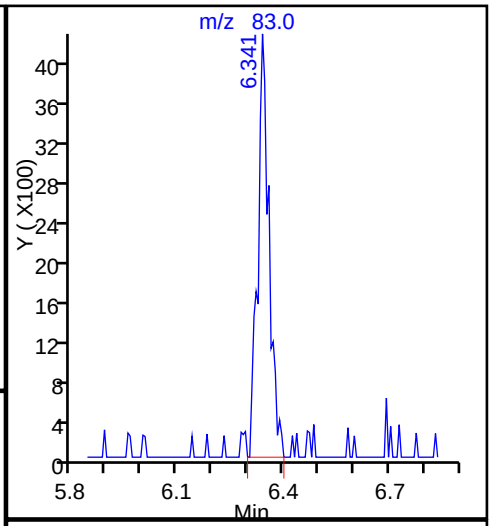
TestAmerica Pittsburgh

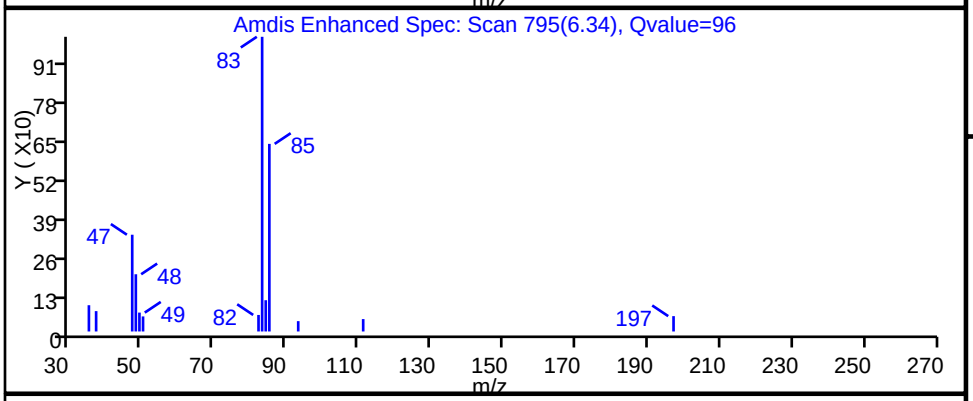
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317018.D

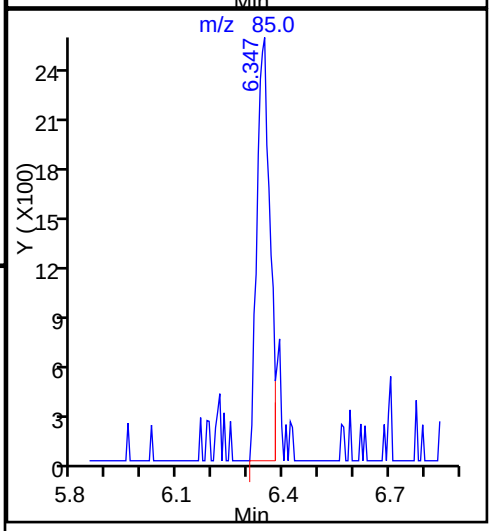
Injection Date:	17-Mar-2015 19:55:30	Instrument ID:	CHHP5
Lims ID:	180-41935-D-7	Lab Sample ID:	180-41935-7
Client ID:	HD-COD-SW-12-0/1-0		
Operator ID:	001562	ALS Bottle#:	18 Worklist Smp#: 18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

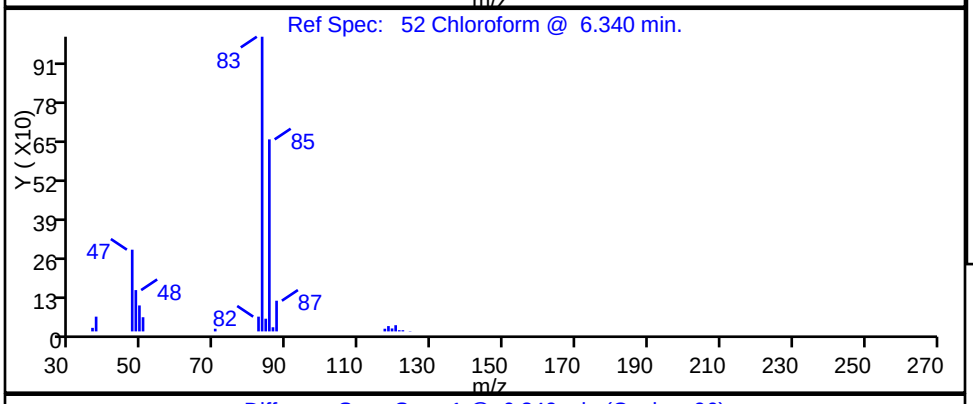
52 Chloroform, CAS: 67-66-3

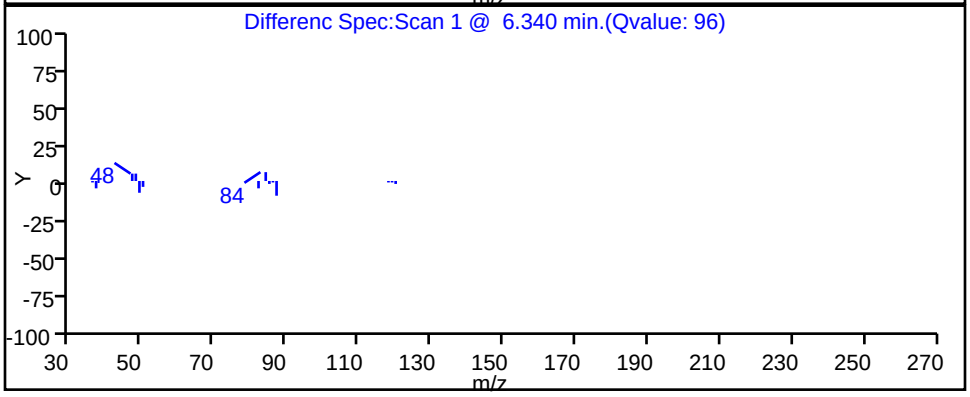












Manual Integration/User Assign Peak Report

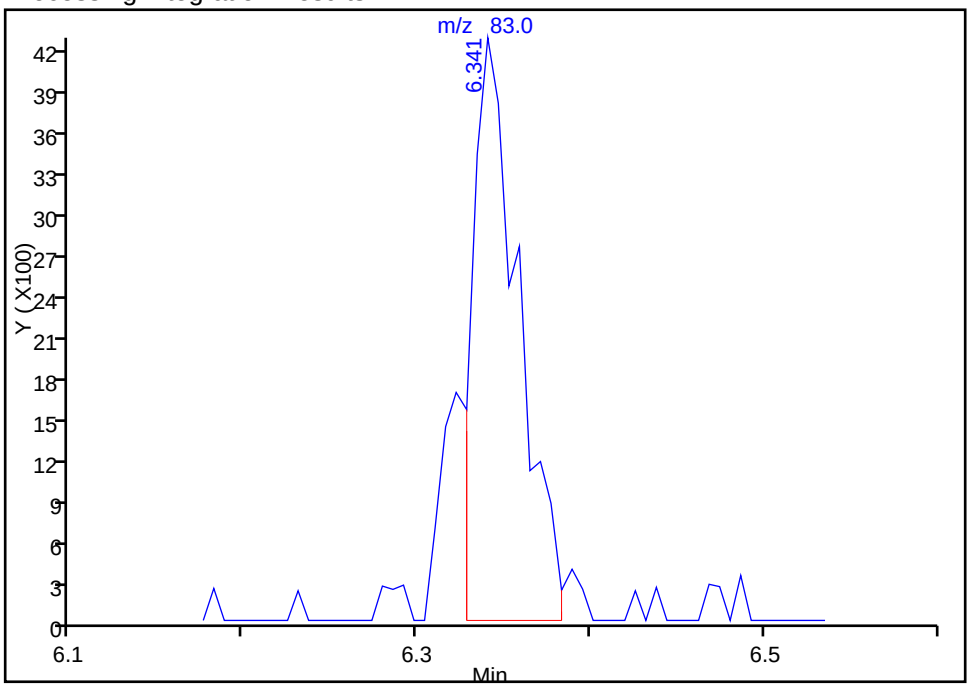
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317018.D				
Injection Date:	17-Mar-2015 19:55:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-7	Lab Sample ID:	180-41935-7		
Client ID:	HD-COD-SW-12-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

52 Chloroform, CAS: 67-66-3

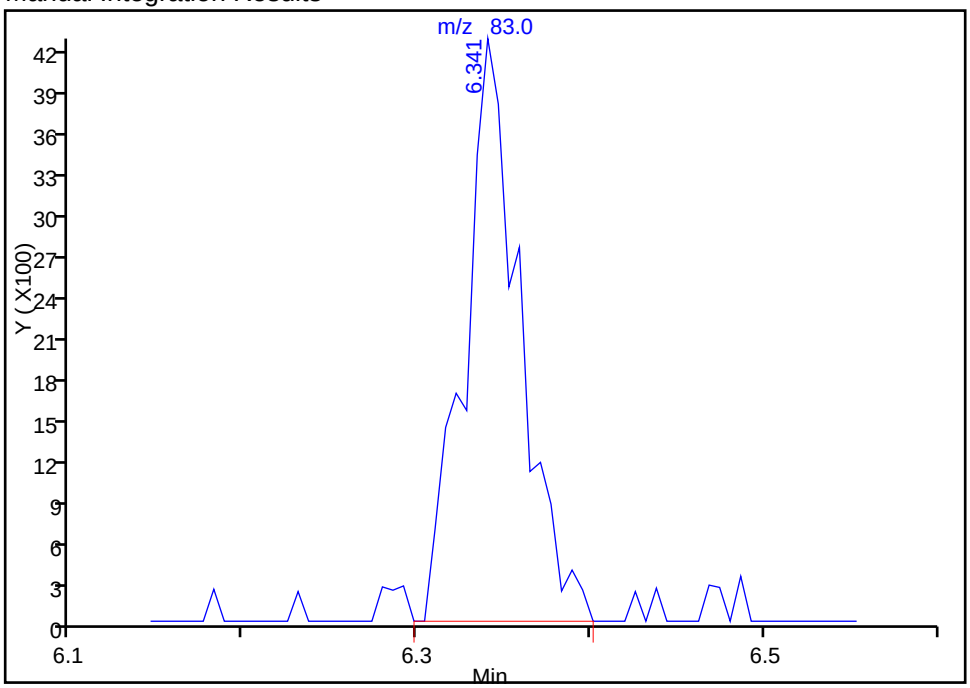
Processing Integration Results

RT: 6.34
Area: 7784
Amount: 1.767008
Amount Units: ng



Manual Integration Results

RT: 6.34
Area: 9363
Amount: 2.125449
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:25:53
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 | Lab Sample ID: 180-41935-8

Matrix: Water | Lab File ID: 50317019.D

Analysis Method: 8260C | Date Collected: 03/10/2015 10:15

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 20:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	4.3	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-41935-8

Matrix: Water Lab File ID: 50317019.D

Analysis Method: 8260C Date Collected: 03/10/2015 10:15

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 20:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		64-135
2037-26-5	Toluene-d8 (Surr)	106		71-118
460-00-4	4-Bromofluorobenzene (Surr)	111		70-118
1868-53-7	Dibromofluoromethane (Surr)	98		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317019.D
Lims ID: 180-41935-D-8 Lab Sample ID: 180-41935-8
Client ID: HD-COD-SW-13-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 20:19:30 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-8
Misc. Info.: 180-0006051-019
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:30:45 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:30:45

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.291	4.311	-0.020	85	111288	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.274	-0.002	99	446765	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.358	0.004	72	101309	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	96	166021	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.523	6.526	-0.003	55	100052	49.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.894	6.897	-0.003	97	129176	48.2	
$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	100	427205	52.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	97	160864	55.3	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.494	3.496	-0.002	94	19878	21.7	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.669				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	8.999	8.990	0.009	1	3132	0.3017	M
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

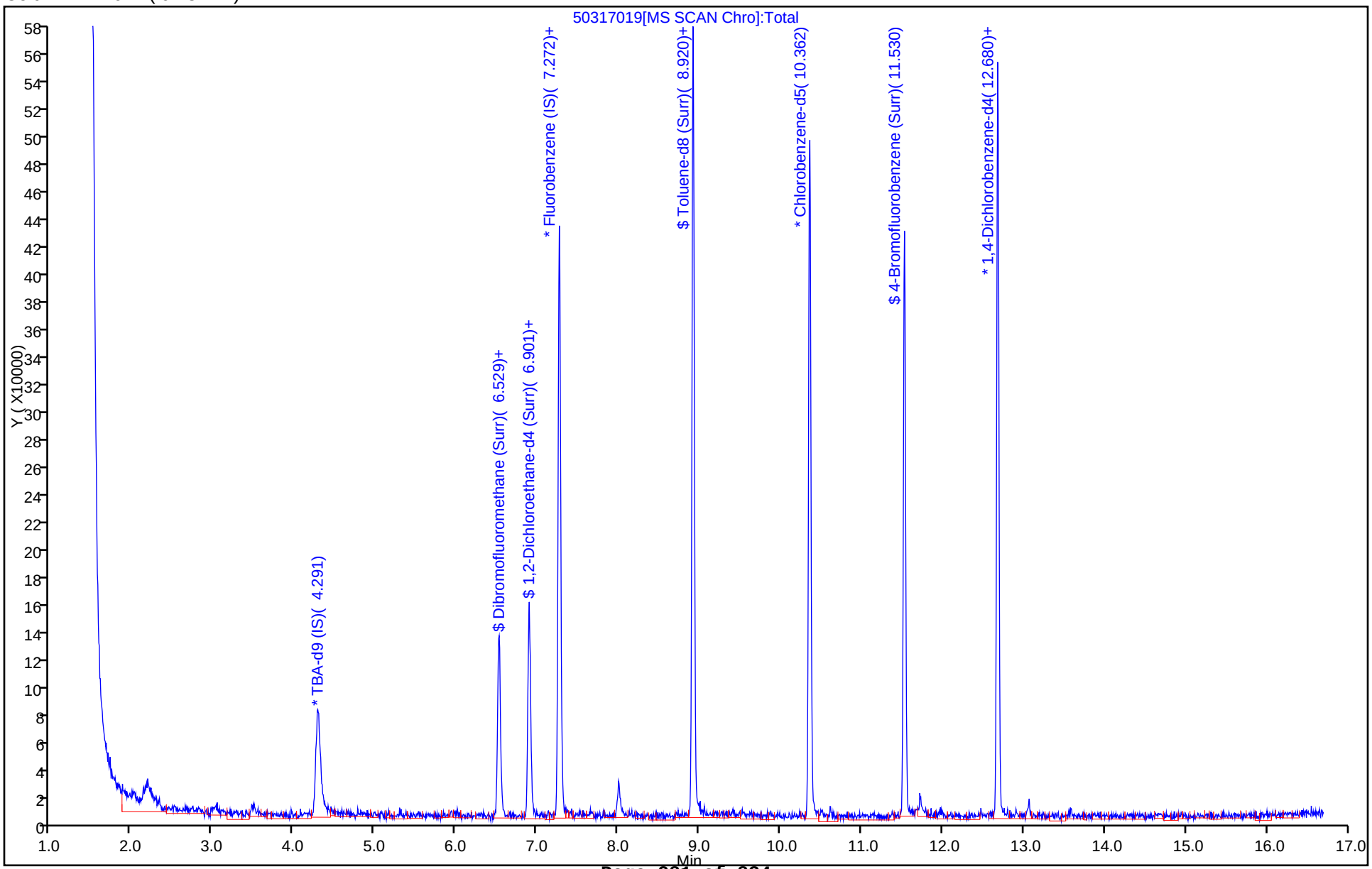
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:30:45 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317019.D				
Injection Date:	17-Mar-2015 20:19:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-8	Lab Sample ID:	180-41935-8	Worklist Smp#:	19
Client ID:	HD-COD-SW-13-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



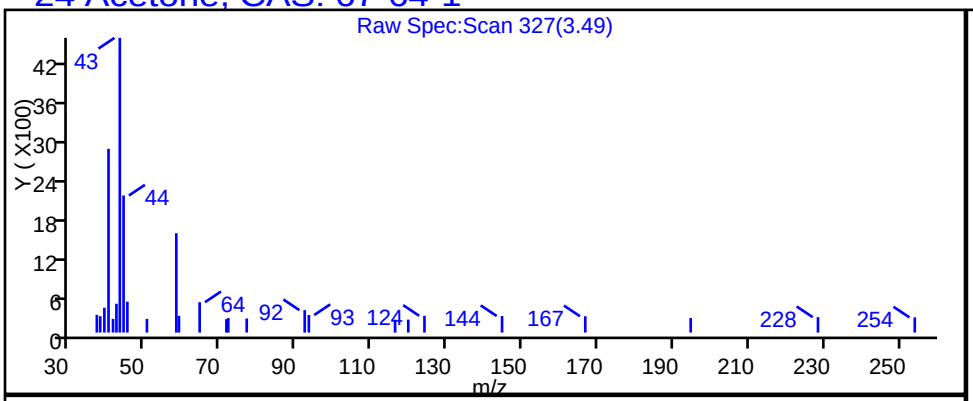
Report Date: 18-Mar-2015 10:30:45 Chrom Revision: 2.2 15-Jan-2015 13:05:58

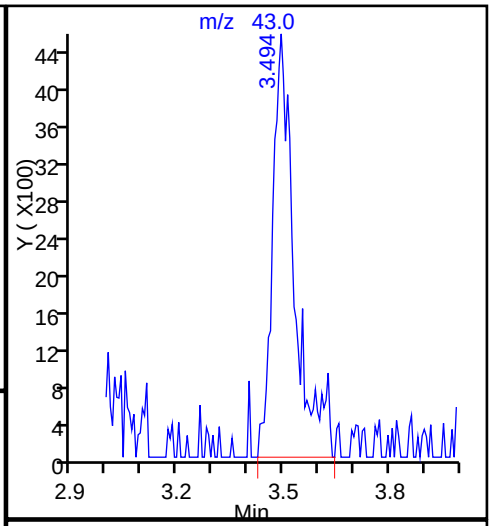
TestAmerica Pittsburgh

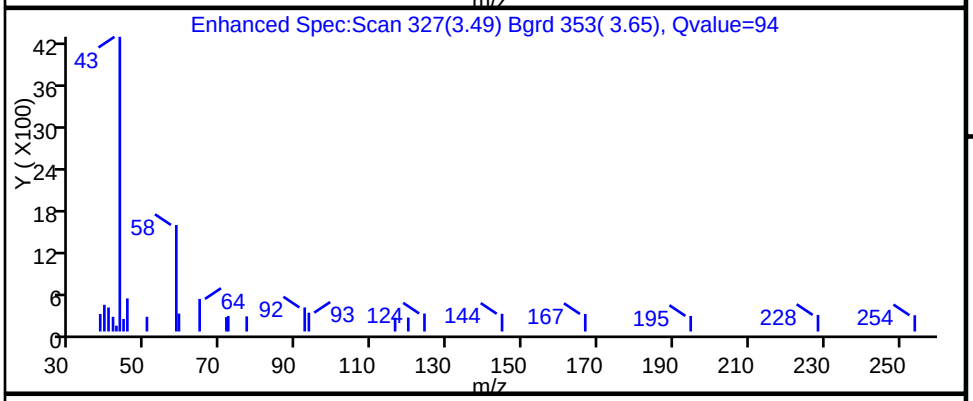
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317019.D

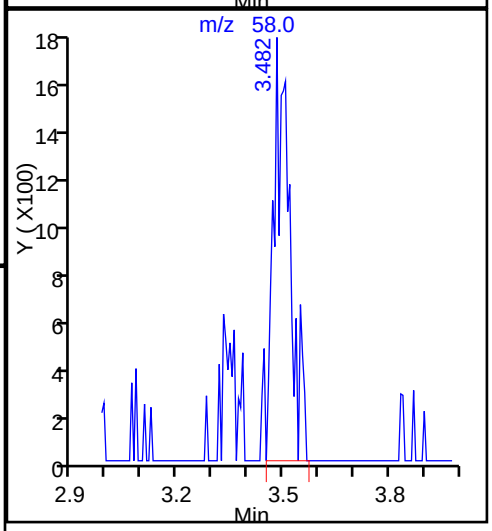
Injection Date:	17-Mar-2015 20:19:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-8	Lab Sample ID:	180-41935-8		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

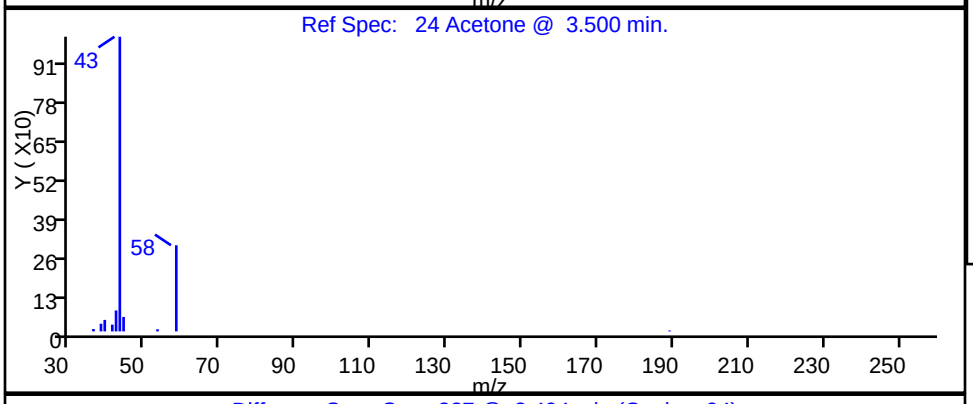
24 Acetone, CAS: 67-64-1

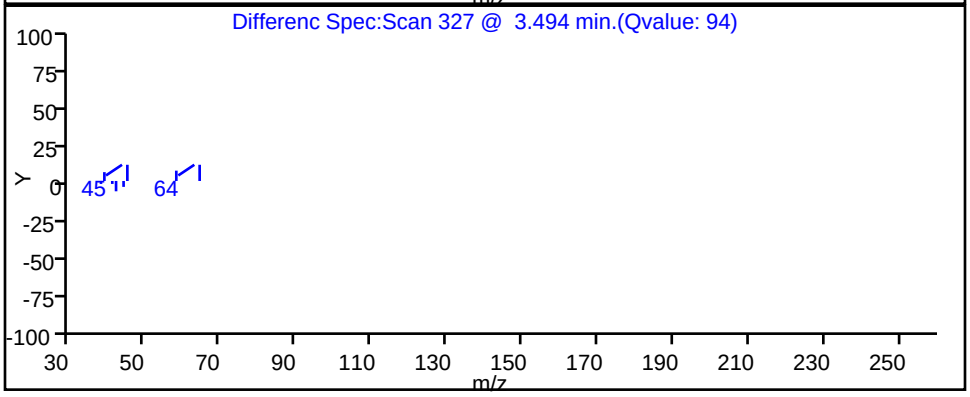












Manual Integration/User Assign Peak Report

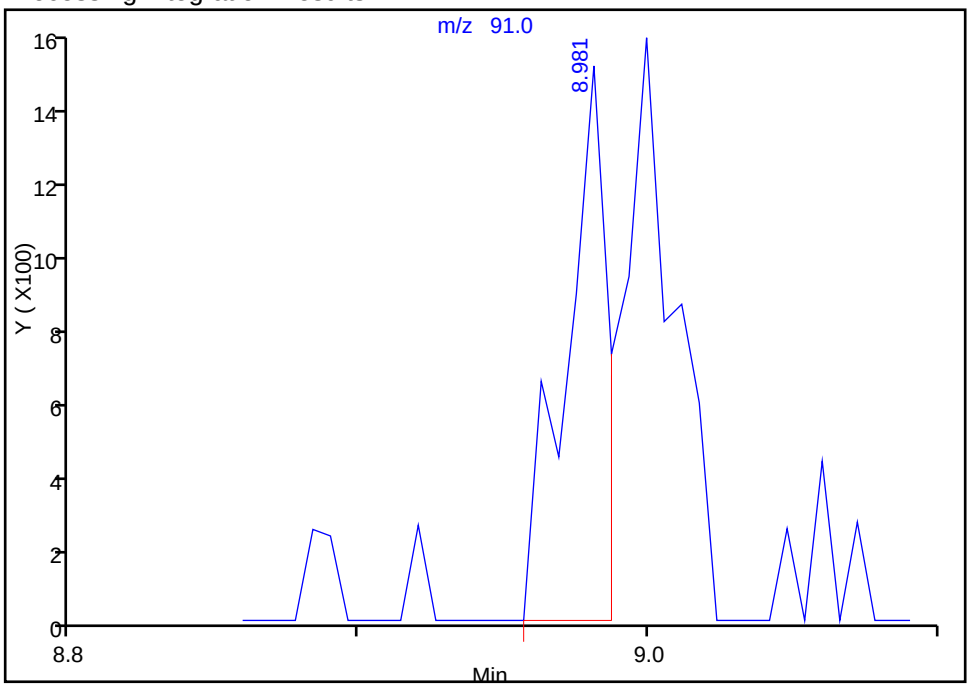
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317019.D				
Injection Date:	17-Mar-2015 20:19:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-8	Lab Sample ID:	180-41935-8		
Client ID:	HD-COD-SW-13-0/1-0				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

76 Toluene, CAS: 108-88-3

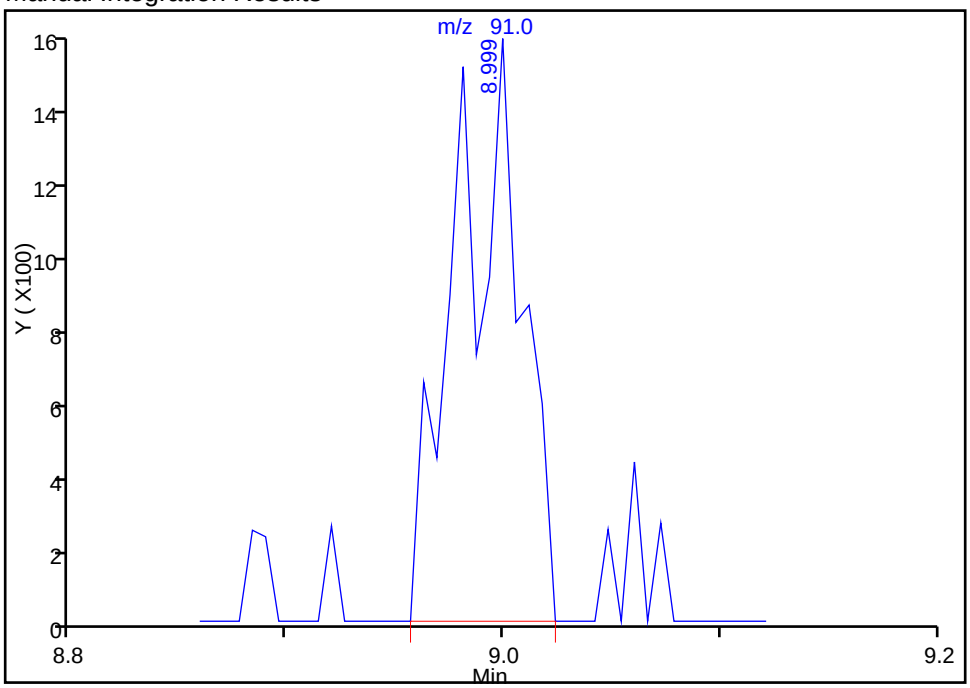
Processing Integration Results

RT: 8.98
Area: 1467
Amount: 0.141302
Amount Units: ng



Manual Integration Results

RT: 9.00
Area: 3132
Amount: 0.301675
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:30:45
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 | Lab Sample ID: 180-41935-9

Matrix: Water | Lab File ID: 50317020.D

Analysis Method: 8260C | Date Collected: 03/10/2015 14:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 20:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	0.51	J	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.16	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	10		1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	0.41	J	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	8.6		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	4.7		1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-41935-9

Matrix: Water Lab File ID: 50317020.D

Analysis Method: 8260C Date Collected: 03/10/2015 14:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 20:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	109		70-118
1868-53-7	Dibromofluoromethane (Surr)	105		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D
Lims ID: 180-41935-D-9 Lab Sample ID: 180-41935-9
Client ID: HD-COD-SW-15-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 20:44:30 ALS Bottle#: 20 Worklist Smp#: 20
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-9
Misc. Info.: 180-0006051-020
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:32:04 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:32:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.292	4.311	-0.019	85	112887	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.274	-0.001	99	433804	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.358	0.005	71	98754	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.682	0.005	96	157699	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.530	6.526	0.004	57	103295	52.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.897	0.005	98	132614	51.0	
$ 7 Toluene-d8 (Surr)	98	8.921	8.923	-0.002	100	393159	49.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.532	-0.001	98	155094	54.7	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96	3.397	3.381	0.016	68	6344	2.54	
24 Acetone	43	3.519	3.496	0.023	42	4488	5.05	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73	4.596	4.597	-0.001	64	1476	0.2580	
37 1,1-Dichloroethane	63	5.186	5.163	0.023	3	3750	0.8120	
45 cis-1,2-Dichloroethene	96	5.934	5.936	-0.002	84	139984	51.4	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83	6.342	6.343	-0.001	50	3321	0.7916	
53 1,1,1-Trichloroethane	97	6.524	6.526	-0.002	57	5550	2.07	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.668	7.669	-0.001	98	110238	42.8	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.536	9.537	-0.001	98	46673	23.6	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

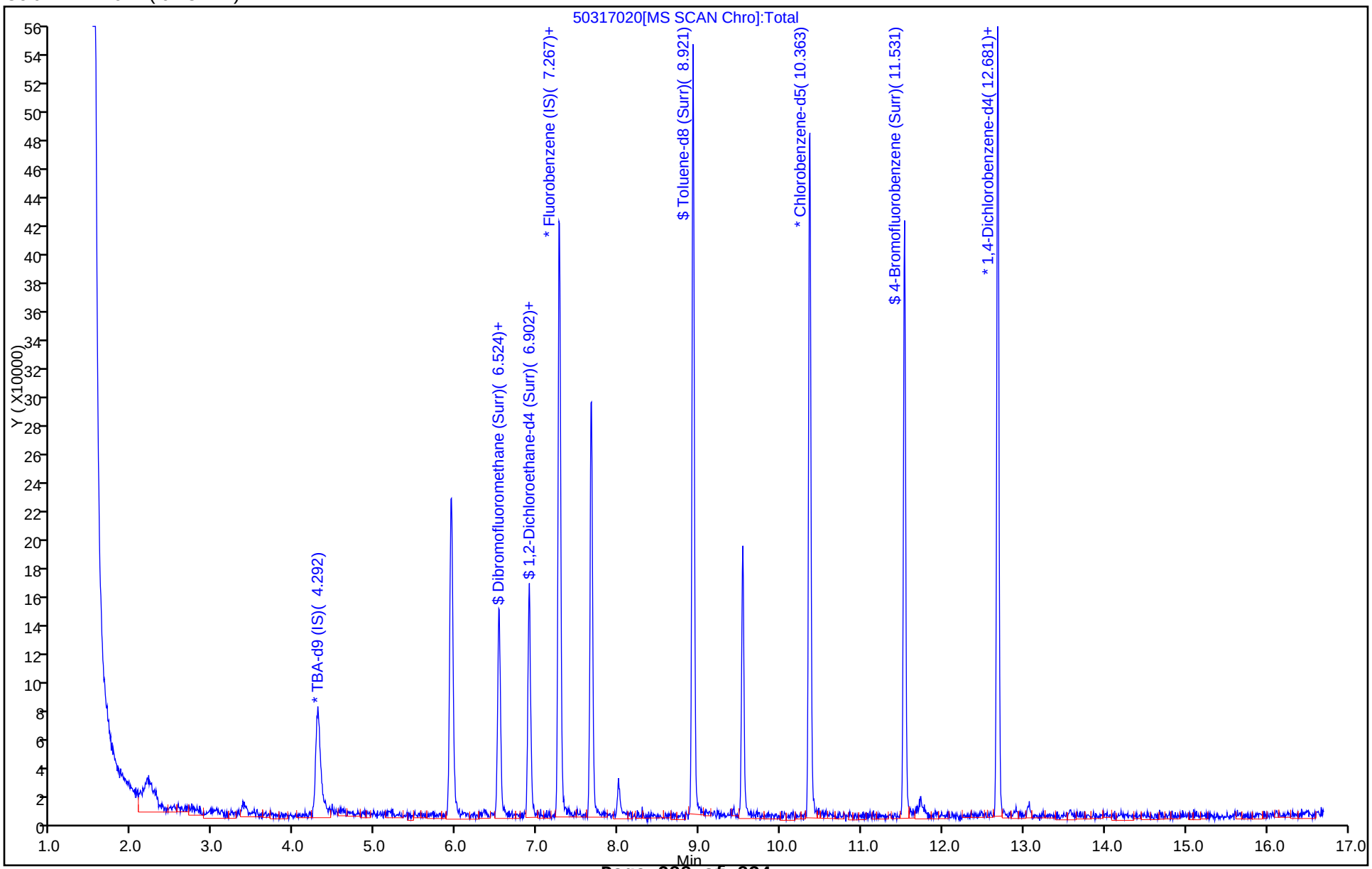
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D				
Injection Date:	17-Mar-2015 20:44:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-9	Lab Sample ID:	180-41935-9	Worklist Smp#:	20
Client ID:	HD-COD-SW-15-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



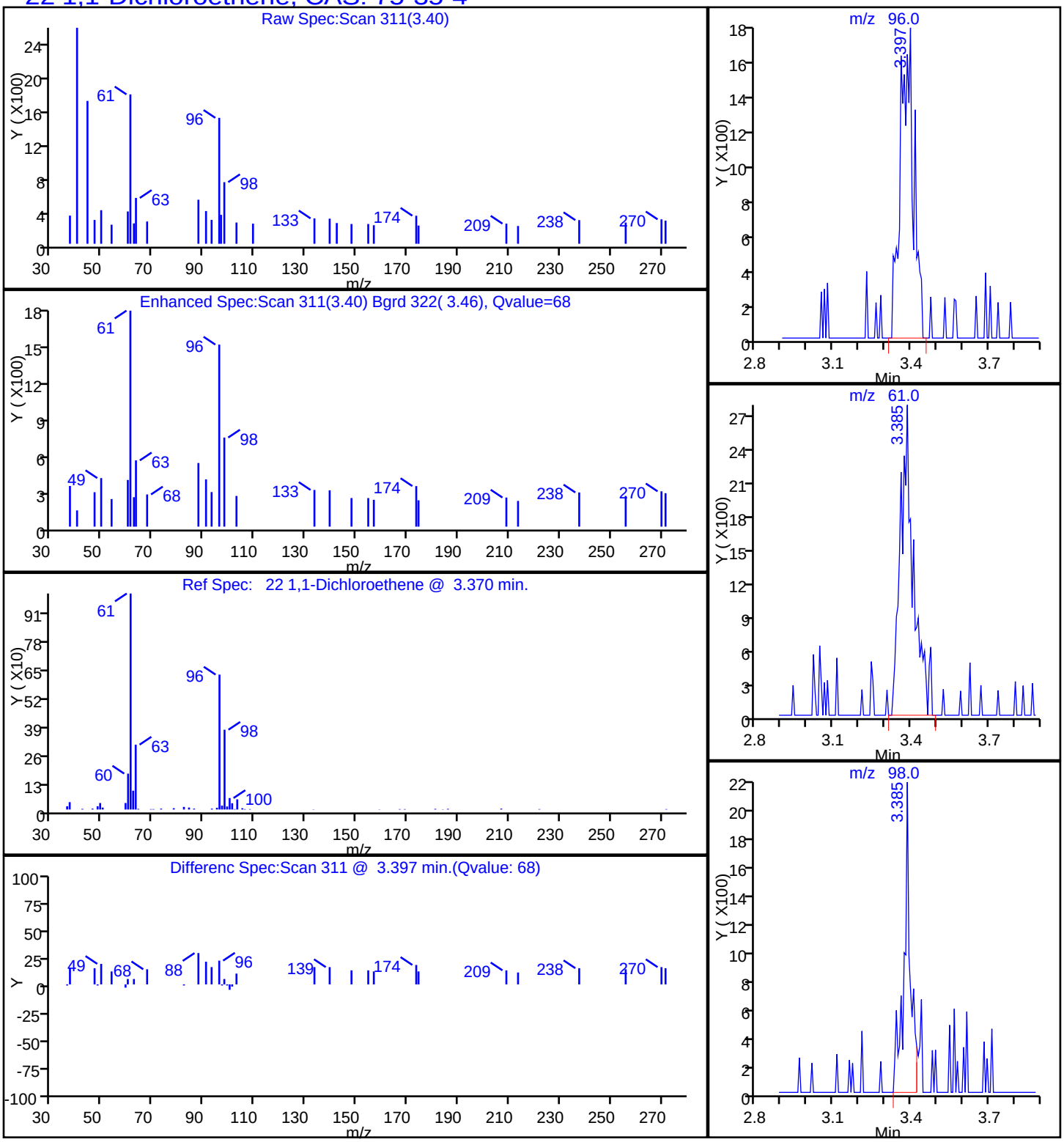
Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D

Injection Date:	17-Mar-2015 20:44:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-9	Lab Sample ID:	180-41935-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

22 1,1-Dichloroethene, CAS: 75-35-4



Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D

Injection Date: 17-Mar-2015 20:44:30 Instrument ID: CHHP5

Lims ID: 180-41935-D-9 Lab Sample ID: 180-41935-9

Client ID: HD-COD-SW-15-0/1-0

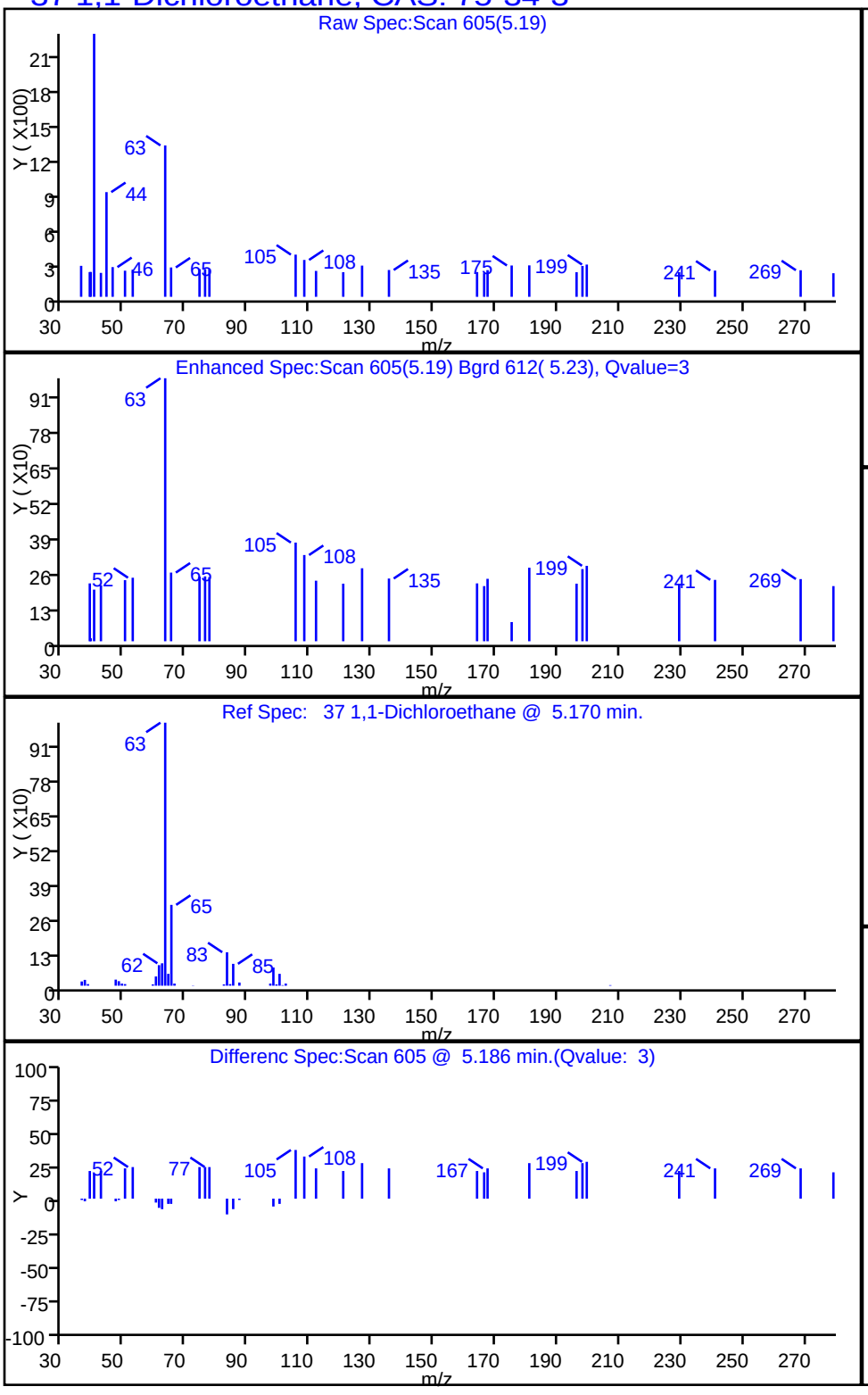
Operator ID: 001562 ALS Bottle#: 20 Worklist Smp#: 20

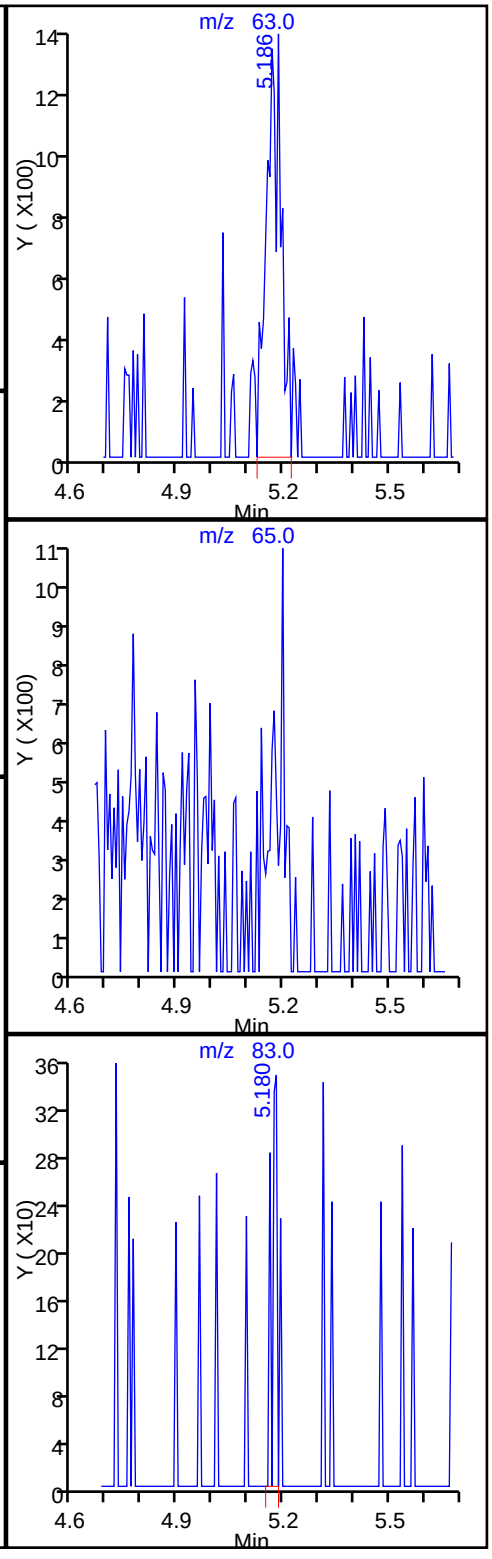
Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3



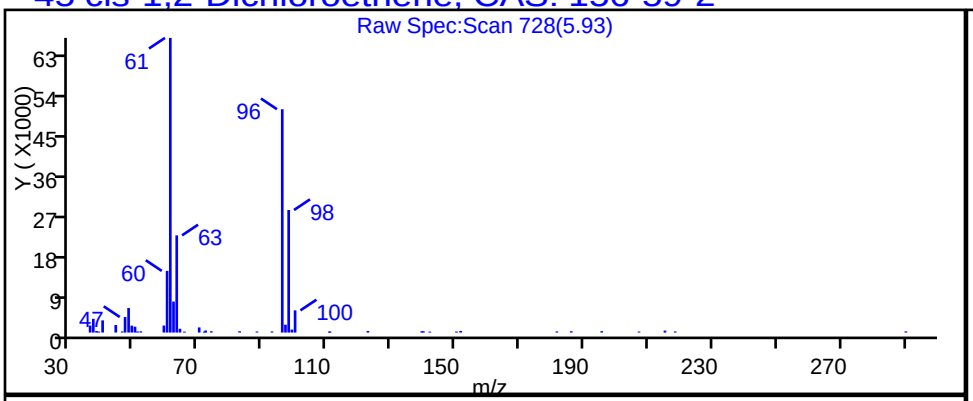


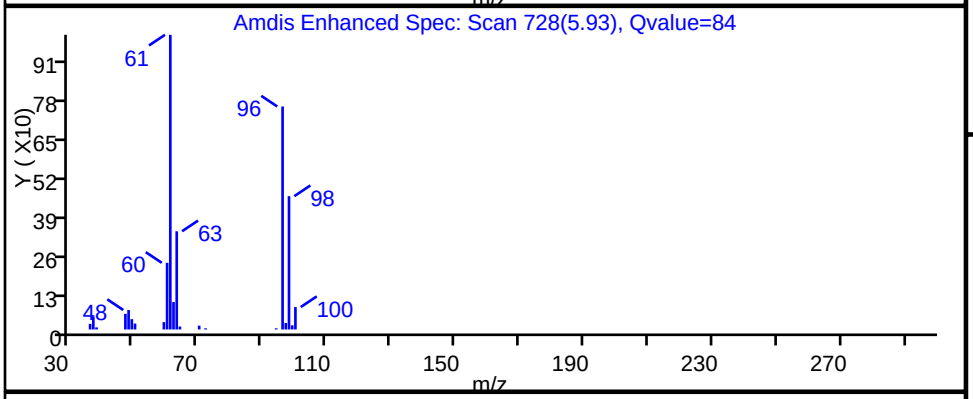
Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

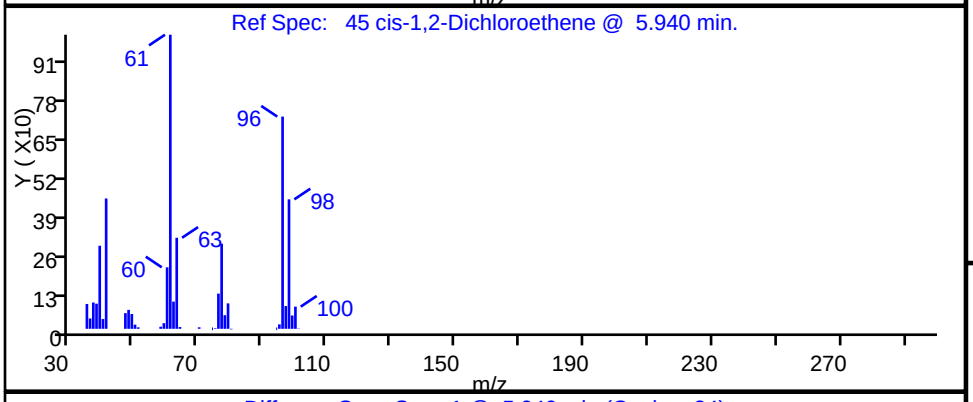
TestAmerica Pittsburgh

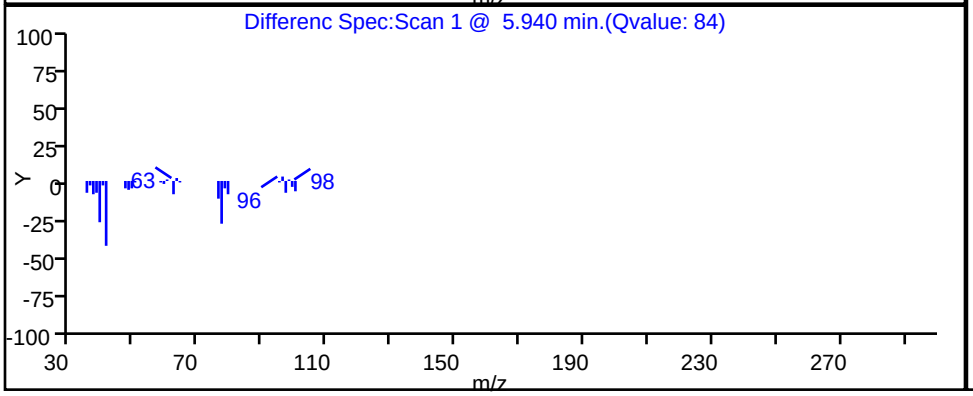
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D				
Injection Date:	17-Mar-2015 20:44:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-9	Lab Sample ID:	180-41935-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

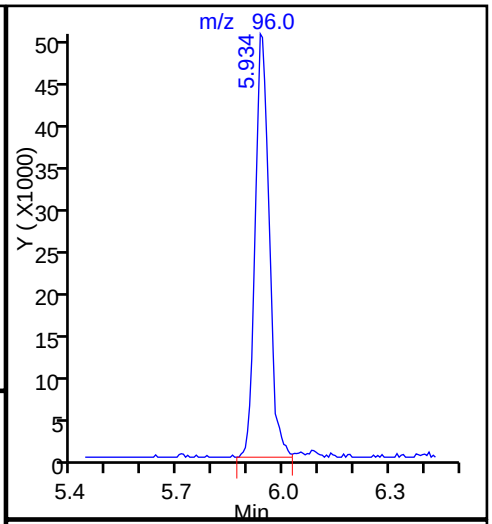
45 cis-1,2-Dichloroethene, CAS: 156-59-2

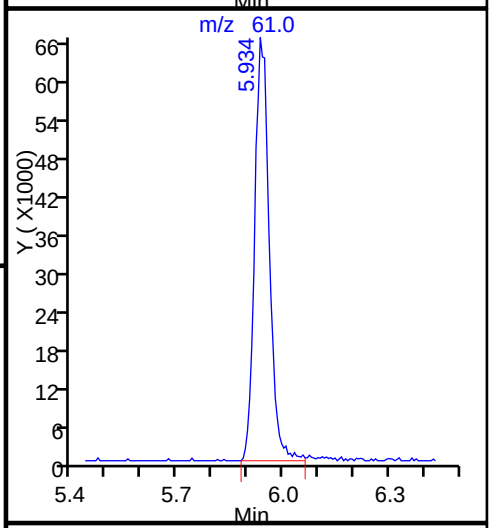


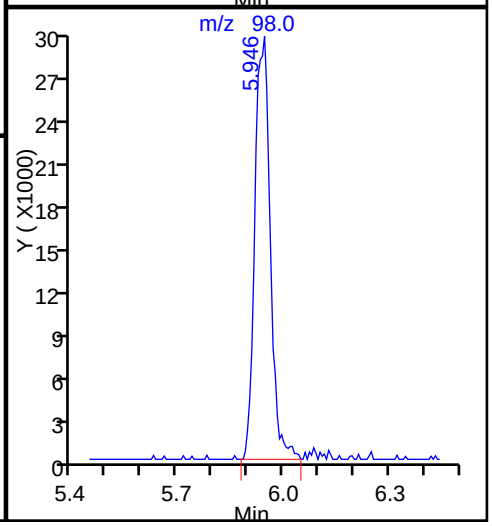










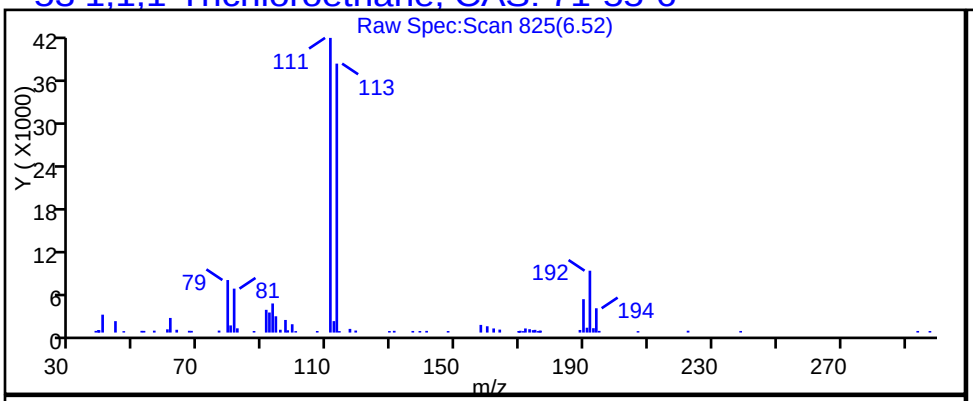


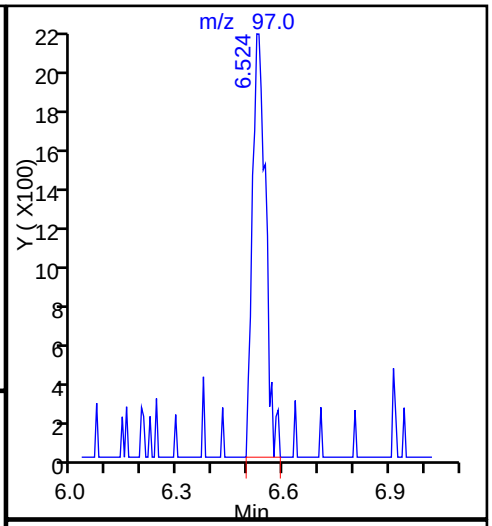
Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

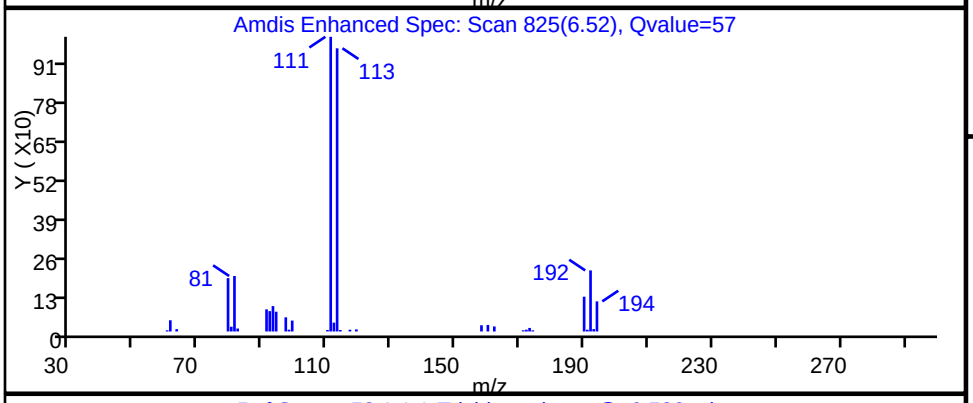
TestAmerica Pittsburgh

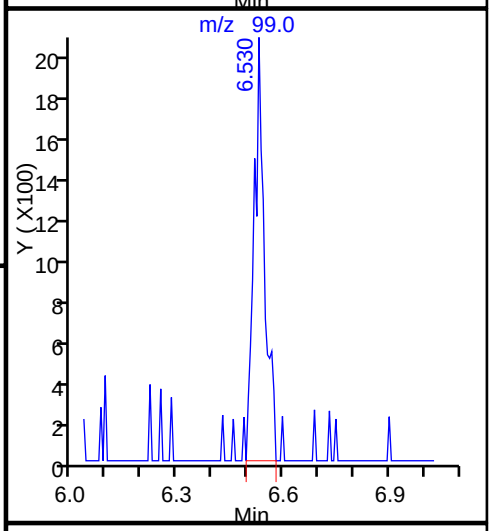
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D				
Injection Date:	17-Mar-2015 20:44:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-9	Lab Sample ID:	180-41935-9		
Client ID:	HD-COD-SW-15-0/1-0				
Operator ID:	001562	ALS Bottle#:	20	Worklist Smp#:	20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

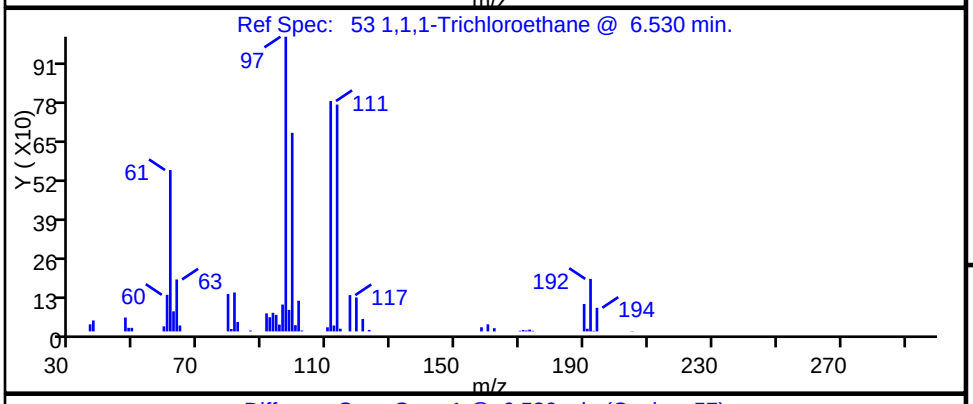
53 1,1,1-Trichloroethane, CAS: 71-55-6

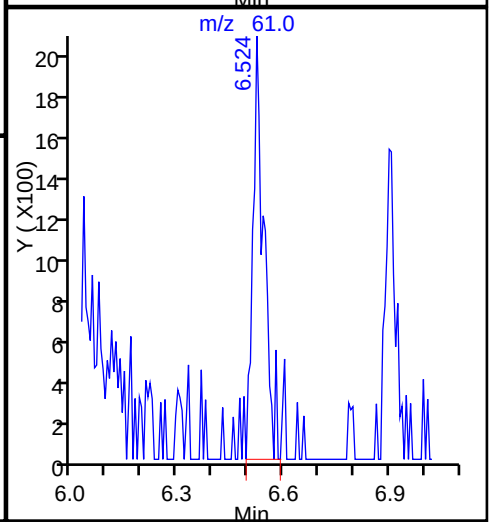


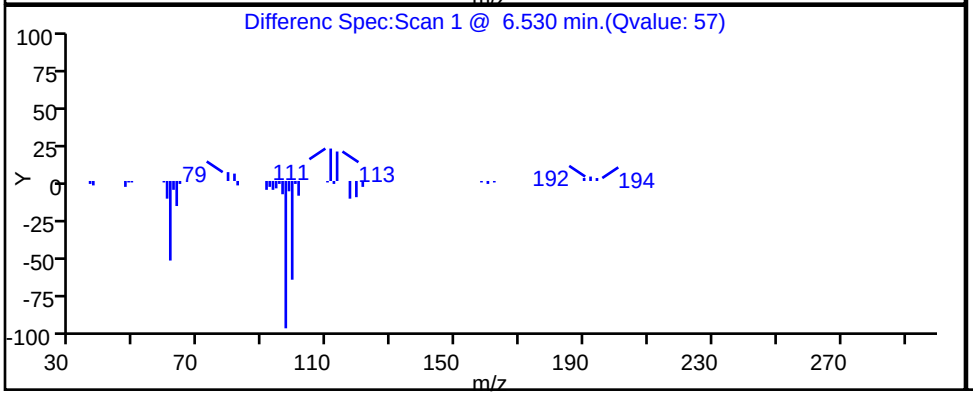










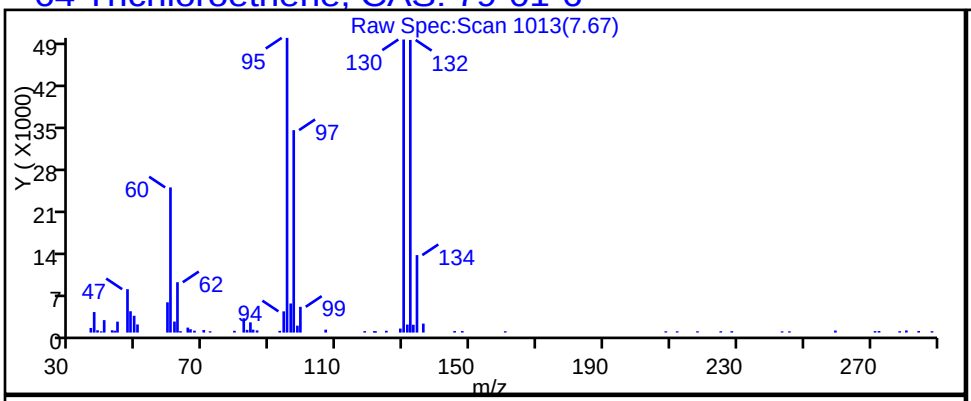


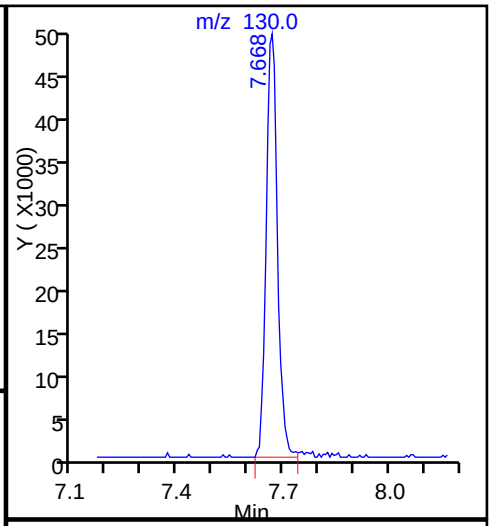
Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

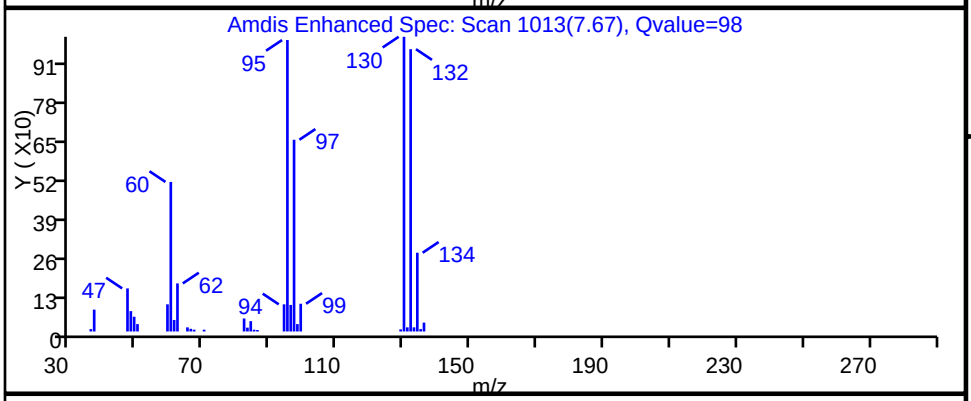
TestAmerica Pittsburgh

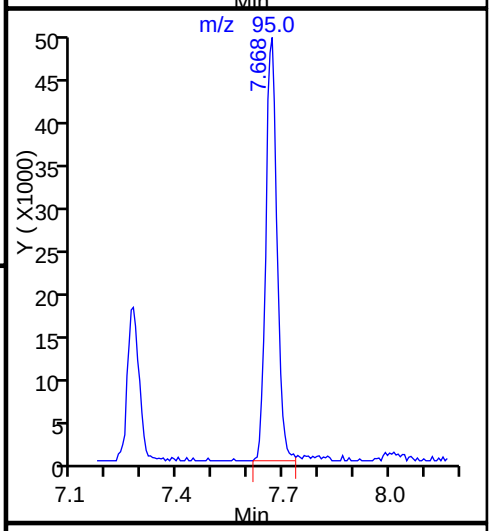
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D		
Injection Date:	17-Mar-2015 20:44:30	Instrument ID:	CHHP5
Lims ID:	180-41935-D-9	Lab Sample ID:	180-41935-9
Client ID:	HD-COD-SW-15-0/1-0		
Operator ID:	001562	ALS Bottle#:	20 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

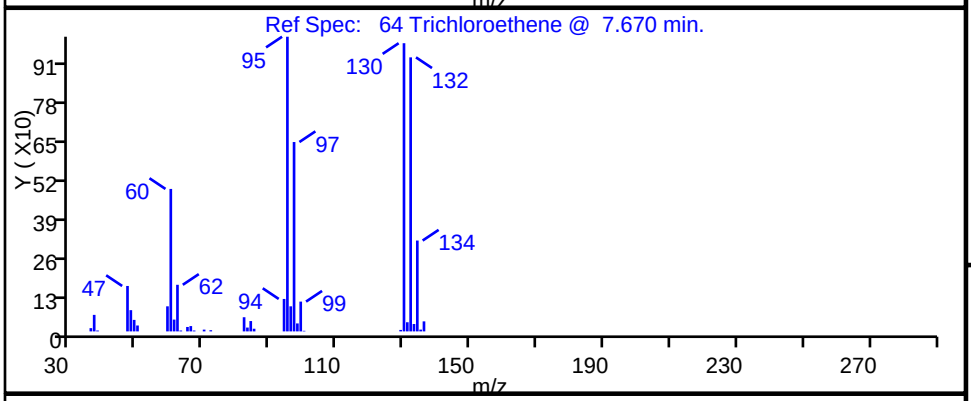
64 Trichloroethene, CAS: 79-01-6

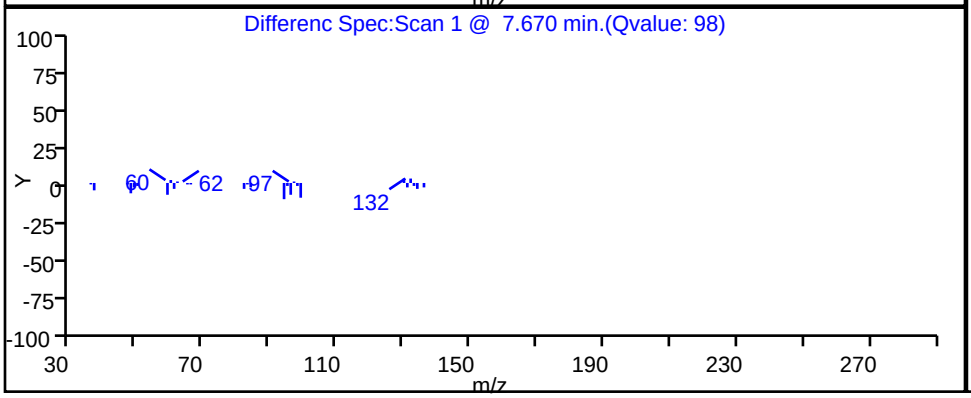


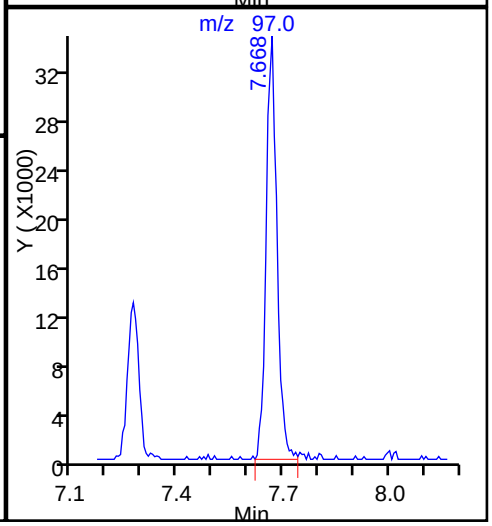












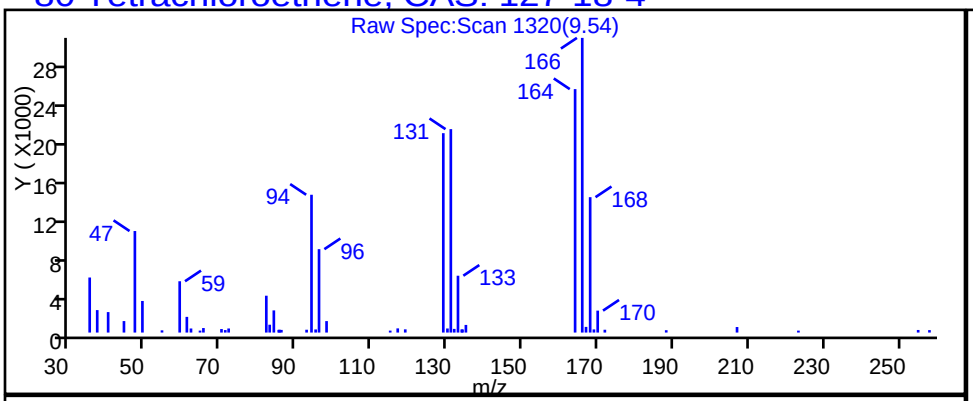
Report Date: 18-Mar-2015 10:32:04 Chrom Revision: 2.2 15-Jan-2015 13:05:58

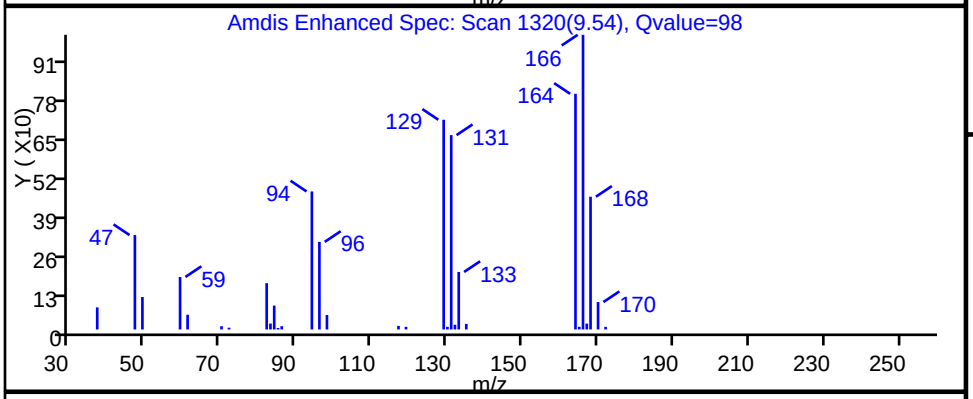
TestAmerica Pittsburgh

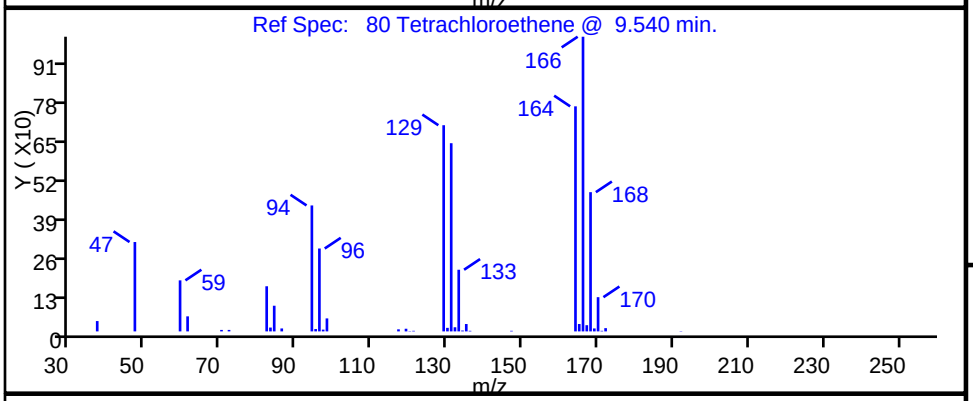
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317020.D

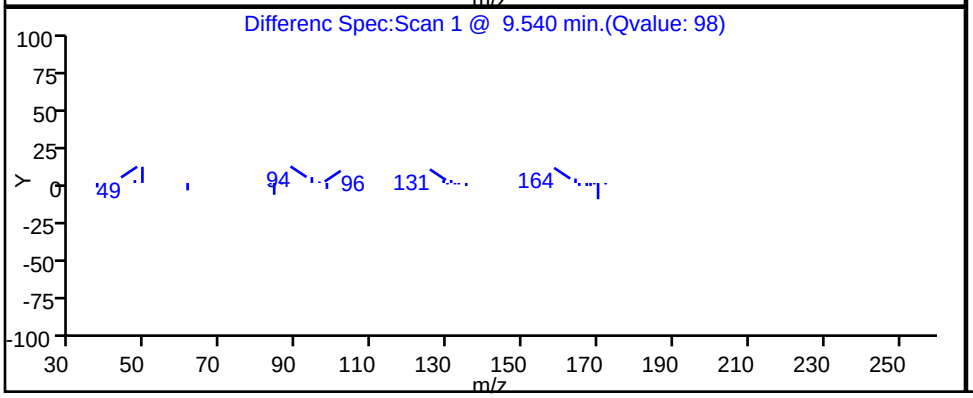
Injection Date:	17-Mar-2015 20:44:30	Instrument ID:	CHHP5
Lims ID:	180-41935-D-9	Lab Sample ID:	180-41935-9
Client ID:	HD-COD-SW-15-0/1-0		
Operator ID:	001562	ALS Bottle#:	20 Worklist Smp#: 20
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

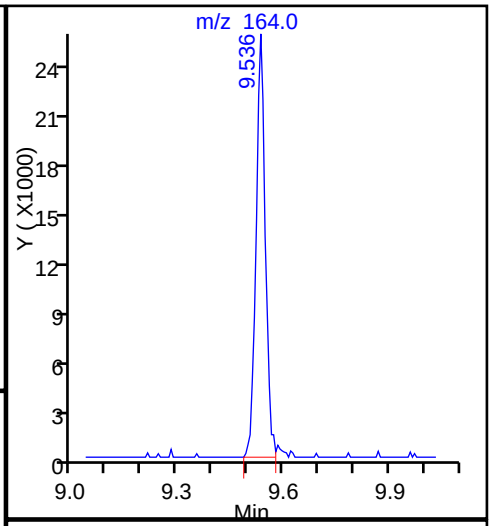
80 Tetrachloroethene, CAS: 127-18-4

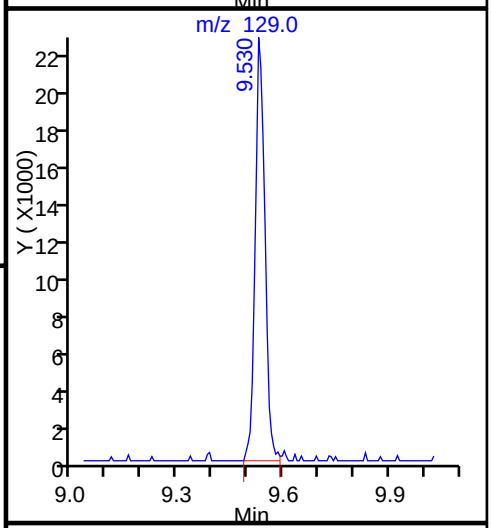


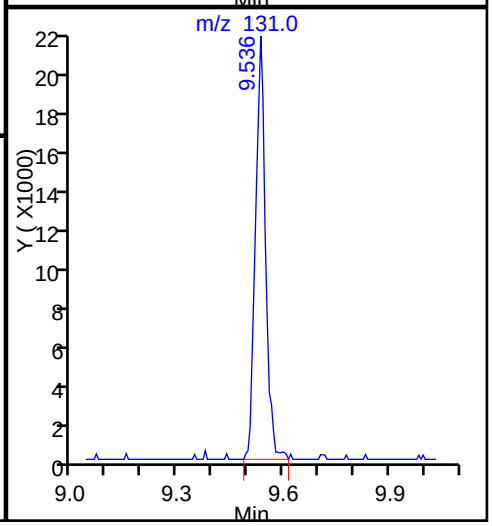












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 | Lab Sample ID: 180-41935-10

Matrix: Water | Lab File ID: 50317021.D

Analysis Method: 8260C | Date Collected: 03/10/2015 10:40

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	4.5	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	0.27	J	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-41935-10

Matrix: Water Lab File ID: 50317021.D

Analysis Method: 8260C Date Collected: 03/10/2015 10:40

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 21:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	105		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317021.D
Lims ID: 180-41935-E-10 Lab Sample ID: 180-41935-10
Client ID: HD-COD-SW-16-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 21:08:30 ALS Bottle#: 21 Worklist Smp#: 21
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-E-10
Misc. Info.: 180-0006051-021
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:33:27 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:33:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.311	-0.006	86	109634	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	100	452894	50.0	
* 3 Chlorobenzene-d5	119	10.365	10.358	0.007	71	102274	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	96	165648	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.526	6.526	0.000	56	98585	47.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	98	136101	50.1	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	100	408726	50.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.532	0.001	96	154454	52.6	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.508	3.496	0.012	95	20670	22.3	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96	5.954	5.936	0.018	1	1473	0.5176	M
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.676	7.669	0.007	87	3600	1.34	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	9.002	8.990	0.012	41	3880	0.3702	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.537	9.537	0.000	8	1458	0.7112	M
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

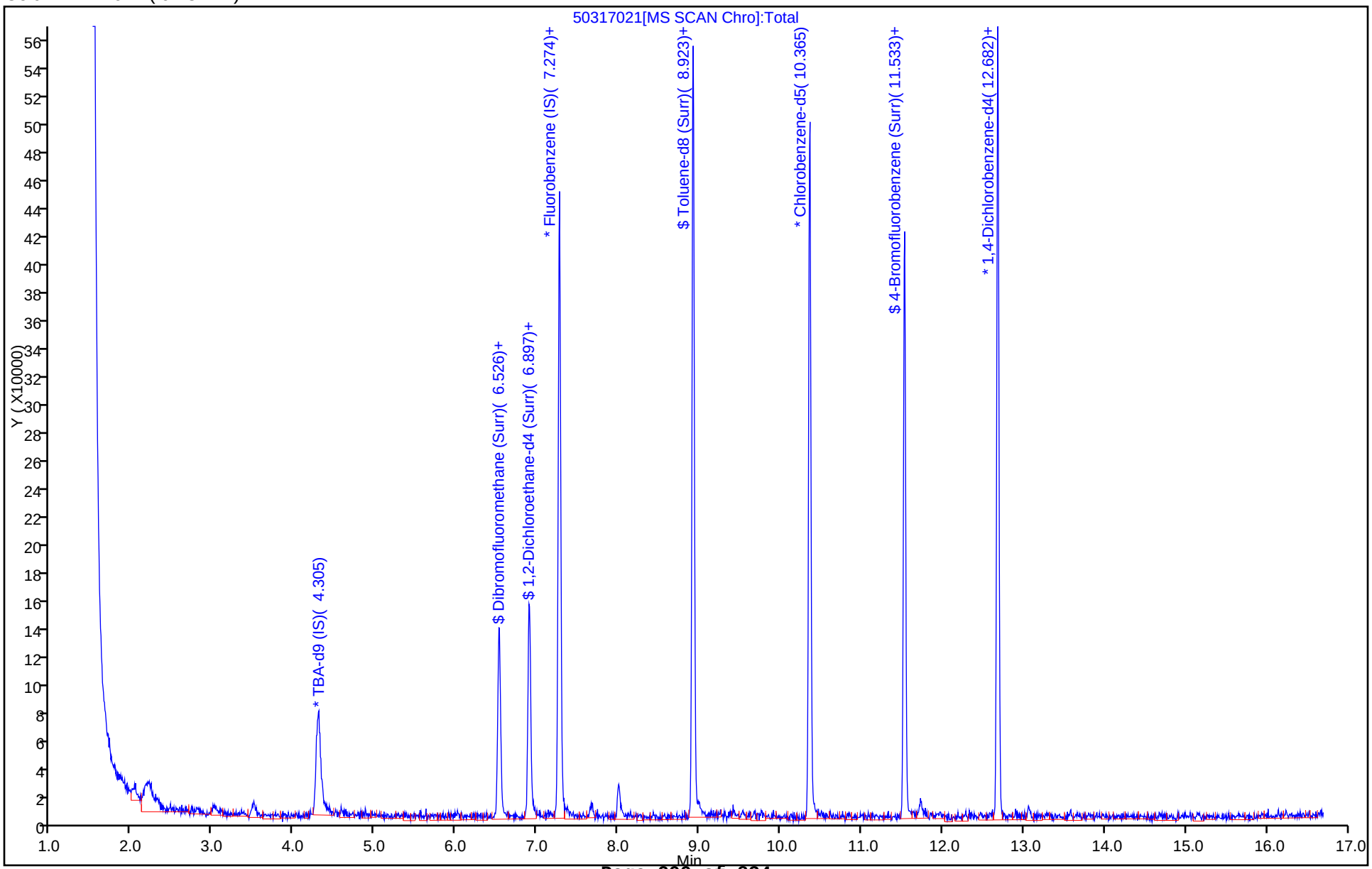
Report Date: 18-Mar-2015 10:33:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317021.D

Injection Date:	17-Mar-2015 21:08:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-E-10	Lab Sample ID:	180-41935-10	Worklist Smp#:	21
Client ID:	HD-COD-SW-16-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	21
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



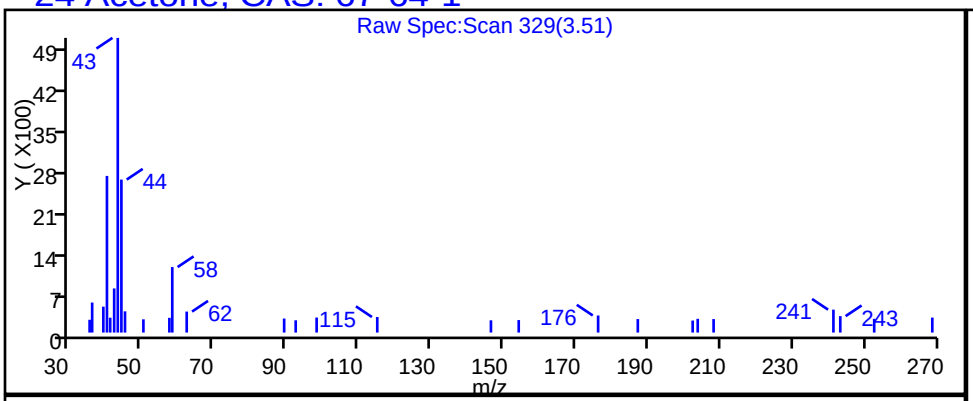
Report Date: 18-Mar-2015 10:33:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

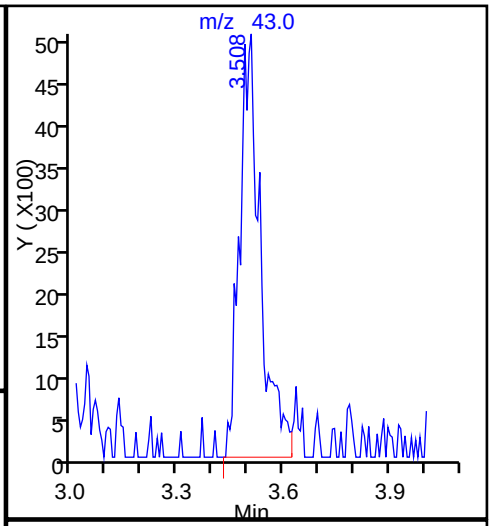
TestAmerica Pittsburgh

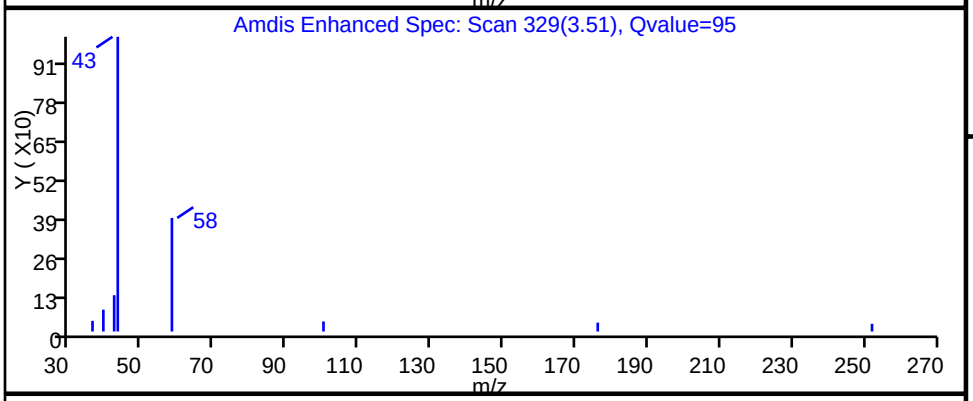
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317021.D

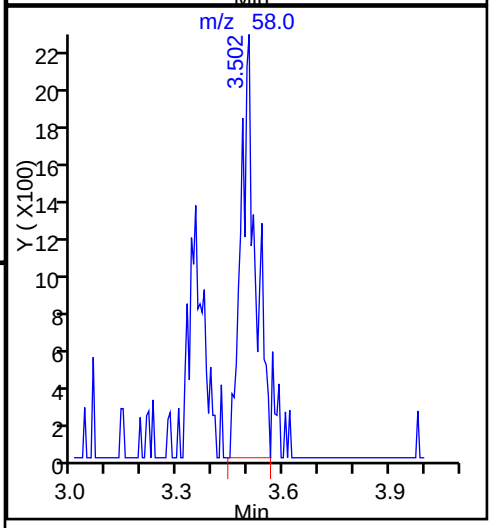
Injection Date:	17-Mar-2015 21:08:30	Instrument ID:	CHHP5
Lims ID:	180-41935-E-10	Lab Sample ID:	180-41935-10
Client ID:	HD-COD-SW-16-0/1-0		
Operator ID:	001562	ALS Bottle#:	21 Worklist Smp#: 21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

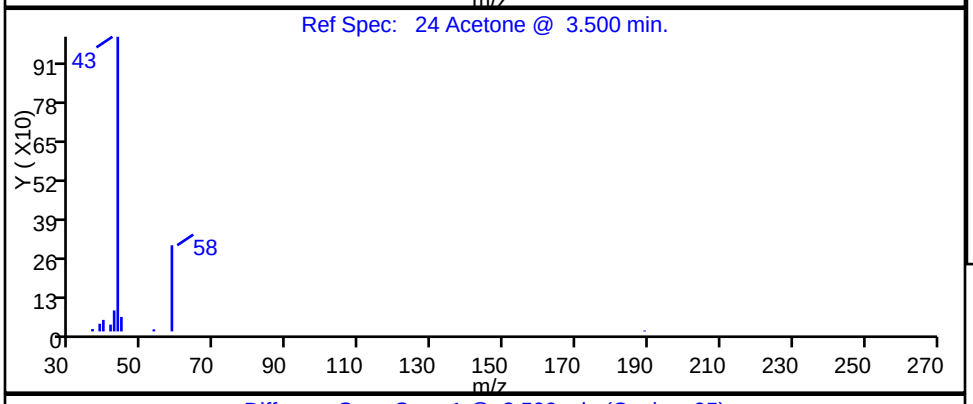
24 Acetone, CAS: 67-64-1

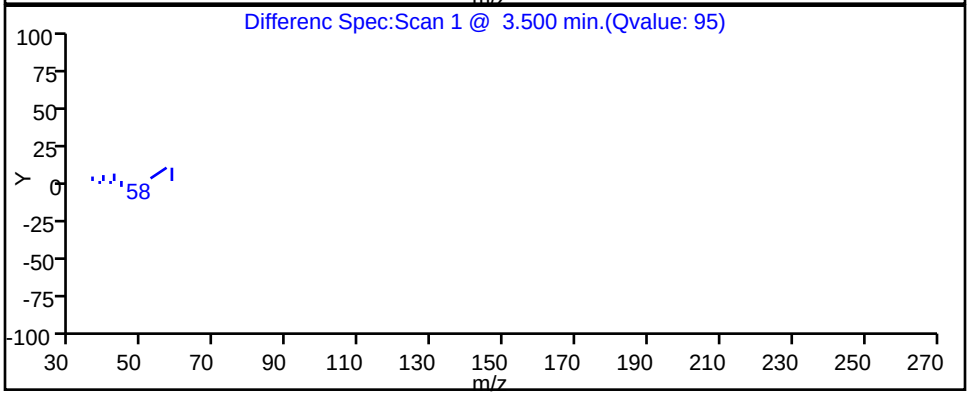










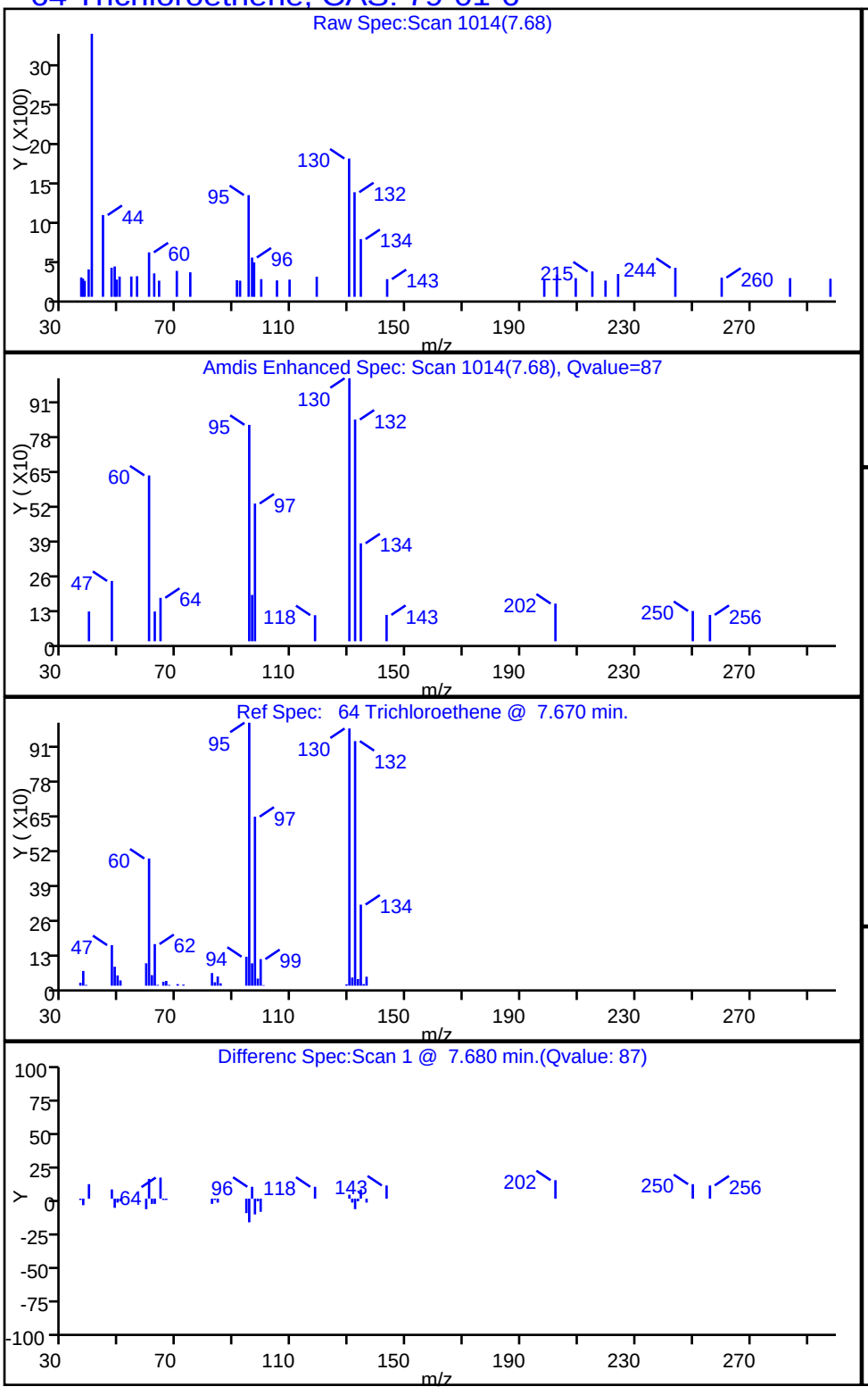


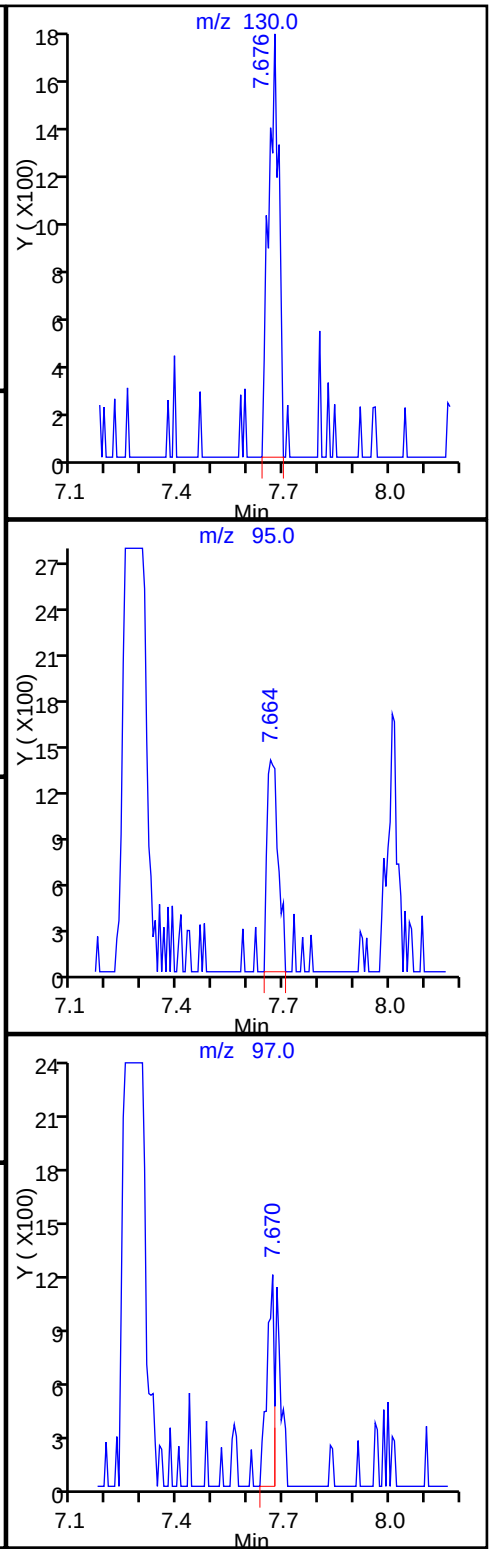
Report Date: 18-Mar-2015 10:33:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317021.D				
Injection Date:	17-Mar-2015 21:08:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-10	Lab Sample ID:	180-41935-10		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 Trichloroethene, CAS: 79-01-6





Manual Integration/User Assign Peak Report

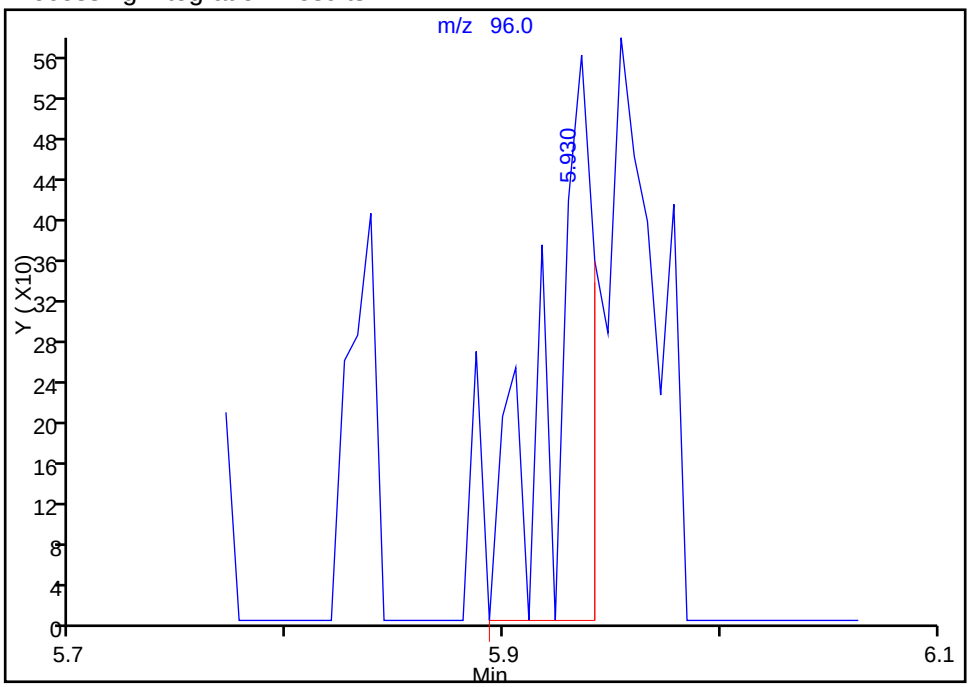
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317021.D				
Injection Date:	17-Mar-2015 21:08:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-10	Lab Sample ID:	180-41935-10		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

45 cis-1,2-Dichloroethene, CAS: 156-59-2

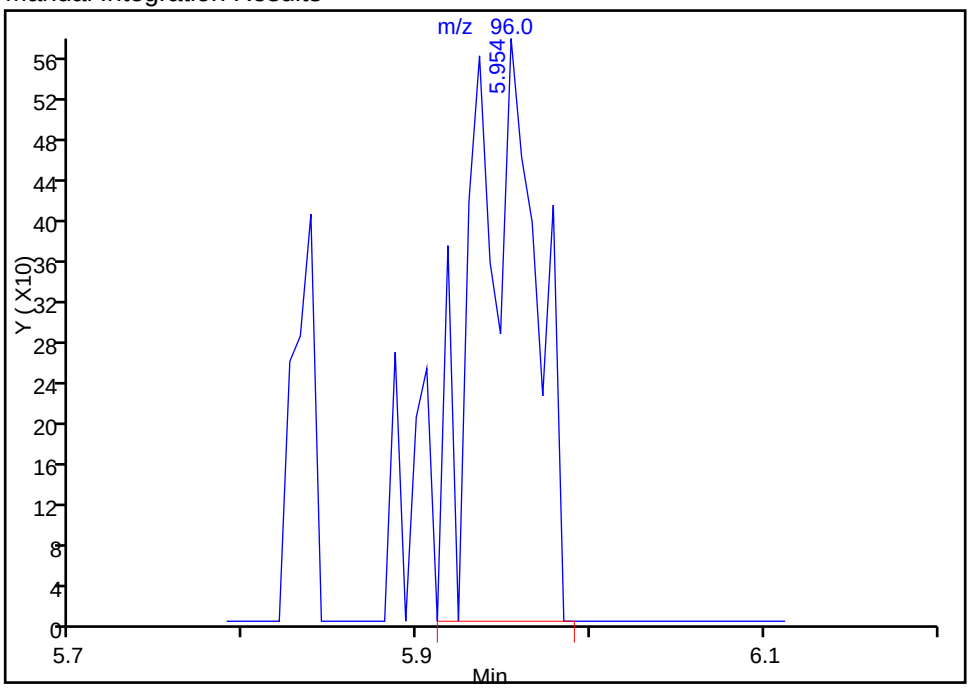
Processing Integration Results

RT: 5.93
Area: 783
Amount: 0.275134
Amount Units: ng



Manual Integration Results

RT: 5.95
Area: 1473
Amount: 0.517589
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:33:27
Audit Action: Manually Integrated
Audit Reason: Split Peak

Manual Integration/User Assign Peak Report

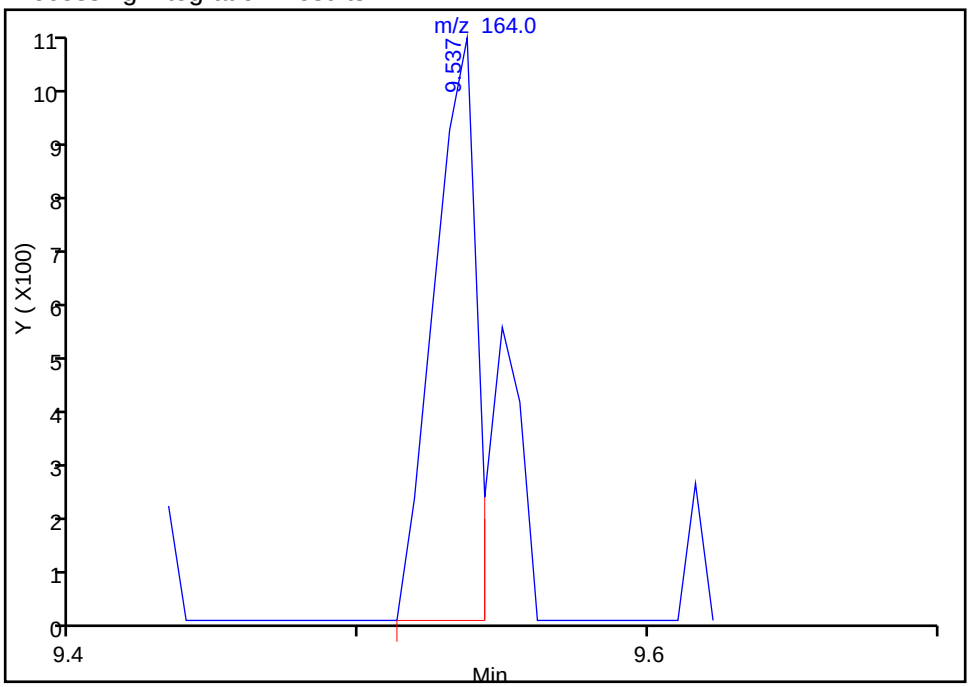
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317021.D				
Injection Date:	17-Mar-2015 21:08:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-10	Lab Sample ID:	180-41935-10		
Client ID:	HD-COD-SW-16-0/1-0				
Operator ID:	001562	ALS Bottle#:	21	Worklist Smp#:	21
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

80 Tetrachloroethene, CAS: 127-18-4

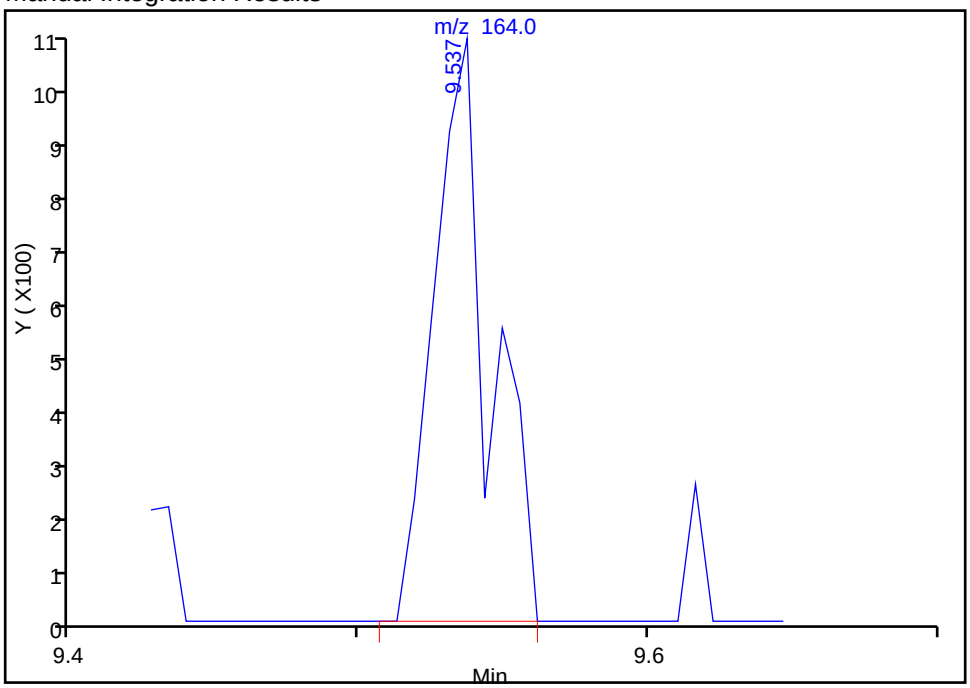
Processing Integration Results

RT: 9.54
Area: 1109
Amount: 0.540948
Amount Units: ng



Manual Integration Results

RT: 9.54
Area: 1458
Amount: 0.711183
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:33:27
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 | Lab Sample ID: 180-41935-11

Matrix: Water | Lab File ID: 50317007.D

Analysis Method: 8260C | Date Collected: 03/10/2015 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 15:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	2.9	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0		1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	3.6		1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-41935-11

Matrix: Water Lab File ID: 50317007.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 15:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	105		70-118
1868-53-7	Dibromofluoromethane (Surr)	96		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317007.D
Lims ID: 180-41935-E-11 Lab Sample ID: 180-41935-11
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 15:30:30 ALS Bottle#: 7 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-E-11
Misc. Info.: 180-0006051-008
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 16:08:14 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 16:08:14

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.311	-0.009	87	134571	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.274	-0.003	99	497919	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.358	0.009	72	117209	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	96	185851	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.002	55	109101	48.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	96	147597	49.4	
$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	99	464421	49.7	
$ 8 4-Bromofluorobenzene (Surr	95	11.535	11.532	0.003	97	177041	52.6	
11 Dichlorodifluoromethane	85		1.616				ND	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
14 Butadiene	39		1.951				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
17 Dichlorofluoromethane	67		2.657				ND	
18 Trichlorofluoromethane	101		2.705				ND	
19 Ethanol	45	3.006	3.012	-0.006	90	13081	NC	
20 Ethyl ether	59		3.089				ND	
21 Acrolein	56		3.265				ND	
22 1,1-Dichloroethene	96		3.381				ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.435				ND	
24 Acetone	43	3.487	3.496	-0.009	99	14856	14.6	
25 Iodomethane	142		3.587				ND	
26 Carbon disulfide	76		3.654				ND	
27 Isopropyl alcohol	45	3.621	3.736	-0.115	1	844	NC	
28 3-Chloro-1-propene	76		3.934				ND	
29 Acetonitrile	40	3.919	3.943	-0.024	15	5603	NC	
30 Methyl acetate	43		4.019				ND	
31 Methylene Chloride	84	4.150	4.147	0.003	1	1346	0.4053	
32 2-Methyl-2-propanol	59		4.445				ND	
33 Acrylonitrile	53		4.549				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
36 Hexane	57		4.981				ND	
37 1,1-Dichloroethane	63	5.178	5.163	0.015	27	1559	0.2941	
38 Vinyl acetate	43		5.291				ND	
41 Isopropyl ether	45		5.300				ND	
39 2-Chloro-1,3-butadiene	53		5.300				ND	
40 Isopropyl ether TIC	45		5.409				ND	
42 Tert-butyl ethyl ether	59		5.799				ND	
44 2,2-Dichloropropane	77		5.923				ND	
45 cis-1,2-Dichloroethene	96	5.944	5.936	0.008	84	16027	5.12	
43 Tert-butyl ethyl ether (TI	59		5.961				ND	
46 2-Butanone (MEK)	43		5.984				ND	
48 Ethyl acetate	43	5.993	5.993	0.000	1	1640	NC	
47 Propionitrile	54	6.091	6.024	0.066	1	76	NC	
49 Chlorobromomethane	128		6.222				ND	
51 Tetrahydrofuran	42		6.282				ND	
52 Chloroform	83		6.343				ND	
50 Methacrylonitrile	41		6.389				ND	
53 1,1,1-Trichloroethane	97	6.535	6.526	0.009	55	1838	0.5977	
54 Cyclohexane	56		6.580				ND	
56 Carbon tetrachloride	117		6.720				ND	
55 1,1-Dichloropropene	75		6.726				ND	
57 Isobutyl alcohol	41		6.939				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
61 Tert-amyl methyl ether	73	7.271	7.143	0.128	37	6747	NC	
60 Tert-amyl methyl ether (TI	73		7.262				ND	
62 n-Heptane	43		7.274				ND	
63 n-Butanol	56	7.757	7.654	0.103	1	187	NC	
64 Trichloroethene	130	7.666	7.669	-0.003	96	15172	5.13	
66 Methylcyclohexane	83		7.864				ND	
65 Ethyl acrylate	55	7.824	7.867	-0.043	1	104	NC	
69 Methyl methacrylate	69		7.867				ND	
67 1,2-Dichloropropane	63		7.901				ND	
68 Dibromomethane	93		8.022				ND	
70 1,4-Dioxane	88		8.065				ND	
71 Dichlorobromomethane	83		8.199				ND	
72 2-Nitropropane	41		8.427				ND	
73 2-Chloroethyl vinyl ether	63		8.506				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
78 Ethyl methacrylate	69		9.318				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.534	9.537	-0.003	97	42544	18.1	
81 1,3-Dichloropropane	76		9.567				ND	
82 2-Hexanone	43		9.659				ND	
83 n-Butyl acetate	43	9.735	9.662	0.072	1	184	NC	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.370				ND	
87 Chlorobenzene	112		10.395				ND	
88 4-Chlorobenzotrifluoride	180		10.431				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
96 2-Chlorobenzotrifluoride	180		11.277				ND	
95 Cyclohexanol	57		11.280				ND	
97 Isopropylbenzene	105		11.380				ND	
98 Cyclohexanone	55		11.450				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
100 Bromobenzene	156		11.684				ND	
101 1,2,3-Trichloropropane	110		11.721				ND	
102 trans-1,4-Dichloro-2-buten	53		11.733				ND	
103 N-Propylbenzene	120		11.788				ND	
104 2-Chlorotoluene	126		11.873				ND	
105 3-Chlorotoluene	126		11.934				ND	
106 1,3,5-Trimethylbenzene	105		11.964				ND	
107 4-Chlorotoluene	126		11.983				ND	
108 tert-Butylbenzene	119		12.287				ND	
109 Pentachloroethane	167		12.314				ND	
110 1,2,4-Trimethylbenzene	105		12.335				ND	
111 1,2-dichloro-4-(trifluorom	214		12.402				ND	
112 sec-Butylbenzene	105		12.506				ND	
113 1,3-Dichlorobenzene	146		12.621				ND	
114 4-Isopropyltoluene	119		12.652				ND	
119 Benzyl chloride	91		12.655				ND	
115 1,4-Dichlorobenzene	146		12.707				ND	
116 2,4-Dichloro-1-(triflourom	214		12.755				ND	
117 1,2,3-Trimethylbenzene	105		12.758				ND	
118 2,5-Dichlorobenzotrifluori	214		12.804				ND	
120 n-Butylbenzene	91		13.059				ND	
121 1,2-Dichlorobenzene	146		13.084				ND	
122 1,2-Dibromo-3-Chloropropan	75		13.862				ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.008				ND	
124 1,3,5-Trichlorobenzene	180		14.078				ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.428				ND	
126 1,2,4-Trichlorobenzene	180		14.696				ND	
127 Hexachlorobutadiene	225		14.860				ND	
128 Naphthalene	128		14.939				ND	
129 1,2,3-Trichlorobenzene	180		15.189				ND	
131 2,4,5-Trichlorotoluene	159		15.967				ND	
130 2,3,6-Trichlorotoluene	159		16.065				ND	
132 2-Methylnaphthalene	142		16.080				ND	
146 2,5-Dichlorotoluene	1		0.000				ND	
150 2,6-Dichlorotoluene	1		0.000				ND	
151 Isooctane	57		0.000				ND	
149 3,4-Dichlorotoluene	1		0.000				ND	
152 Formaldehyde TIC	1		0.000				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
148 2,3-Dichlorotoluene	1		0.000				ND	
147 2,4-Dichlorotoluene	1		0.000				ND	
S 133 Xylenes, Total	106		1.000				ND	
S 134 1,2-Dichloroethene, Total	96				0		5.12	
S 135 1,3-Dichloropropene, Total	1		0.000				ND	
T 153 1,2 Epoxybutane TIC	42		0.000				ND	
T 136 Mesityl oxide TIC	83		0.000				ND	
T 137 Tetrahydrofuran TIC	42		0.000				ND	
T 138 Methyl n-amyl ketone TIC	43		0.000				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

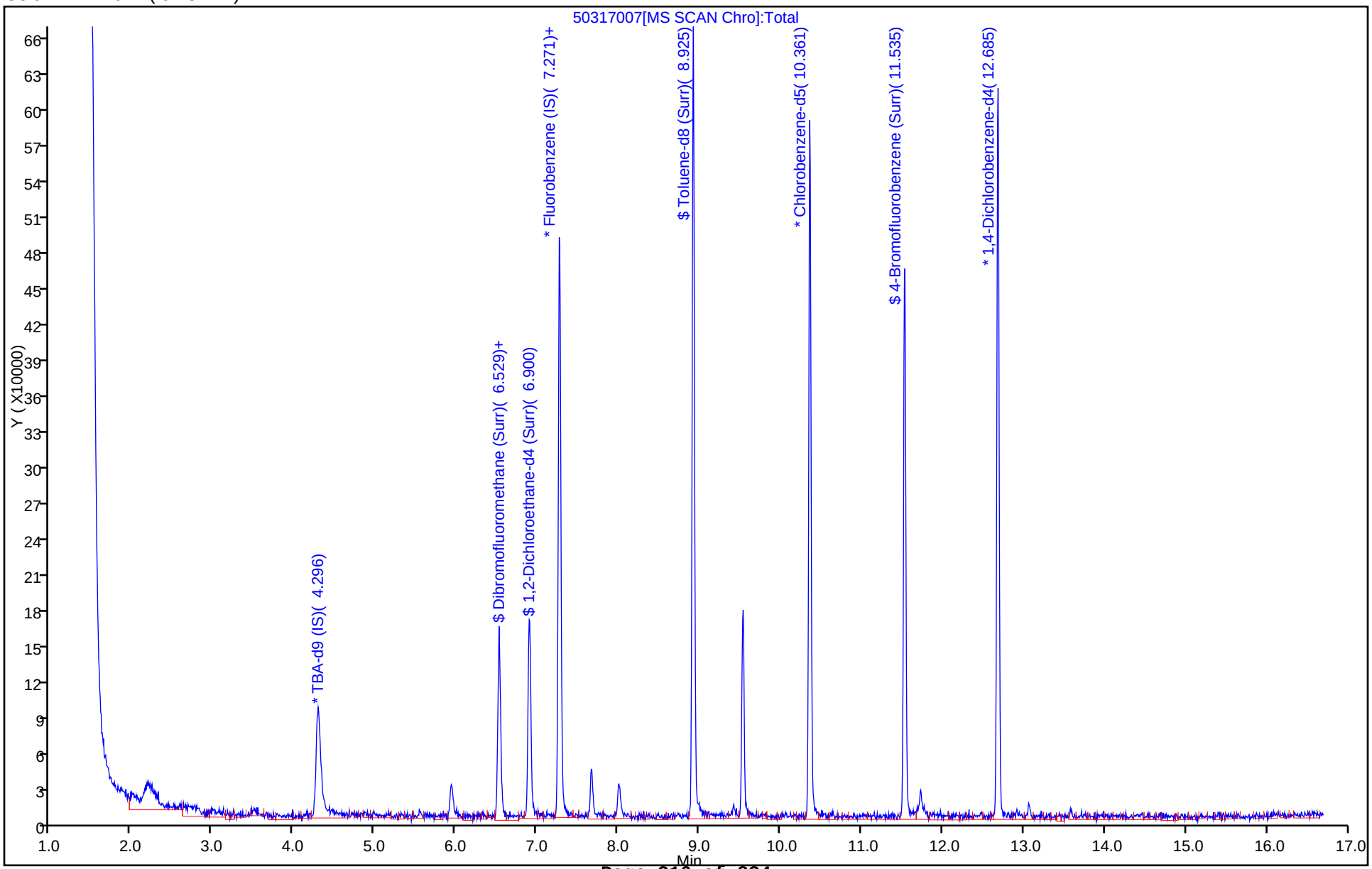
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 17-Mar-2015 16:08:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317007.D				
Injection Date:	17-Mar-2015 15:30:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-E-11	Lab Sample ID:	180-41935-11	Worklist Smp#:	8
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



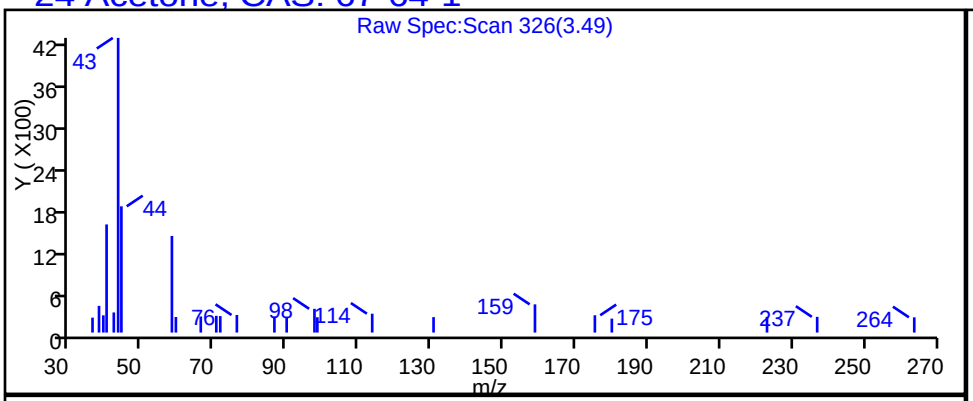
Report Date: 17-Mar-2015 16:08:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

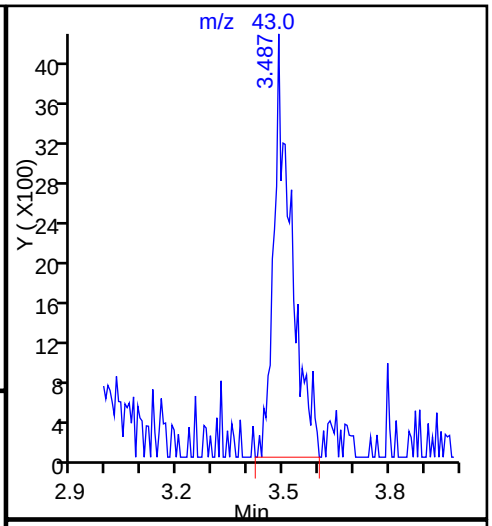
TestAmerica Pittsburgh

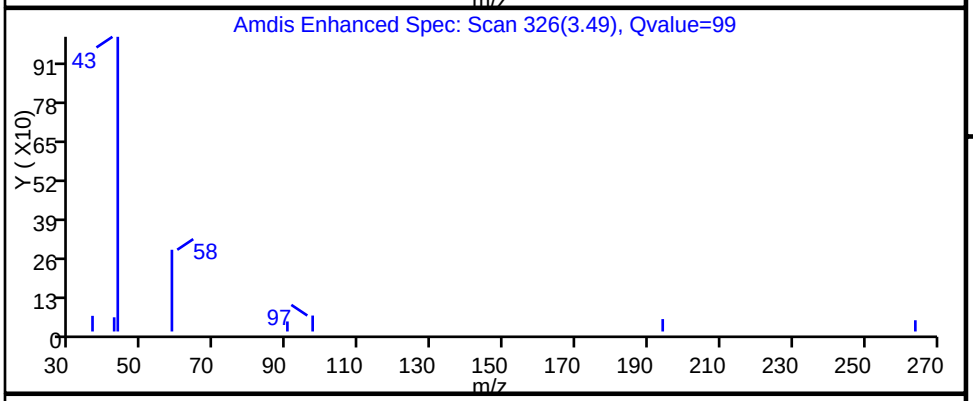
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317007.D

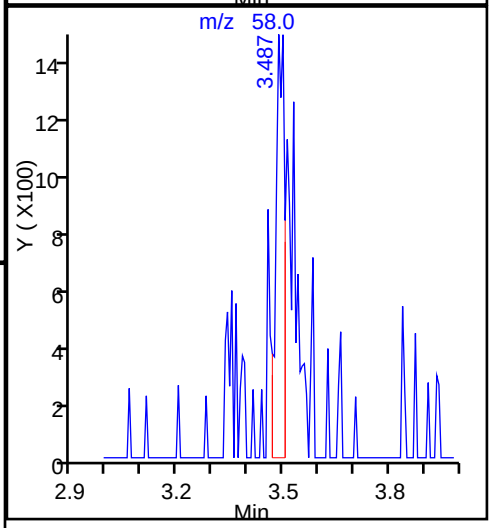
Injection Date:	17-Mar-2015 15:30:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-11	Lab Sample ID:	180-41935-11		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

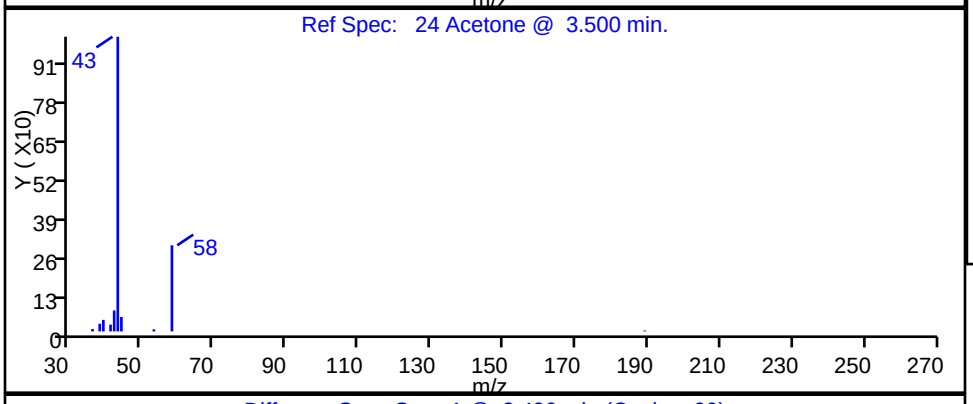
24 Acetone, CAS: 67-64-1

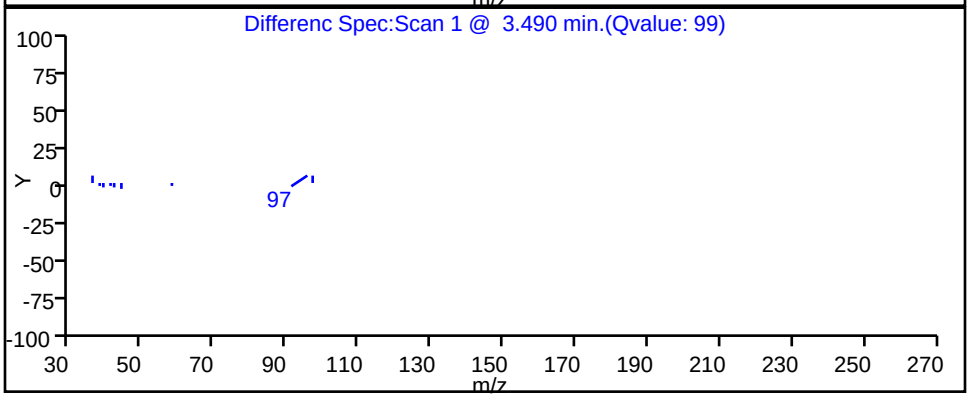










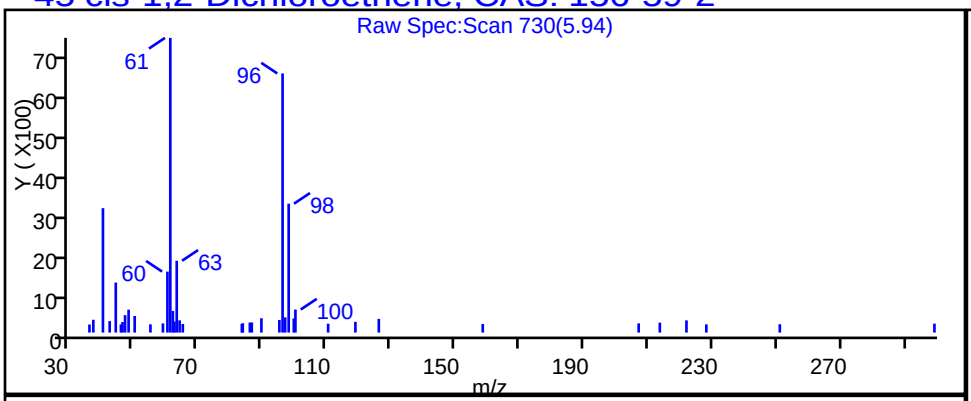


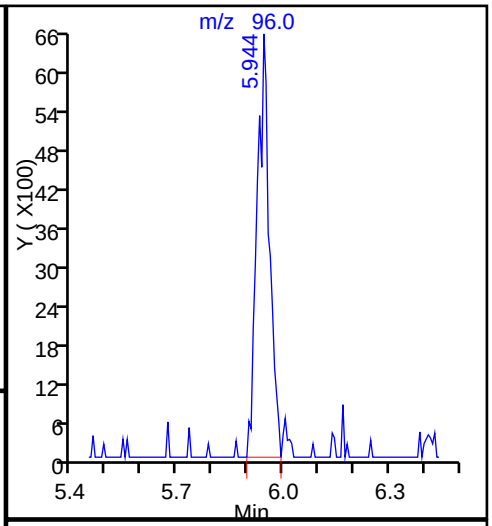
Report Date: 17-Mar-2015 16:08:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

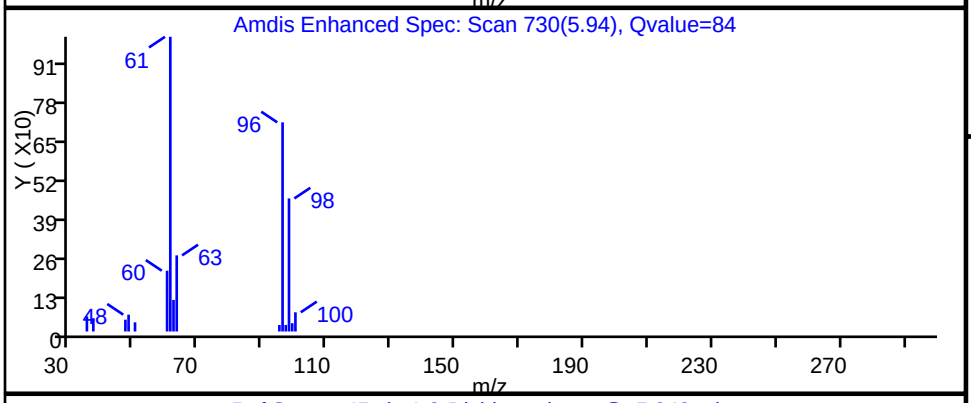
TestAmerica Pittsburgh

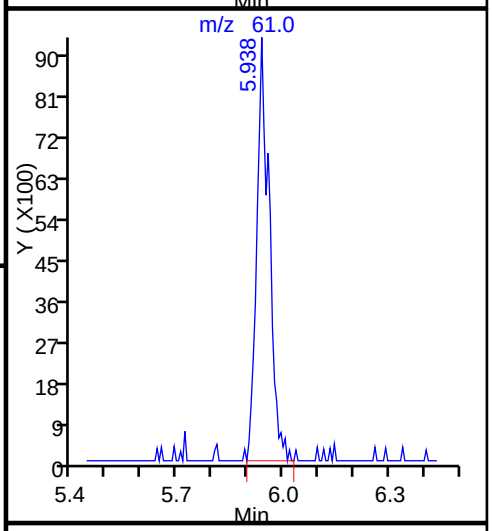
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317007.D				
Injection Date:	17-Mar-2015 15:30:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-11	Lab Sample ID:	180-41935-11		
Client ID:	HD-COD-SW-17-0/1-0				
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

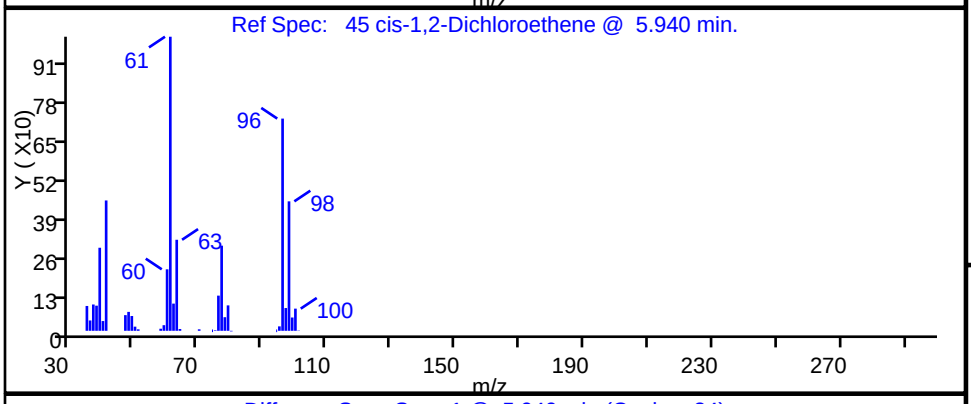
45 cis-1,2-Dichloroethene, CAS: 156-59-2

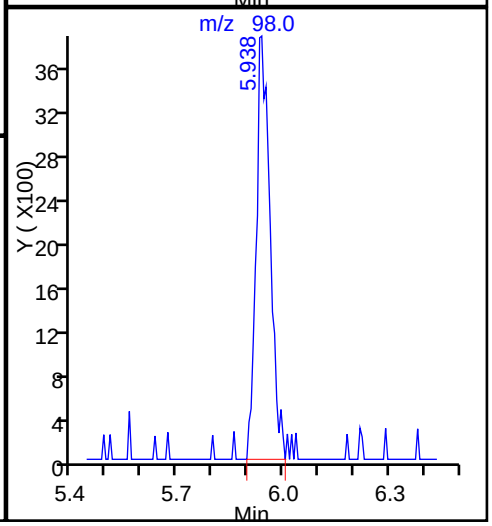


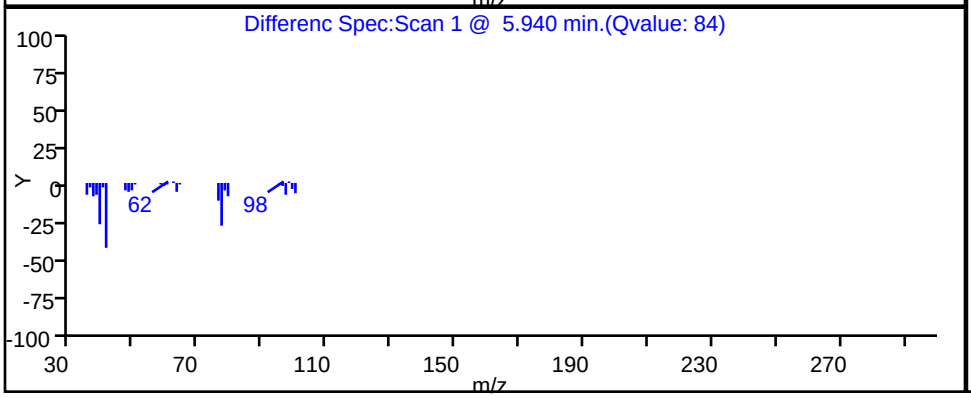












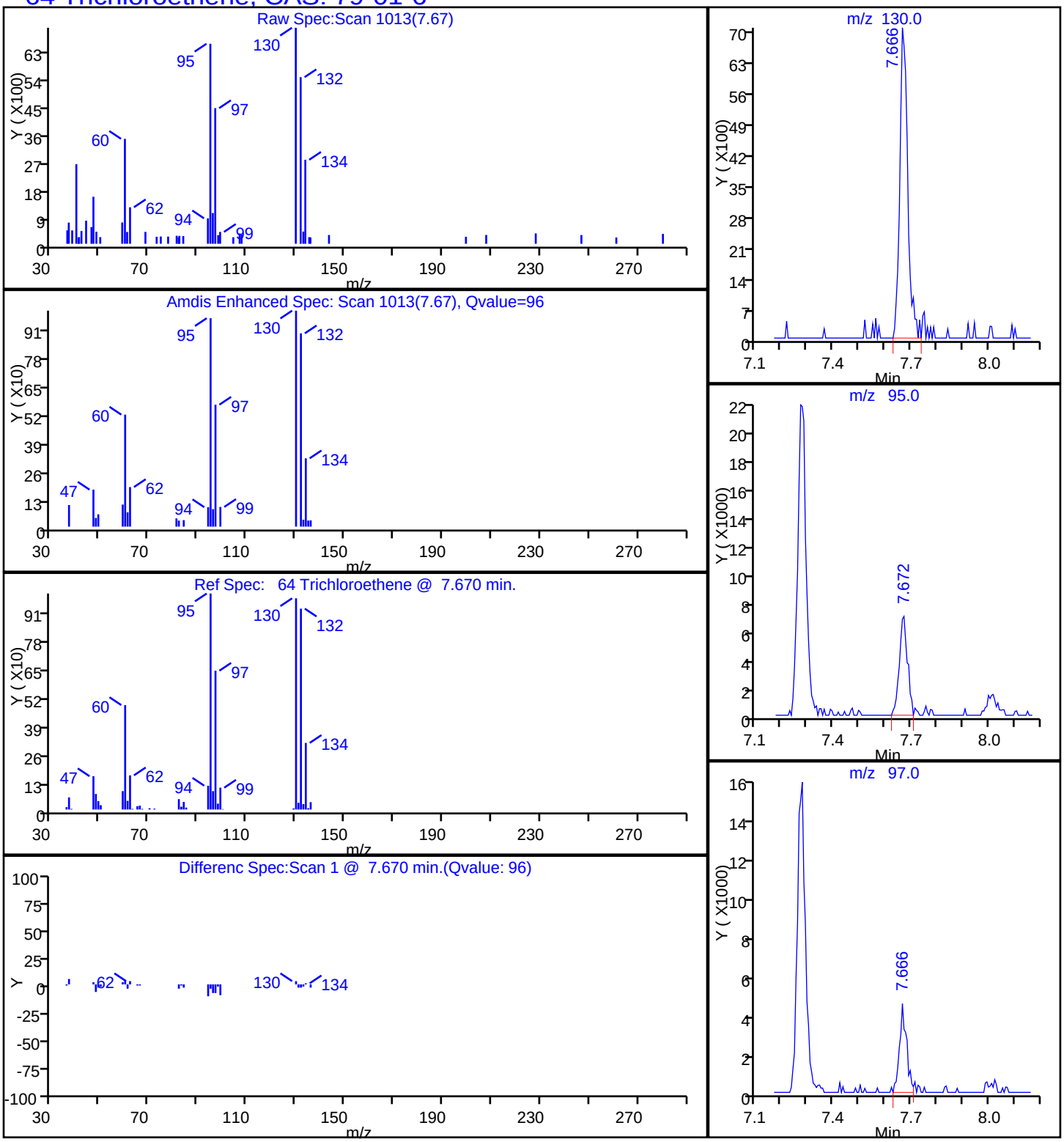
Report Date: 17-Mar-2015 16:08:15 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317007.D

Injection Date:	17-Mar-2015 15:30:30	Instrument ID:	CHHP5
Lims ID:	180-41935-E-11	Lab Sample ID:	180-41935-11
Client ID:	HD-COD-SW-17-0/1-0		
Operator ID:	001562	ALS Bottle#:	7 Worklist Smp#: 8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

64 Trichloroethene, CAS: 79-01-6

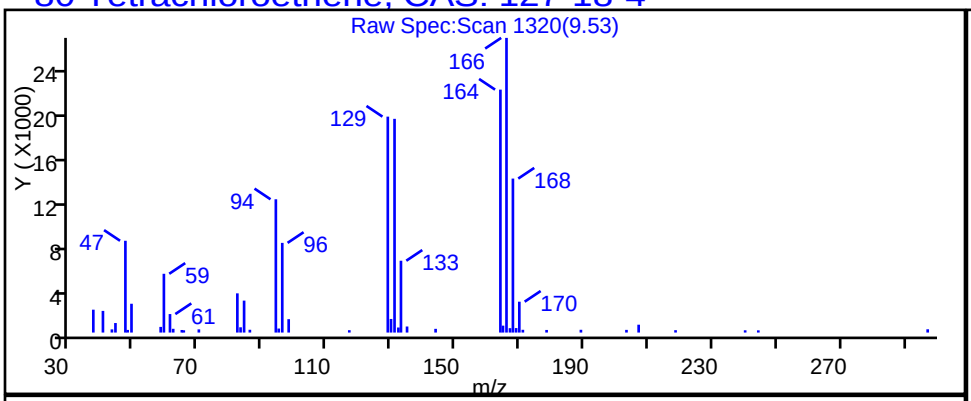


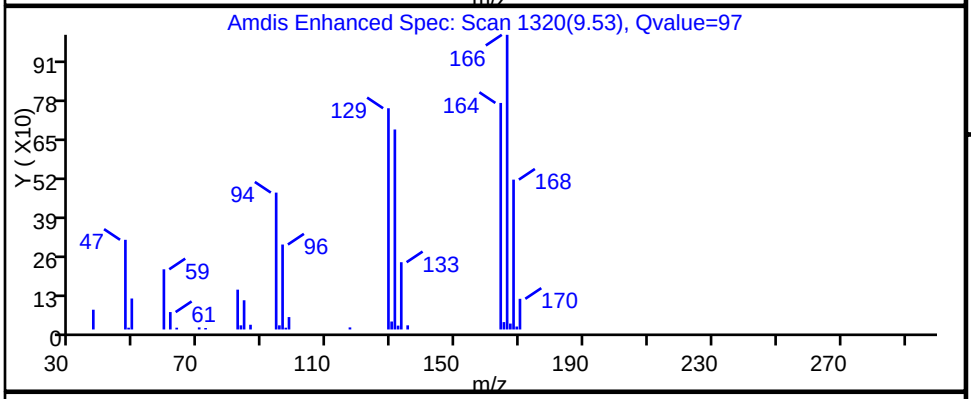
Report Date: 17-Mar-2015 16:08:15 Chrom Revision: 2.2 15-Jan-2015 13:05:58

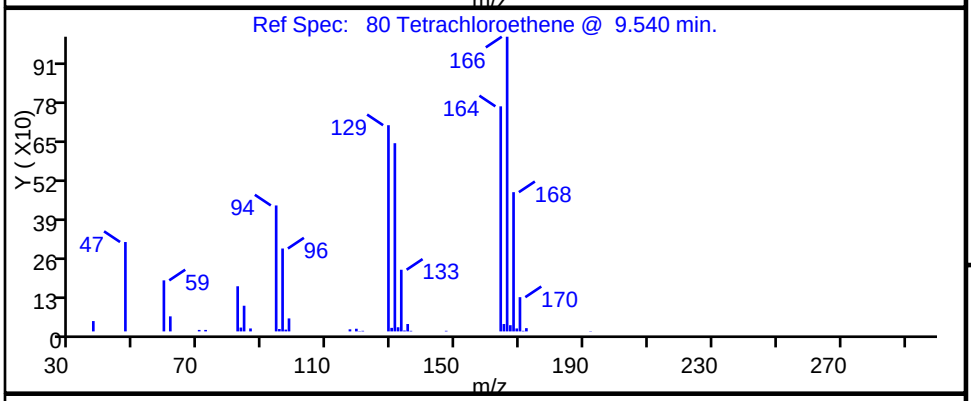
TestAmerica Pittsburgh

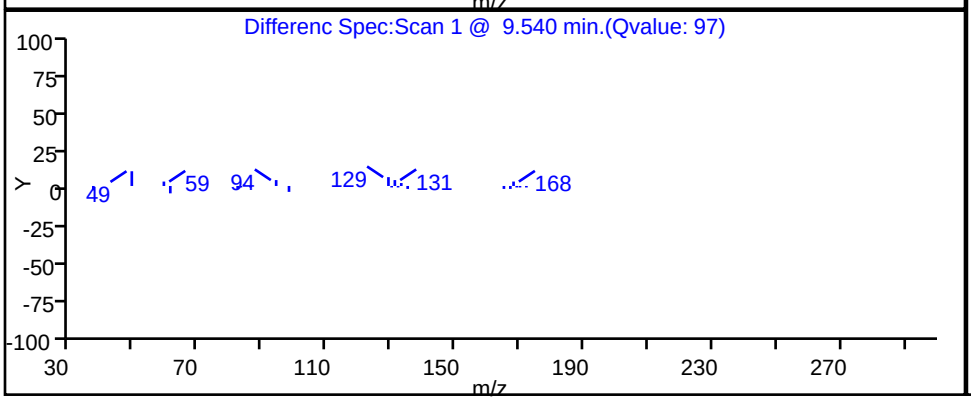
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317007.D		
Injection Date:	17-Mar-2015 15:30:30	Instrument ID:	CHHP5
Lims ID:	180-41935-E-11	Lab Sample ID:	180-41935-11
Client ID:	HD-COD-SW-17-0/1-0		
Operator ID:	001562	ALS Bottle#:	7 Worklist Smp#: 8
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

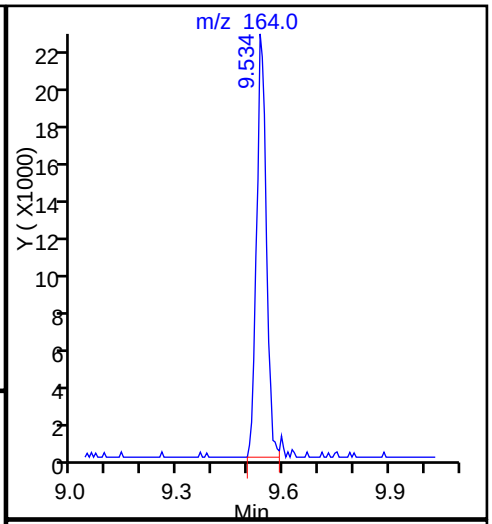
80 Tetrachloroethene, CAS: 127-18-4

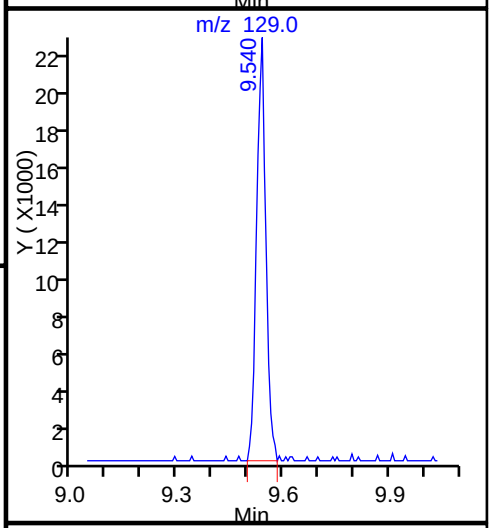


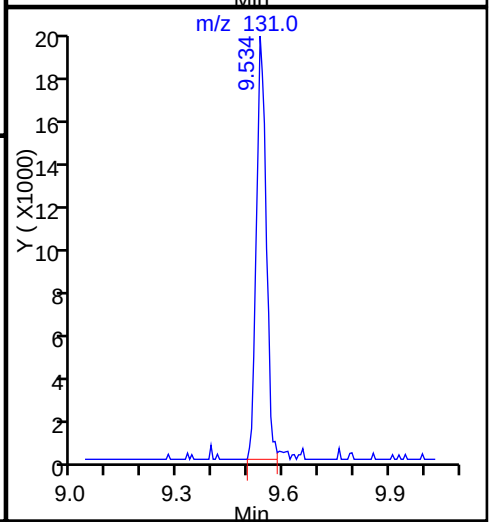












FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 | Lab Sample ID: 180-41935-12

Matrix: Water | Lab File ID: 50317022.D

Analysis Method: 8260C | Date Collected: 03/10/2015 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 21:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	3.1	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-41935-12

Matrix: Water Lab File ID: 50317022.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:30

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 21:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	112		70-118
1868-53-7	Dibromofluoromethane (Surr)	100		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317022.D
Lims ID: 180-41935-D-12 Lab Sample ID: 180-41935-12
Client ID: HD-COD-SW-20-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 21:32:30 ALS Bottle#: 22 Worklist Smp#: 22
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-12
Misc. Info.: 180-0006051-022
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:35:06 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:35:06

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.290	4.311	-0.021	84	98920	1000.0	
*	2 Fluorobenzene (IS)	96	7.271	7.274	-0.003	99	445869	50.0	
*	3 Chlorobenzene-d5	119	10.362	10.358	0.004	72	102693	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.679	12.682	-0.003	96	164223	50.0	
$	5 Dibromofluoromethane (Surr	113	6.523	6.526	-0.003	54	100917	49.8	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	97	137962	51.6	
$	7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	422852	51.6	
$	8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	98	164638	55.8	
	12 Chloromethane	50		1.781				ND	
	13 Vinyl chloride	62		1.908				ND	
	15 Bromomethane	94		2.249				ND	
	16 Chloroethane	64		2.377				ND	
	22 1,1-Dichloroethene	96		3.381				ND	
	24 Acetone	43	3.499	3.496	0.003	78	14163	15.5	
	26 Carbon disulfide	76		3.654				ND	
	31 Methylene Chloride	84		4.147				ND	
	33 Acrylonitrile	53		4.549				ND	
	34 trans-1,2-Dichloroethene	96		4.561				ND	
	35 Methyl tert-butyl ether	73		4.597				ND	
	37 1,1-Dichloroethane	63		5.163				ND	
	45 cis-1,2-Dichloroethene	96	5.945	5.936	0.009	1	1064	0.3798	
	46 2-Butanone (MEK)	43		5.984				ND	
	49 Chlorobromomethane	128		6.222				ND	
	52 Chloroform	83		6.343				ND	
	53 1,1,1-Trichloroethane	97		6.526				ND	
	56 Carbon tetrachloride	117		6.720				ND	
	58 Benzene	78		6.952				ND	
	59 1,2-Dichloroethane	62		6.982				ND	
	64 Trichloroethene	130	7.654	7.669	-0.015	1	1335	0.5043	M
	67 1,2-Dichloropropane	63		7.901				ND	
	70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	8.987	8.990	-0.003	48	3678	0.3495	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106	10.605	10.620	-0.015	1	1062	0.2270	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106				0		0.2270	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

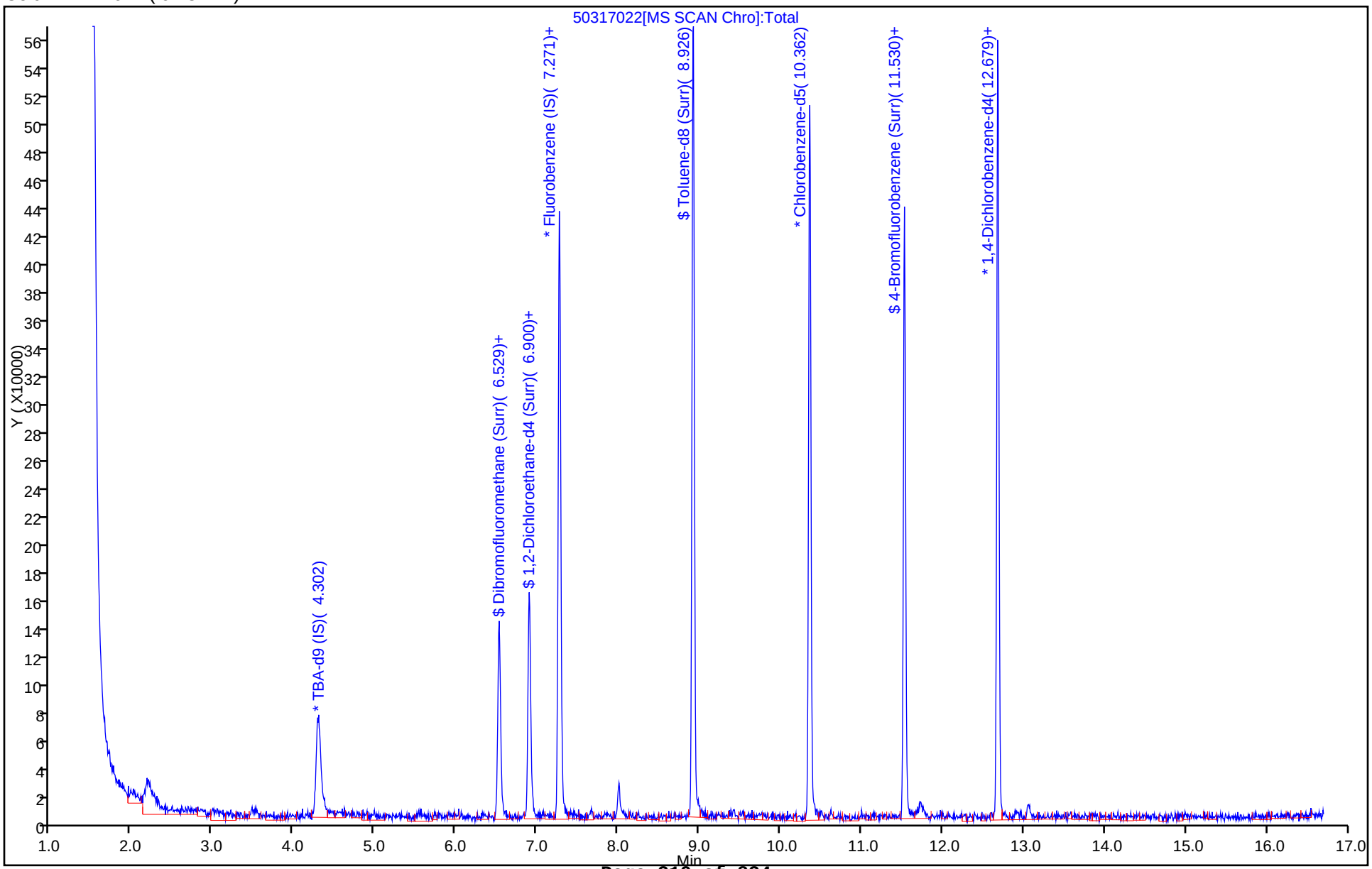
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:35:07 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317022.D				
Injection Date:	17-Mar-2015 21:32:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-12	Lab Sample ID:	180-41935-12	Worklist Smp#:	22
Client ID:	HD-COD-SW-20-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	22
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



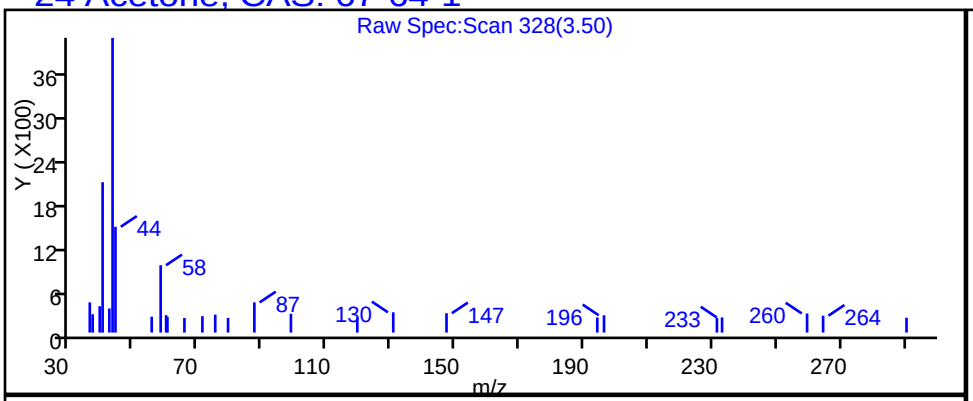
Report Date: 18-Mar-2015 10:35:07 Chrom Revision: 2.2 15-Jan-2015 13:05:58

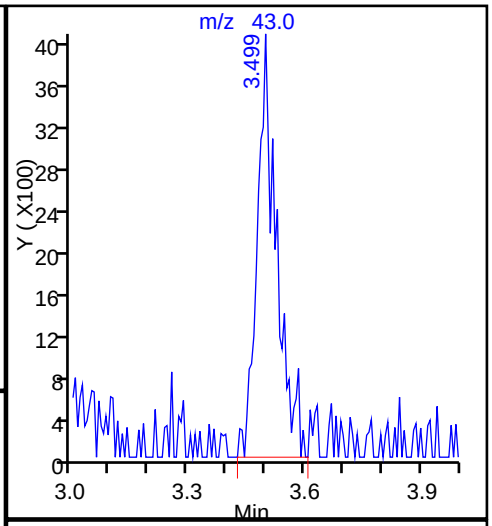
TestAmerica Pittsburgh

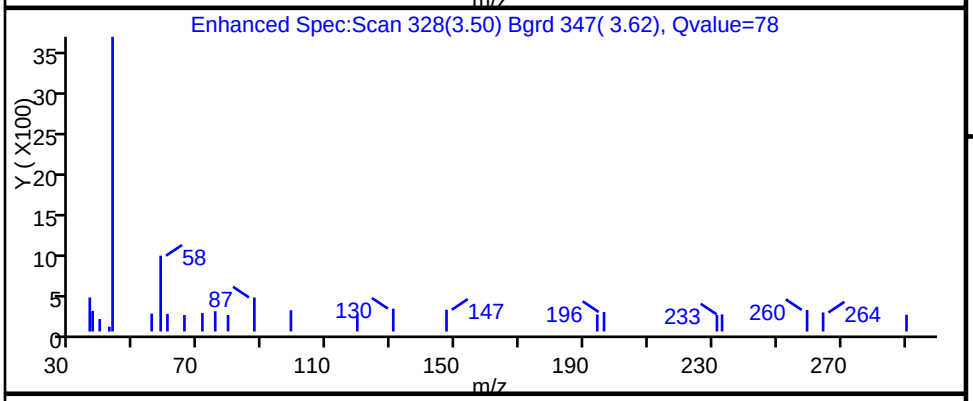
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317022.D

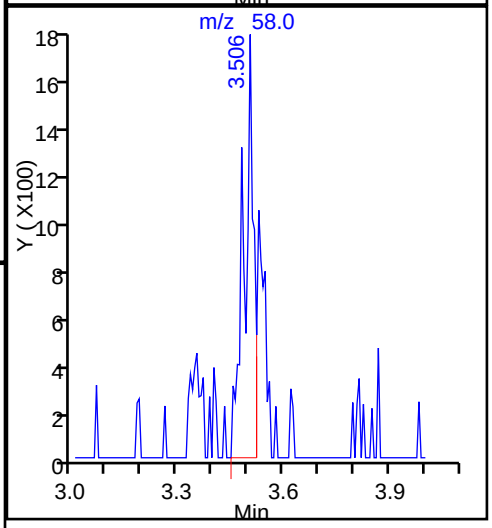
Injection Date:	17-Mar-2015 21:32:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-12	Lab Sample ID:	180-41935-12		
Client ID:	HD-COD-SW-20-0/1-0				
Operator ID:	001562	ALS Bottle#:	22	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

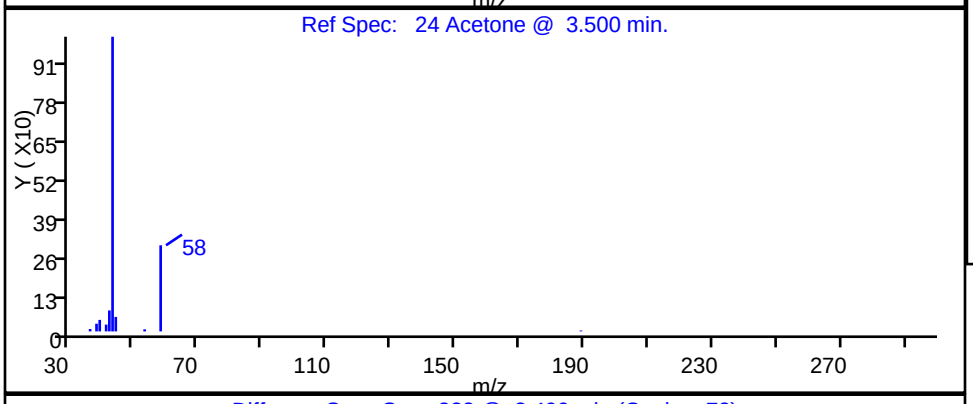
24 Acetone, CAS: 67-64-1

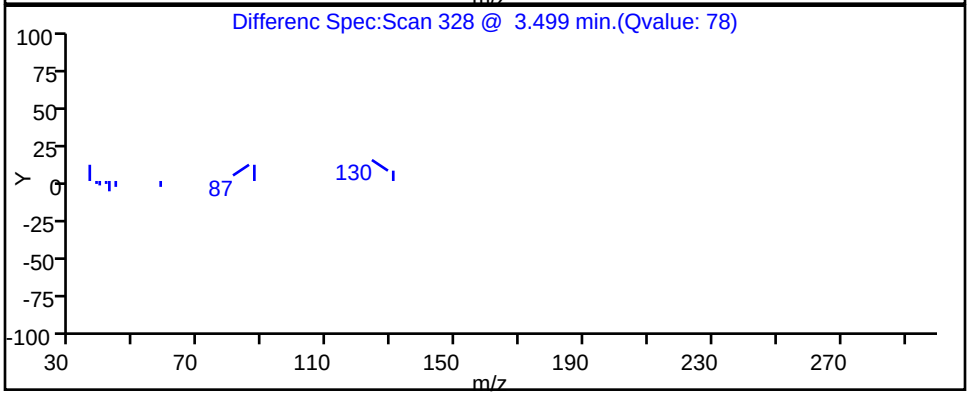












Manual Integration/User Assign Peak Report

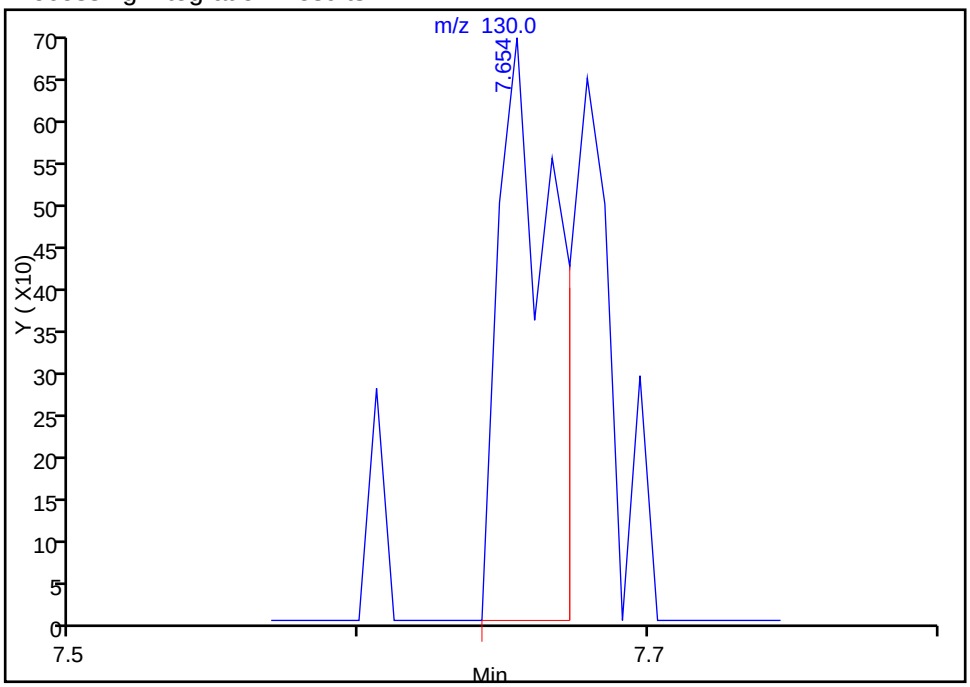
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317022.D				
Injection Date:	17-Mar-2015 21:32:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-12	Lab Sample ID:	180-41935-12		
Client ID:	HD-COD-SW-20-0/1-0				
Operator ID:	001562	ALS Bottle#:	22	Worklist Smp#:	22
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 Trichloroethene, CAS: 79-01-6

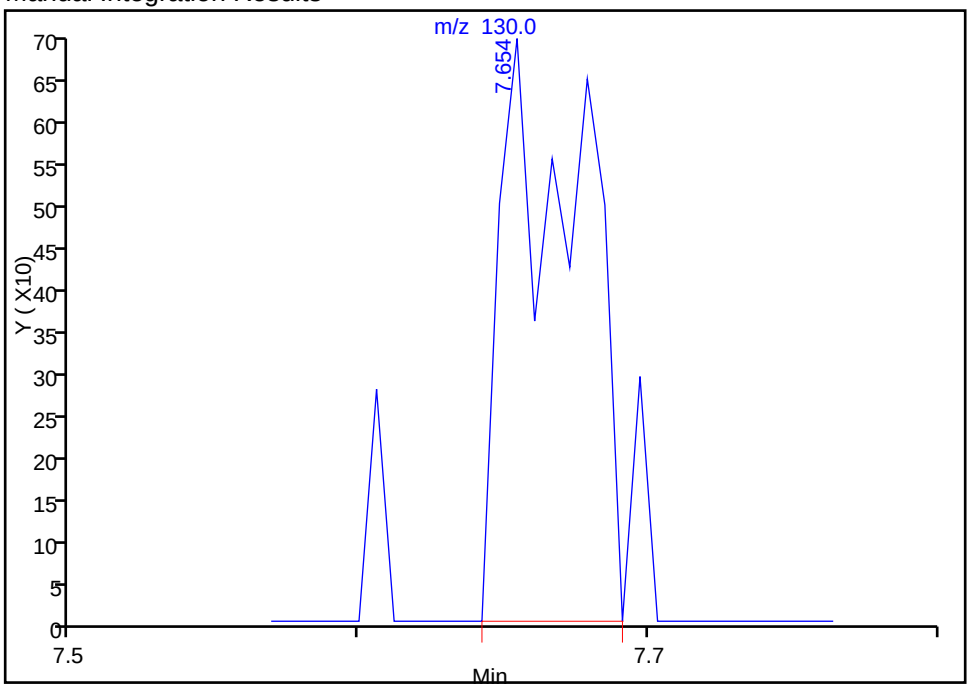
Processing Integration Results

RT: 7.65
Area: 919
Amount: 0.347151
Amount Units: ng



Manual Integration Results

RT: 7.65
Area: 1335
Amount: 0.504295
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 10:35:06
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 | Lab Sample ID: 180-41935-13

Matrix: Water | Lab File ID: 50319018.D

Analysis Method: 8260C | Date Collected: 03/10/2015 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 03/19/2015 19:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135984 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	4.2	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	0.16	J	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-41935-13

Matrix: Water Lab File ID: 50319018.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:55

Sample wt/vol: 5(mL) Date Analyzed: 03/19/2015 19:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135984 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-135
2037-26-5	Toluene-d8 (Surr)	99		71-118
460-00-4	4-Bromofluorobenzene (Surr)	108		70-118
1868-53-7	Dibromofluoromethane (Surr)	107		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319018.D
Lims ID: 180-41935-C-13 Lab Sample ID: 180-41935-13
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 19-Mar-2015 19:09:30 ALS Bottle#: 18 Worklist Smp#: 18
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-C-13
Misc. Info.: 180-0006092-018
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Mar-2015 07:56:34 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 20-Mar-2015 07:56:33

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
*	1 TBA-d9 (IS)	65	4.291	4.298	-0.007	98	120315	1000.0	
*	2 Fluorobenzene (IS)	96	7.272	7.273	-0.001	100	437999	50.0	
*	3 Chlorobenzene-d5	119	10.362	10.363	-0.001	98	101333	50.0	
*	4 1,4-Dichlorobenzene-d4	152	12.686	12.687	-0.001	93	158916	50.0	
$	5 Dibromofluoromethane (Surr	113	6.524	6.531	-0.007	55	106885	53.7	
$	6 1,2-Dichloroethane-d4 (Sur	65	6.901	6.896	0.005	98	136026	51.8	
$	7 Toluene-d8 (Surr)	98	8.920	8.922	-0.002	100	397917	49.3	
$	8 4-Bromofluorobenzene (Surr	95	11.530	11.531	-0.001	97	156403	53.8	
	12 Chloromethane	50		1.780				ND	
	13 Vinyl chloride	62		1.907				ND	
	15 Bromomethane	94		2.254				ND	
	16 Chloroethane	64		2.394				ND	
	22 1,1-Dichloroethene	96		3.386				ND	
	24 Acetone	43	3.500	3.501	-0.001	90	18689	20.8	
	26 Carbon disulfide	76		3.647				ND	
	31 Methylene Chloride	84		4.146				ND	
	33 Acrylonitrile	53		4.554				ND	
	34 trans-1,2-Dichloroethene	96		4.560				ND	
	35 Methyl tert-butyl ether	73		4.590				ND	
	37 1,1-Dichloroethane	63		5.174				ND	
	45 cis-1,2-Dichloroethene	96		5.935				ND	
	46 2-Butanone (MEK)	43		5.983				ND	
	49 Chlorobromomethane	128		6.220				ND	
	52 Chloroform	83		6.342				ND	
	53 1,1,1-Trichloroethane	97		6.525				ND	
	56 Carbon tetrachloride	117		6.713				ND	
	58 Benzene	78		6.950				ND	
	59 1,2-Dichloroethane	62		6.981				ND	
	64 Trichloroethene	130	7.686	7.662	0.024	1	2097	0.8064	M
	67 1,2-Dichloropropane	63		7.900				ND	
	70 1,4-Dioxane	88		8.052				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.198				ND	
74 cis-1,3-Dichloropropene	75		8.654				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
76 Toluene	91		8.988				ND	
77 trans-1,3-Dichloropropene	75		9.214				ND	
79 1,1,2-Trichloroethane	97		9.402				ND	
80 Tetrachloroethene	164		9.536				ND	
82 2-Hexanone	43		9.658				ND	
84 Chlorodibromomethane	129		9.785				ND	
85 Ethylene Dibromide	107		9.901				ND	
87 Chlorobenzene	112		10.388				ND	
89 1,1,1,2-Tetrachloroethane	131		10.473				ND	
90 Ethylbenzene	106		10.497				ND	
91 m-Xylene & p-Xylene	106		10.619				ND	
92 o-Xylene	106		11.008				ND	
93 Styrene	104		11.026				ND	
94 Bromoform	173		11.215				ND	
99 1,1,2,2-Tetrachloroethane	83		11.677				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

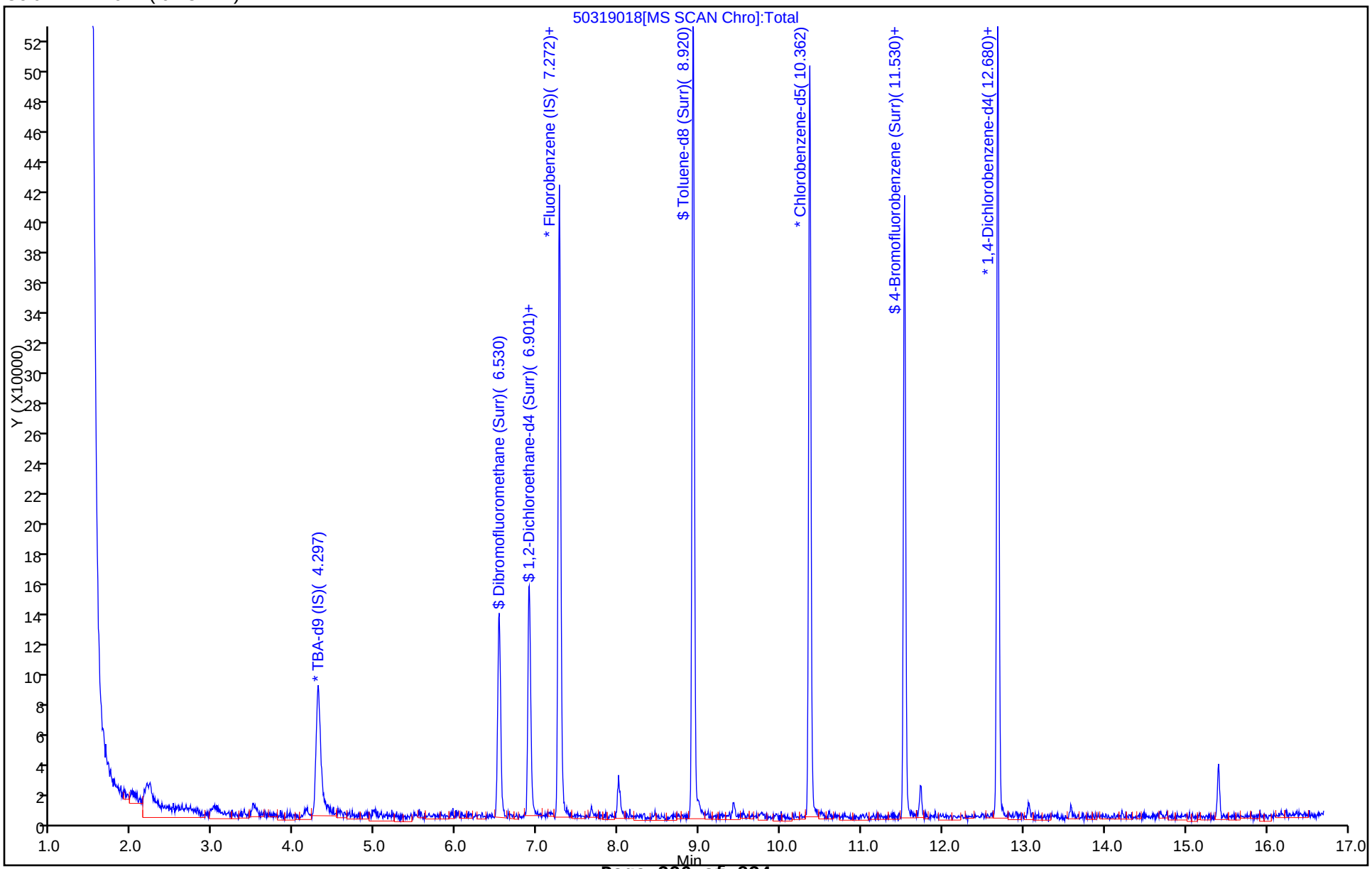
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 20-Mar-2015 07:56:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319018.D				
Injection Date:	19-Mar-2015 19:09:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-C-13	Lab Sample ID:	180-41935-13	Worklist Smp#:	18
Client ID:	HD-COD-SW-26-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

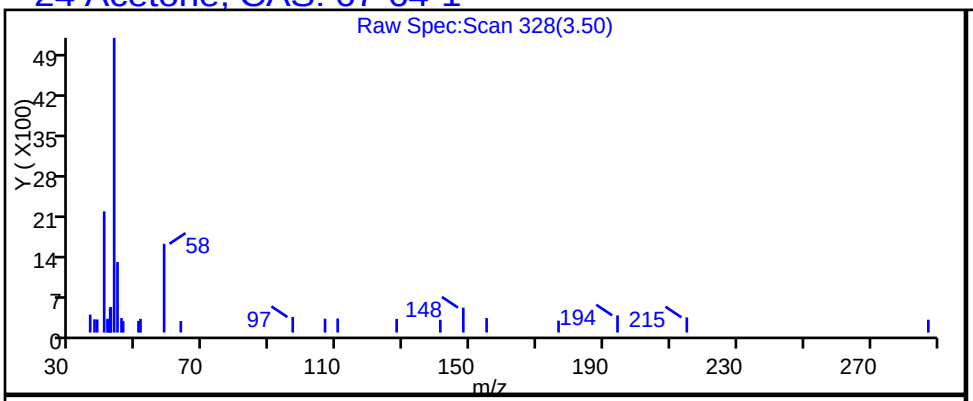


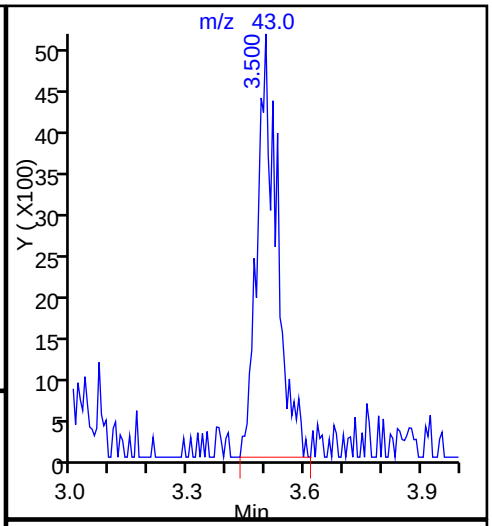
Report Date: 20-Mar-2015 07:56:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

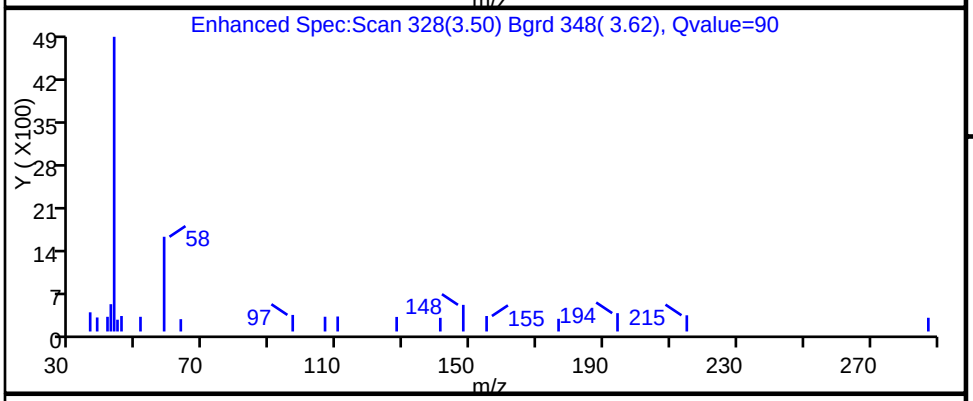
TestAmerica Pittsburgh

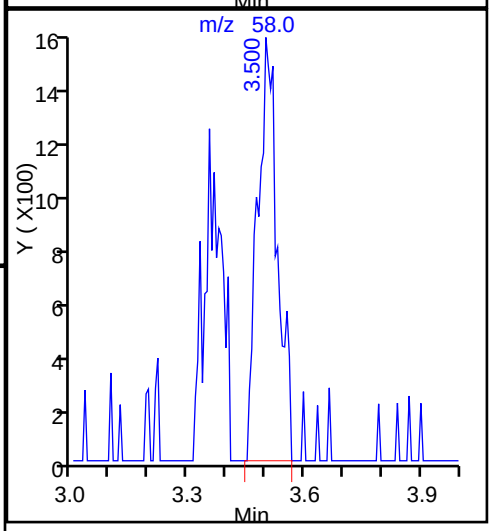
Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319018.D				
Injection Date:	19-Mar-2015 19:09:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-C-13	Lab Sample ID:	180-41935-13		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

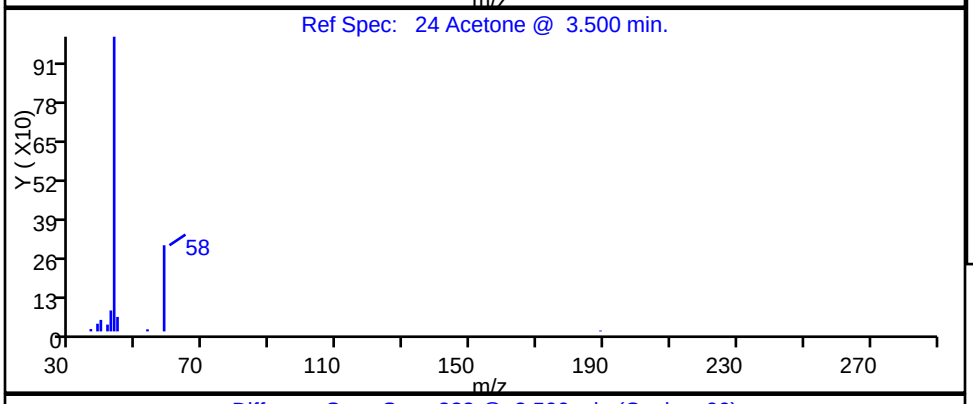
24 Acetone, CAS: 67-64-1

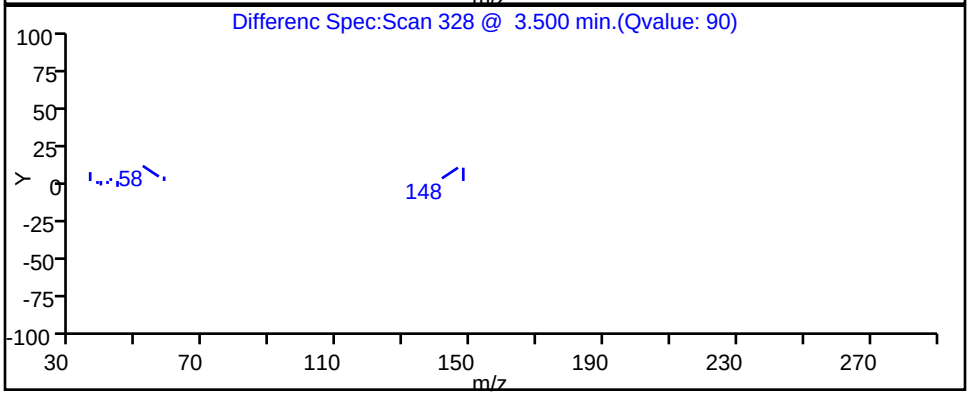












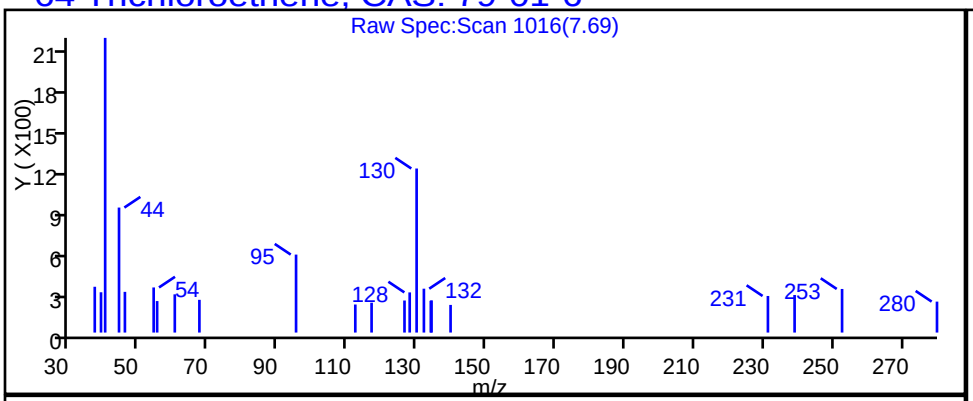
Report Date: 20-Mar-2015 07:56:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

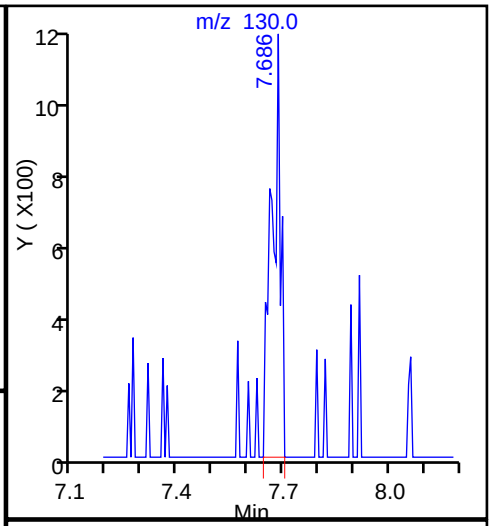
TestAmerica Pittsburgh

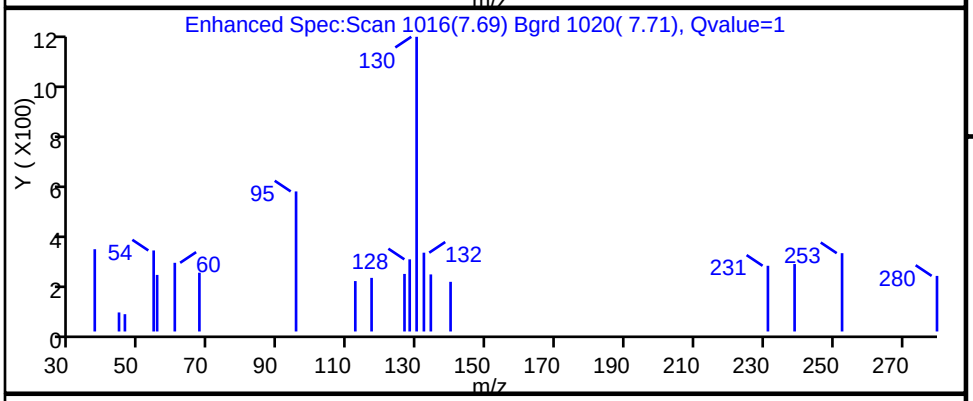
Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319018.D

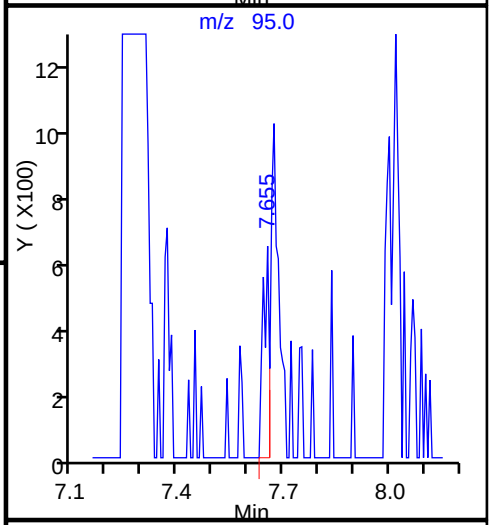
Injection Date:	19-Mar-2015 19:09:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-C-13	Lab Sample ID:	180-41935-13		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

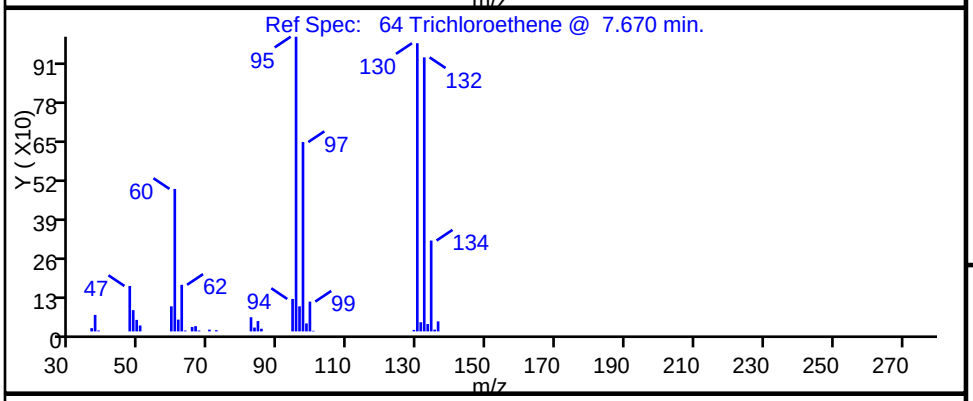
64 Trichloroethene, CAS: 79-01-6

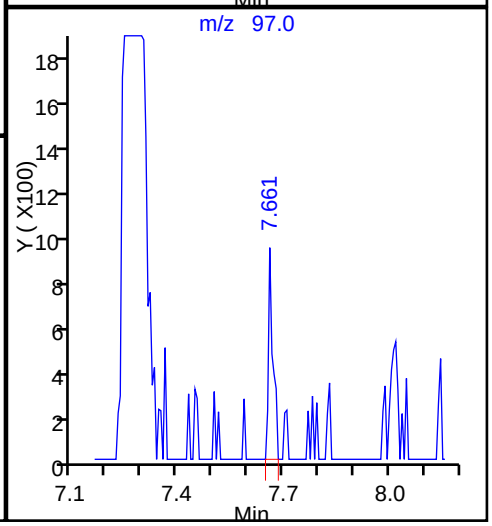


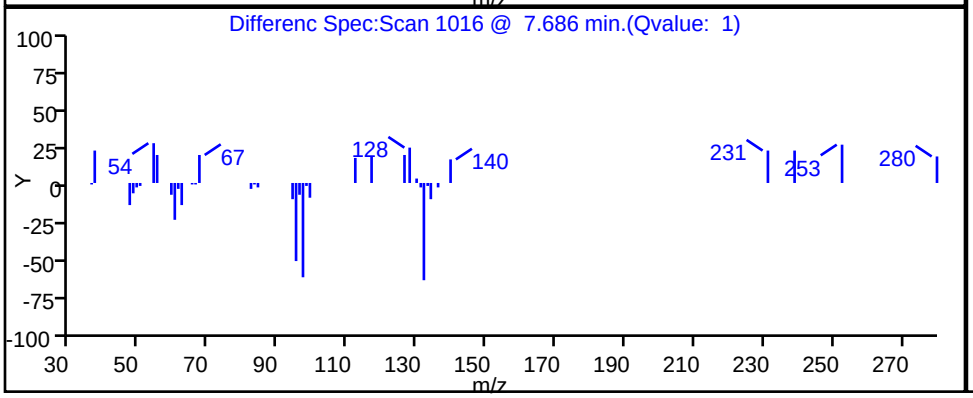












Manual Integration/User Assign Peak Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319018.D				
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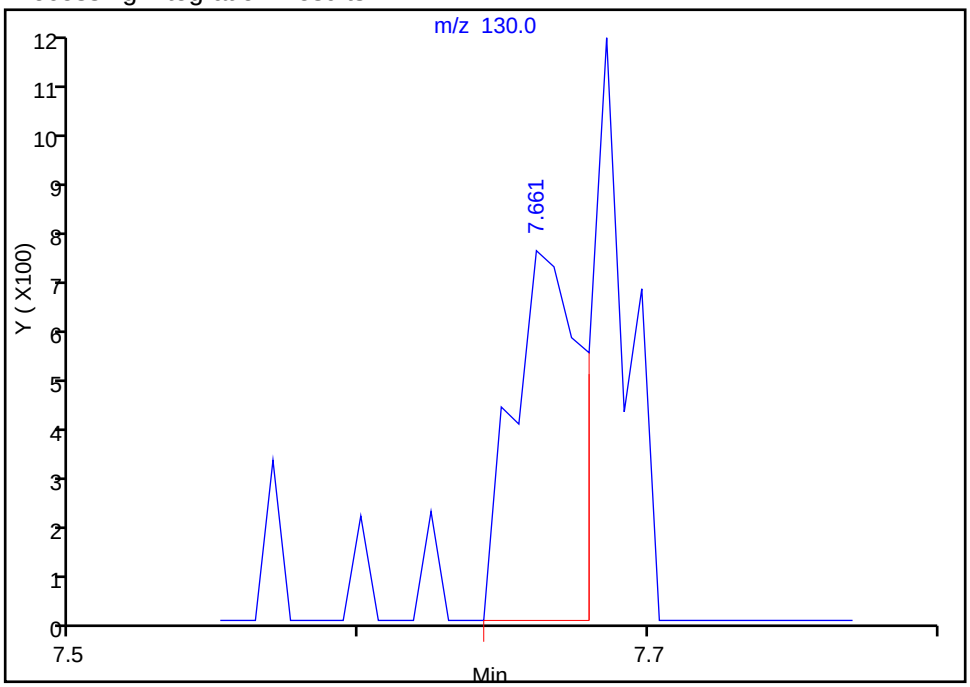
Lims ID:	180-41935-C-13	Lab Sample ID:	180-41935-13		
Client ID:	HD-COD-SW-26-0/1-0				
Operator ID:	001562	ALS Bottle#:	18	Worklist Smp#:	18
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 Trichloroethene, CAS: 79-01-6

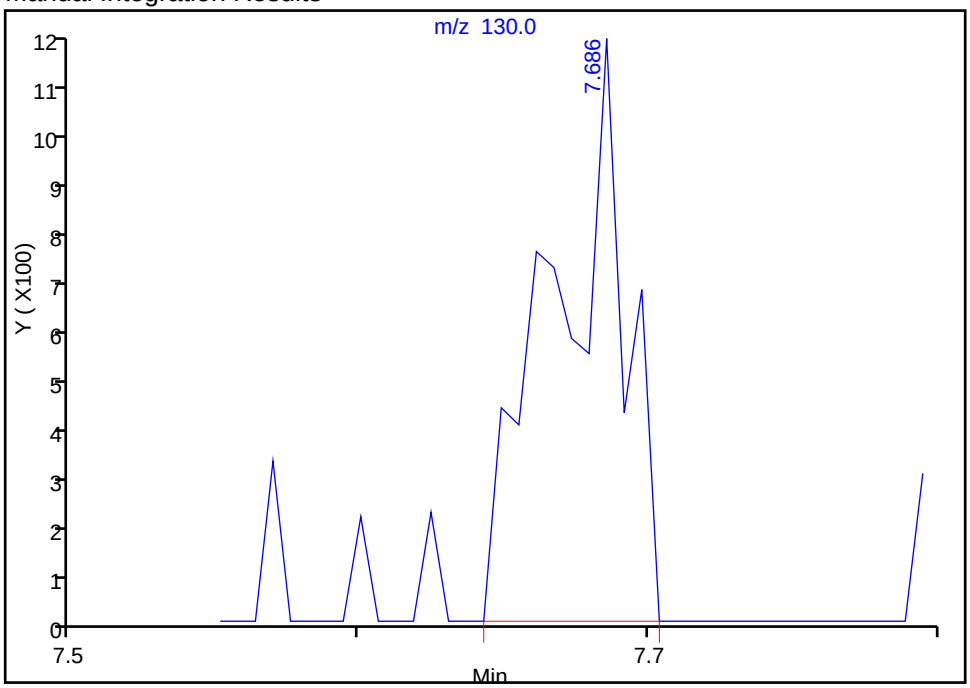
Processing Integration Results

RT: 7.66
Area: 1258
Amount: 0.483747
Amount Units: ng



Manual Integration Results

RT: 7.69
Area: 2097
Amount: 0.806373
Amount Units: ng



Reviewer: fergusond, 20-Mar-2015 07:56:33
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 | Lab Sample ID: 180-41935-14

Matrix: Water | Lab File ID: 50317024.D

Analysis Method: 8260C | Date Collected: 03/10/2015 14:10

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 22:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	3.9	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	0.27	J	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	0.30	J	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-41935-14

Matrix: Water Lab File ID: 50317024.D

Analysis Method: 8260C Date Collected: 03/10/2015 14:10

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 22:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		64-135
2037-26-5	Toluene-d8 (Surr)	100		71-118
460-00-4	4-Bromofluorobenzene (Surr)	112		70-118
1868-53-7	Dibromofluoromethane (Surr)	103		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317024.D
Lims ID: 180-41935-D-14 Lab Sample ID: 180-41935-14
Client ID: HD-COD-SW-27-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 22:19:30 ALS Bottle#: 24 Worklist Smp#: 24
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-14
Misc. Info.: 180-0006051-024
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 10:38:31 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:38:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.290	4.311	-0.021	83	103954	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.274	-0.003	99	417076	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	72	93927	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.679	12.682	-0.003	95	160088	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.526	0.002	55	97997	51.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	96	126653	50.6	
$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	100	372605	49.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	97	151494	56.2	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.505	3.496	0.009	78	16530	19.3	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96	5.938	5.936	0.002	2	3583	1.37	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.666	7.669	-0.003	90	3743	1.51	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91	8.992	8.990	0.002	48	2220	0.2306	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.540	9.537	0.003	19	912	0.4844	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

Reagents:

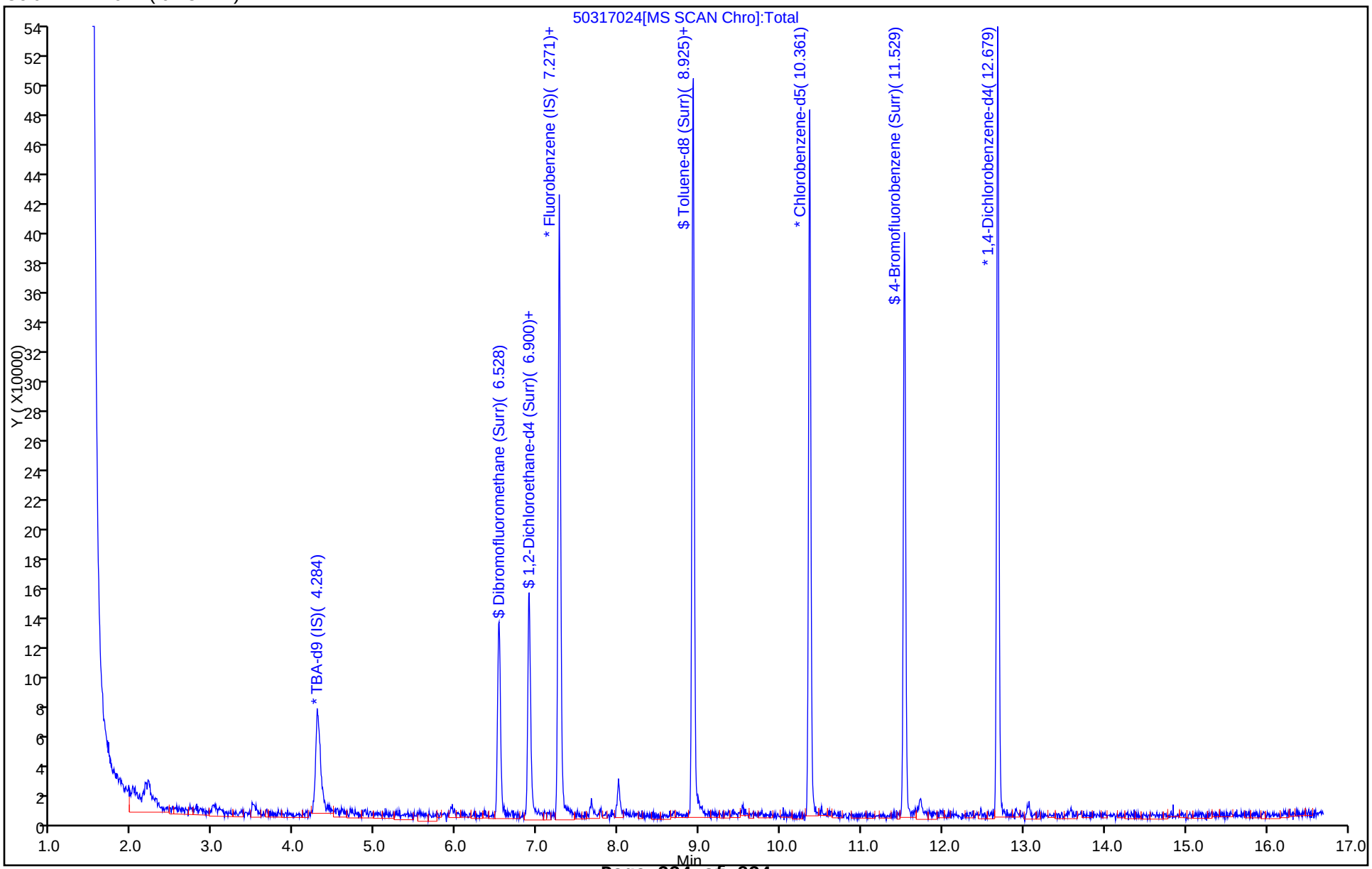
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 10:38:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317024.D				
Injection Date:	17-Mar-2015 22:19:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-14	Lab Sample ID:	180-41935-14	Worklist Smp#:	24
Client ID:	HD-COD-SW-27-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	24
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

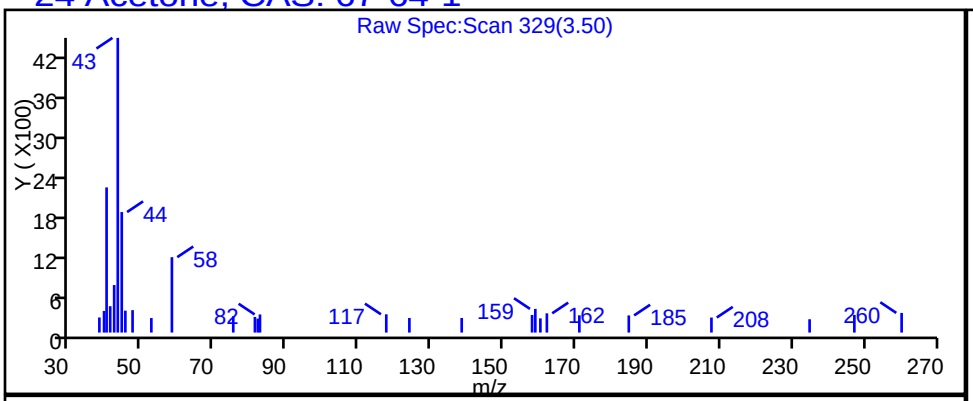


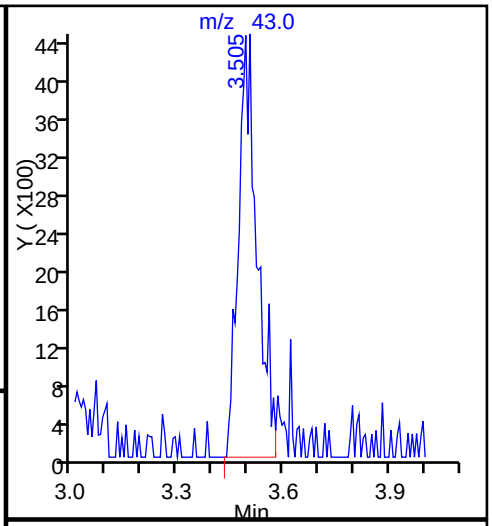
Report Date: 18-Mar-2015 10:38:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

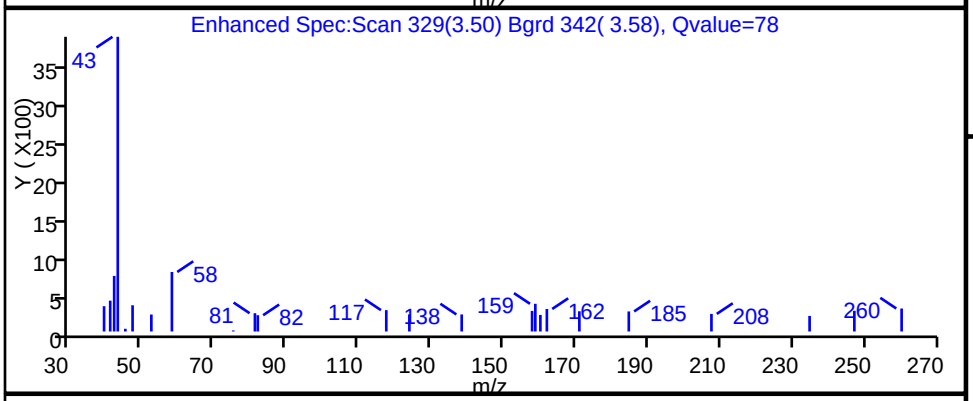
TestAmerica Pittsburgh

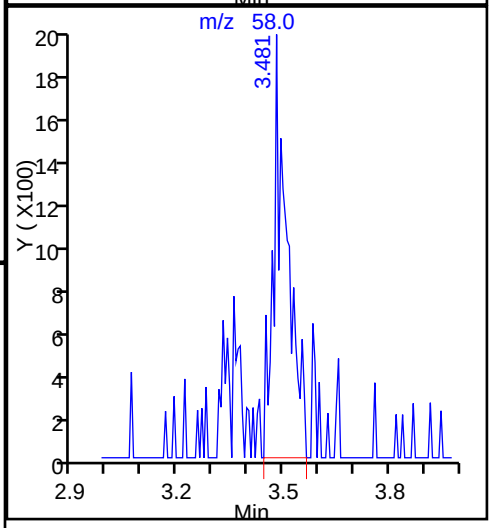
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317024.D				
Injection Date:	17-Mar-2015 22:19:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-14	Lab Sample ID:	180-41935-14		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

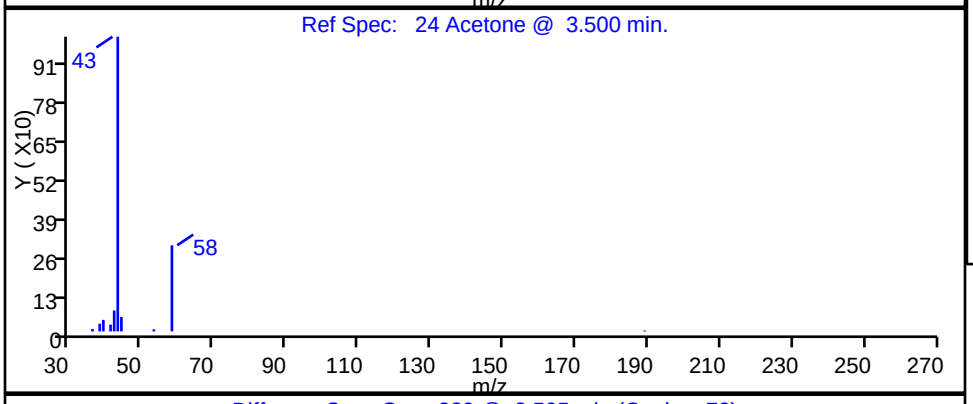
24 Acetone, CAS: 67-64-1

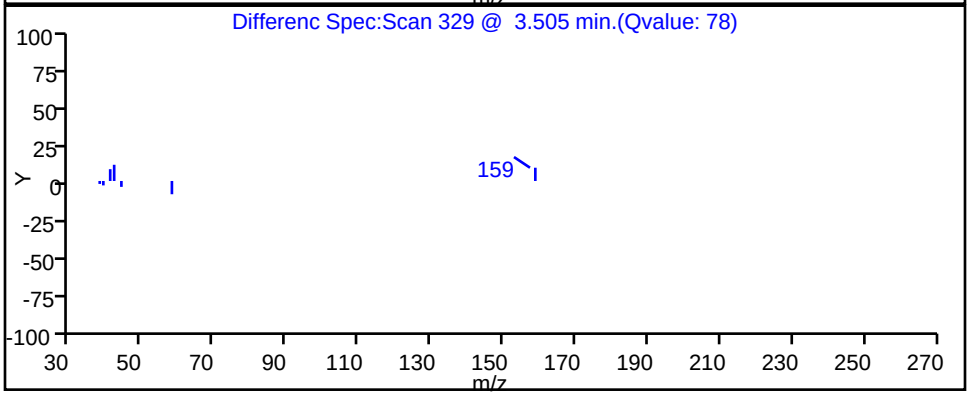










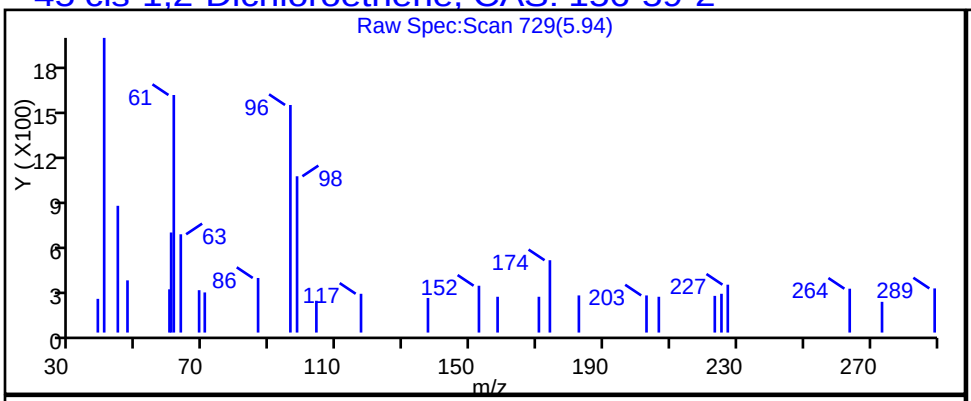


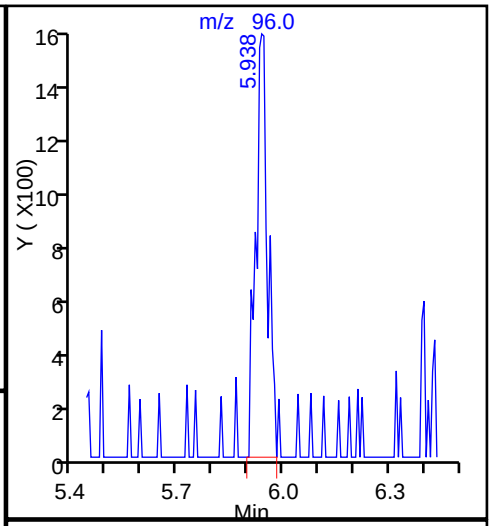
Report Date: 18-Mar-2015 10:38:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

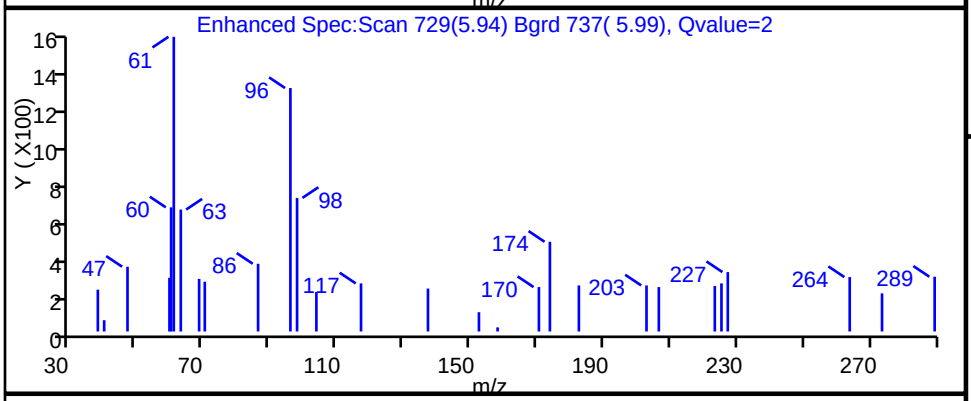
TestAmerica Pittsburgh

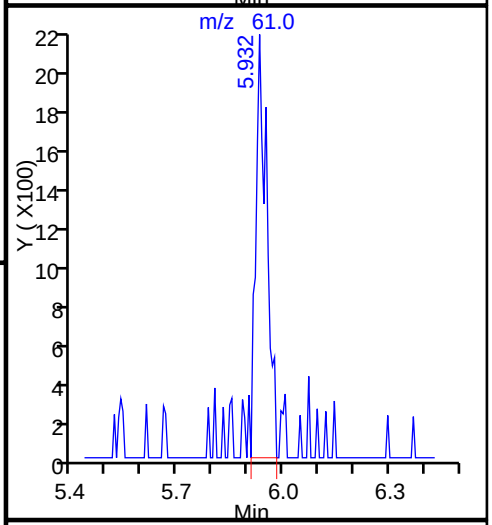
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317024.D				
Injection Date:	17-Mar-2015 22:19:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-14	Lab Sample ID:	180-41935-14		
Client ID:	HD-COD-SW-27-0/1-0				
Operator ID:	001562	ALS Bottle#:	24	Worklist Smp#:	24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

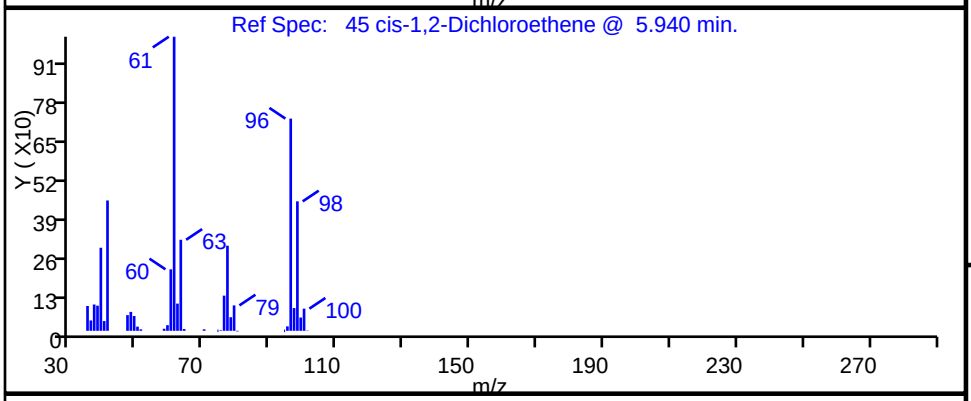
45 cis-1,2-Dichloroethene, CAS: 156-59-2

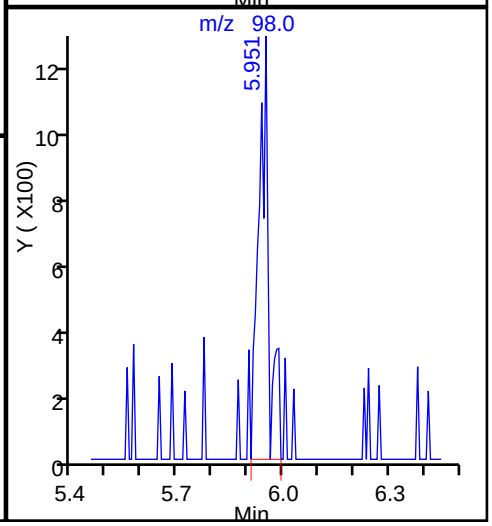


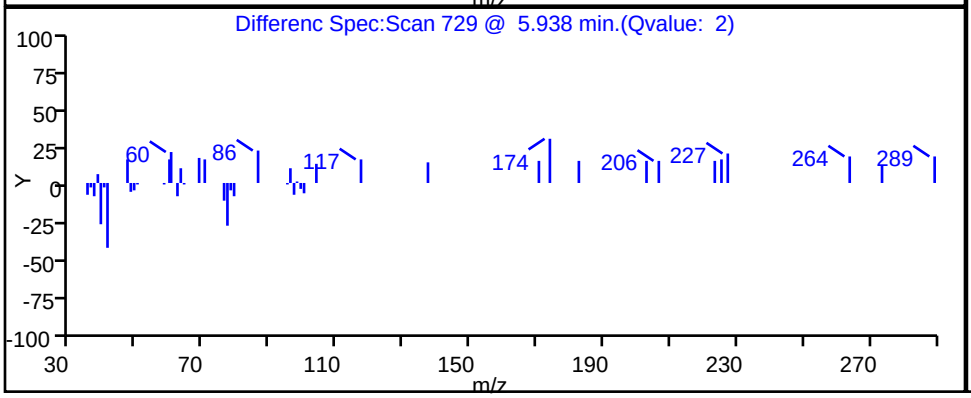










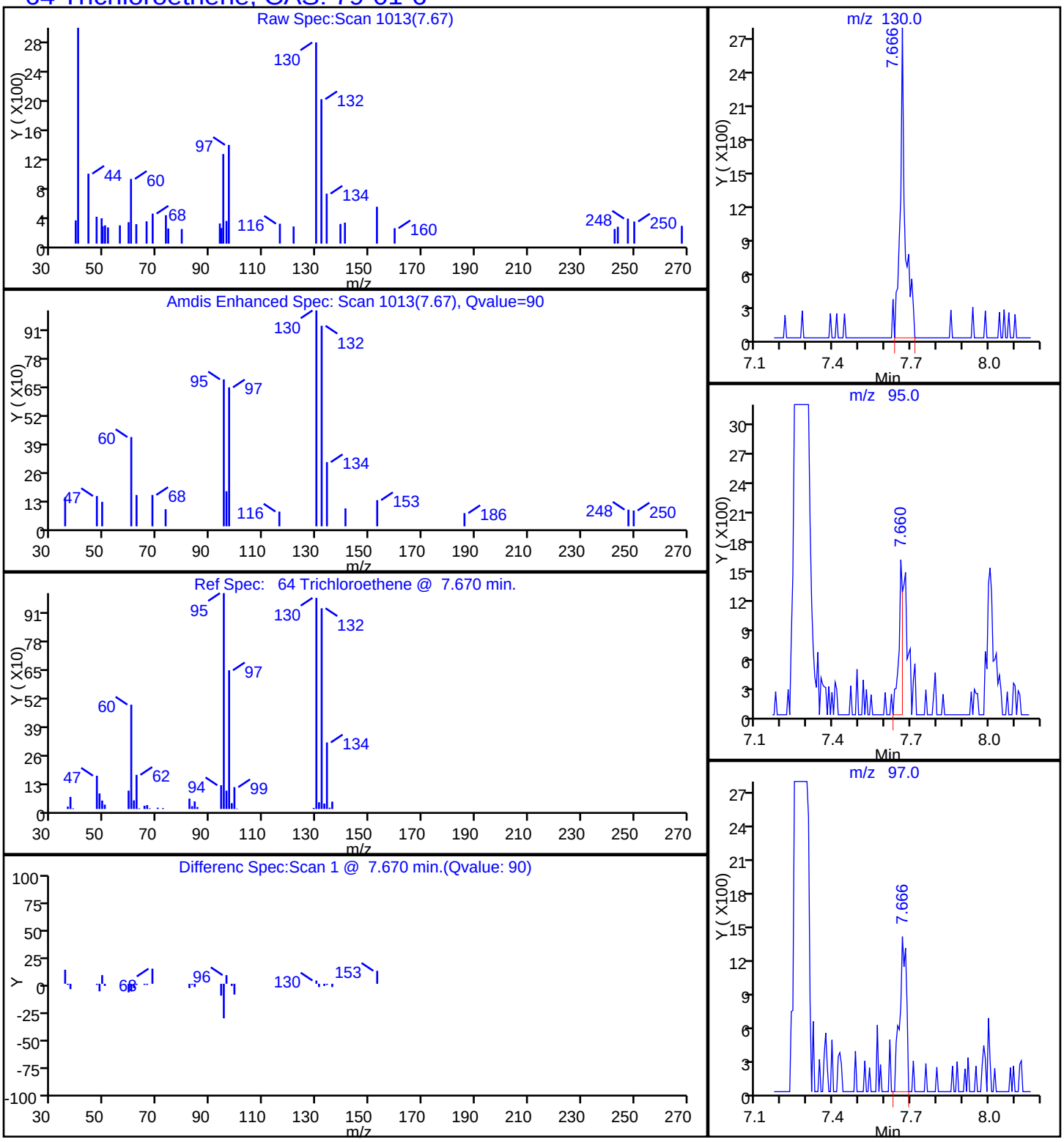


Report Date: 18-Mar-2015 10:38:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317024.D		
Injection Date:	17-Mar-2015 22:19:30	Instrument ID:	CHHP5
Lims ID:	180-41935-D-14	Lab Sample ID:	180-41935-14
Client ID:	HD-COD-SW-27-0/1-0		
Operator ID:	001562	ALS Bottle#:	24 Worklist Smp#: 24
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

64 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 | Lab Sample ID: 180-41935-15

Matrix: Water | Lab File ID: 50317025.D

Analysis Method: 8260C | Date Collected: 03/10/2015 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 22:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	3.2	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	0.16	J	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-41935-15

Matrix: Water Lab File ID: 50317025.D

Analysis Method: 8260C Date Collected: 03/10/2015 13:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 22:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	113		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317025.D
Lims ID: 180-41935-C-15 Lab Sample ID: 180-41935-15
Client ID: HD-COD-SW-28-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 22:43:30 ALS Bottle#: 25 Worklist Smp#: 25
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-C-15
Misc. Info.: 180-0006051-025
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 11:21:12 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 11:21:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.285	4.311	-0.026	85	111080	1000.0	
* 2 Fluorobenzene (IS)	96	7.272	7.274	-0.002	99	450592	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.358	0.004	72	101310	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	96	163654	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.524	6.526	-0.002	54	101818	49.7	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.895	6.897	-0.002	96	130590	48.3	
$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	100	420014	52.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	98	163897	56.3	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.518	3.496	0.022	71	14980	16.2	
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84	4.139	4.147	-0.008	23	1630	0.5424	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83	6.347	6.343	0.004	51	3543	0.8130	M
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130	7.667	7.669	-0.002	52	2153	0.8048	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164	9.523	9.537	-0.014	1	1154	0.5683	M
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

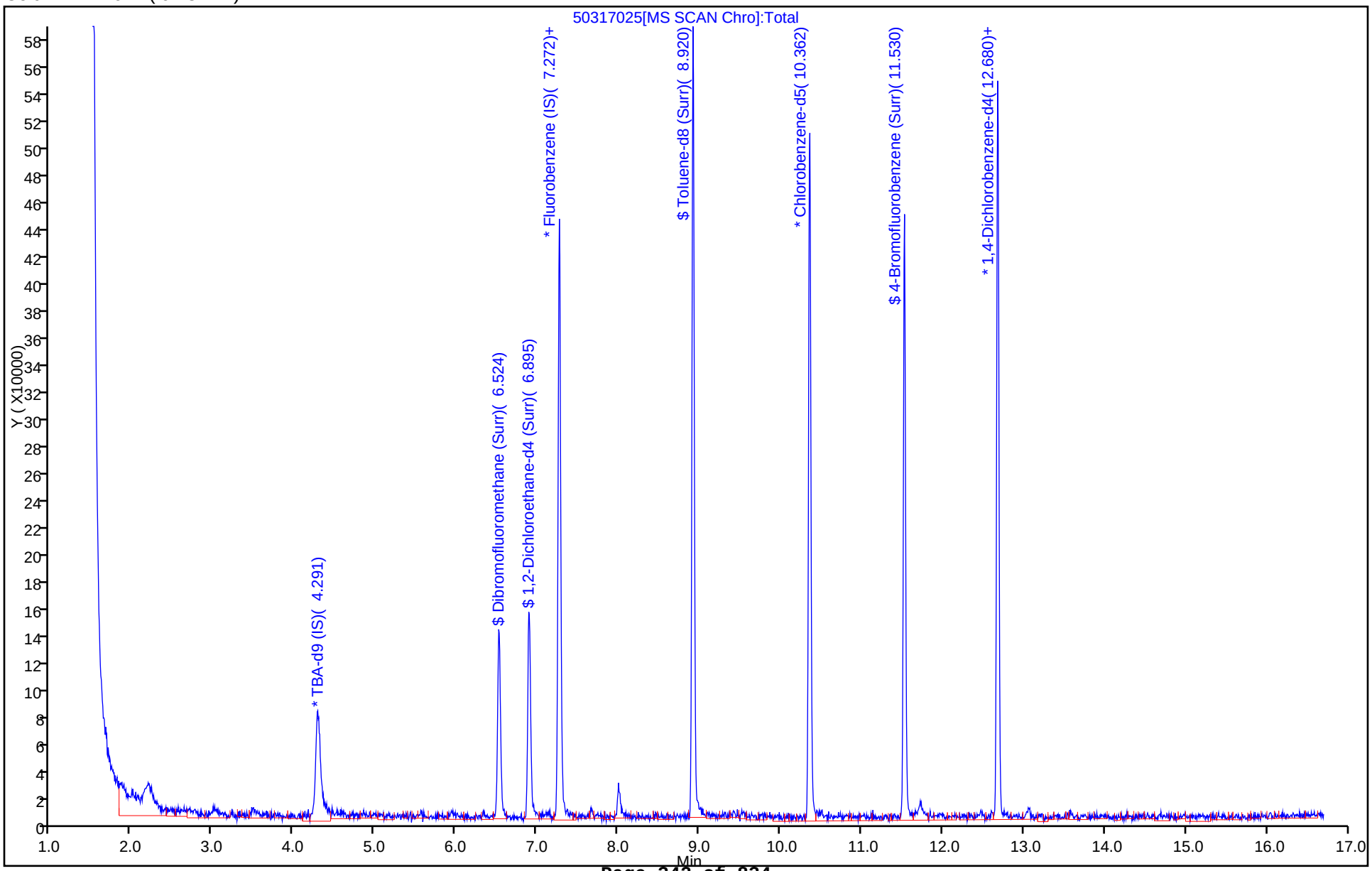
Report Date: 18-Mar-2015 11:21:12 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317025.D

Injection Date:	17-Mar-2015 22:43:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-C-15	Lab Sample ID:	180-41935-15	Worklist Smp#:	25
Client ID:	HD-COD-SW-28-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	25
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



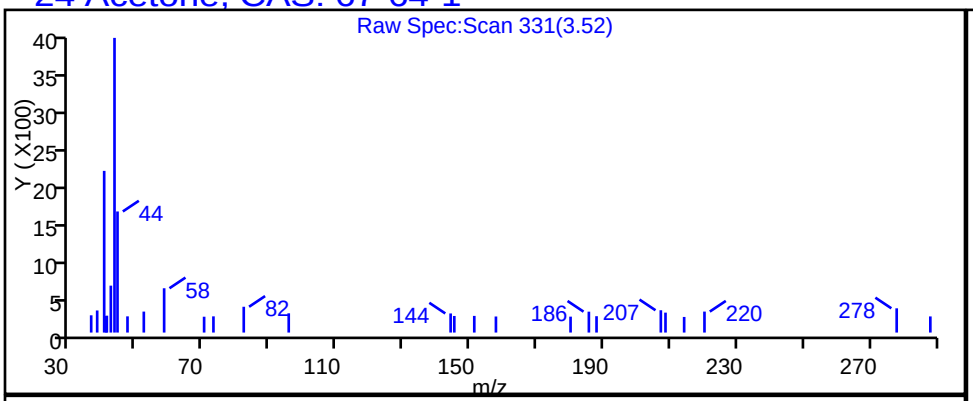
Report Date: 18-Mar-2015 11:21:12 Chrom Revision: 2.2 15-Jan-2015 13:05:58

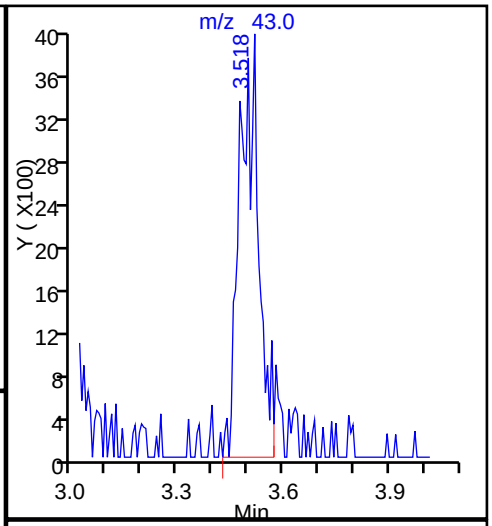
TestAmerica Pittsburgh

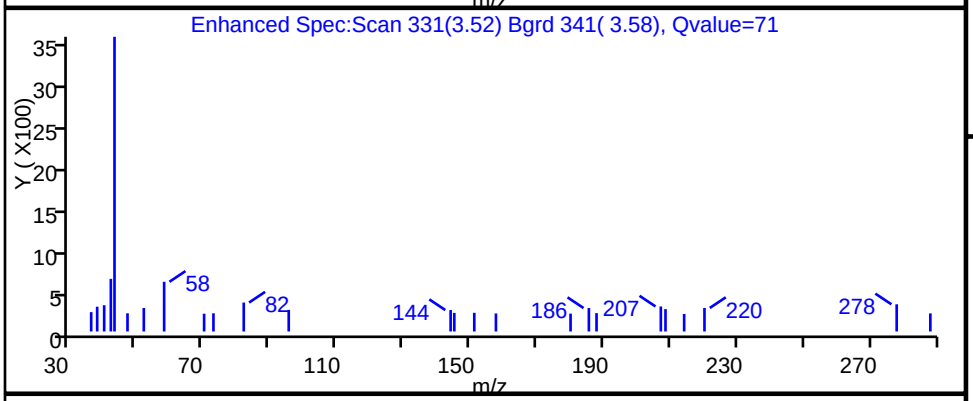
Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317025.D

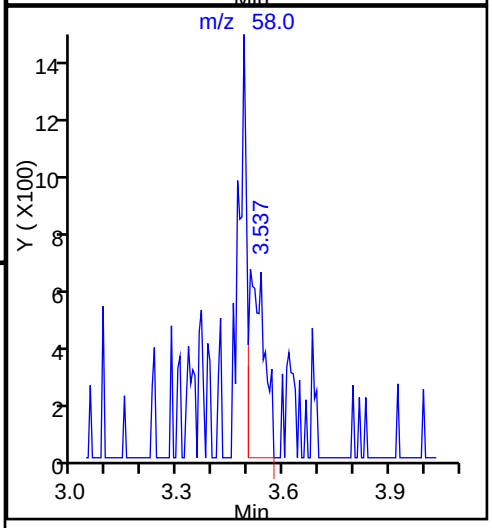
Injection Date:	17-Mar-2015 22:43:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-C-15	Lab Sample ID:	180-41935-15		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	25	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

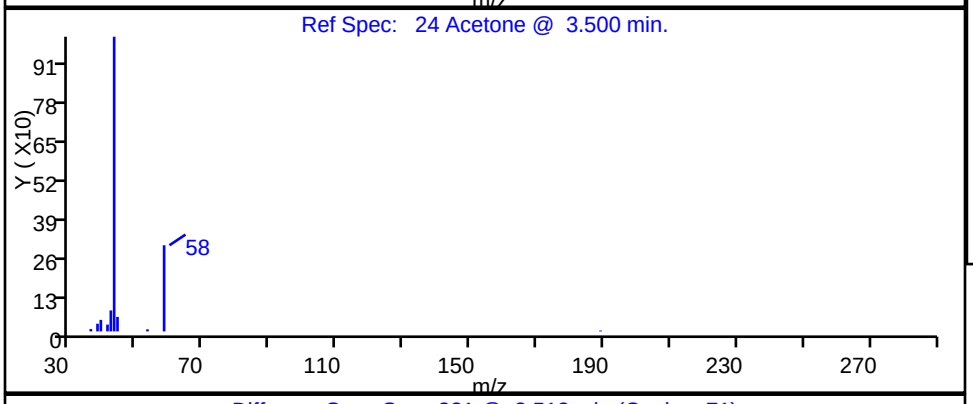
24 Acetone, CAS: 67-64-1

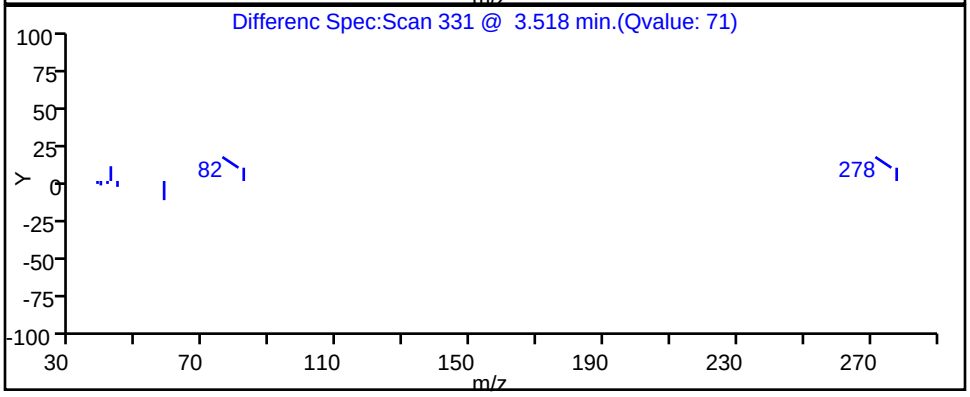










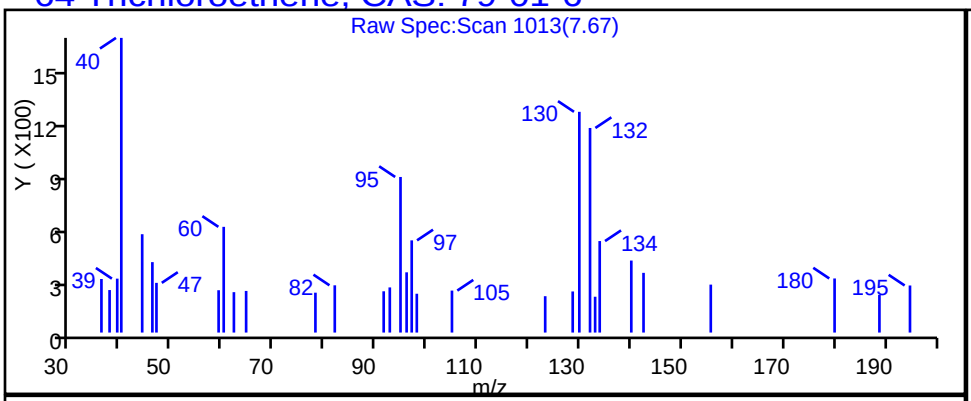


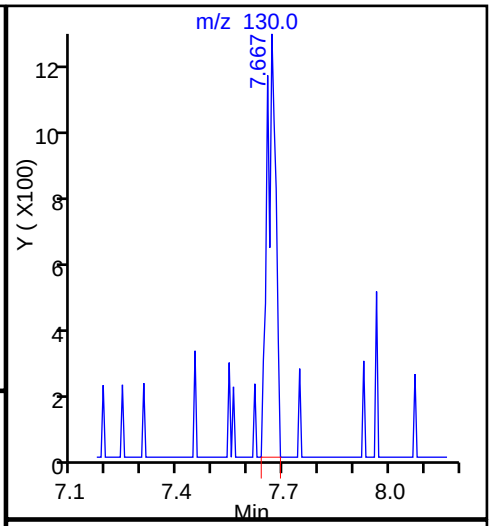
Report Date: 18-Mar-2015 11:21:13 Chrom Revision: 2.2 15-Jan-2015 13:05:58

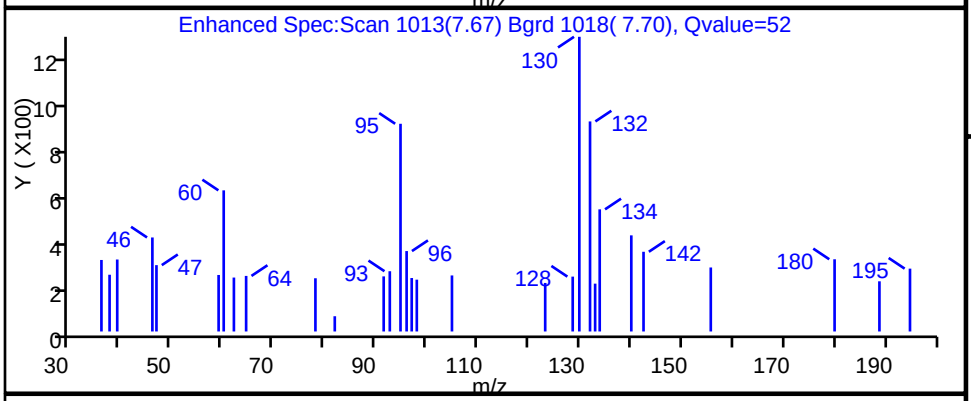
TestAmerica Pittsburgh

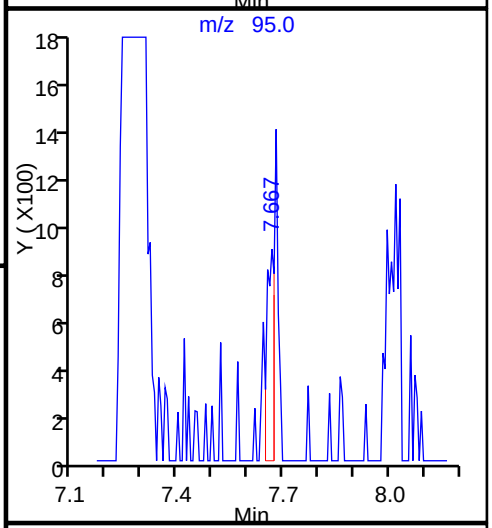
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317025.D				
Injection Date:	17-Mar-2015 22:43:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-C-15	Lab Sample ID:	180-41935-15		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	25	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

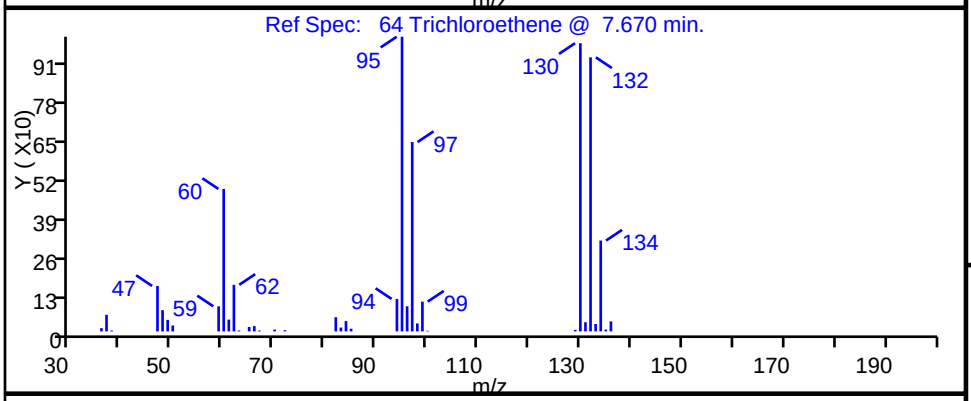
64 Trichloroethene, CAS: 79-01-6

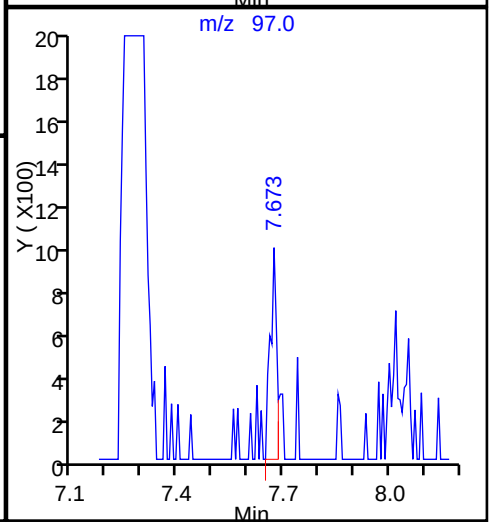


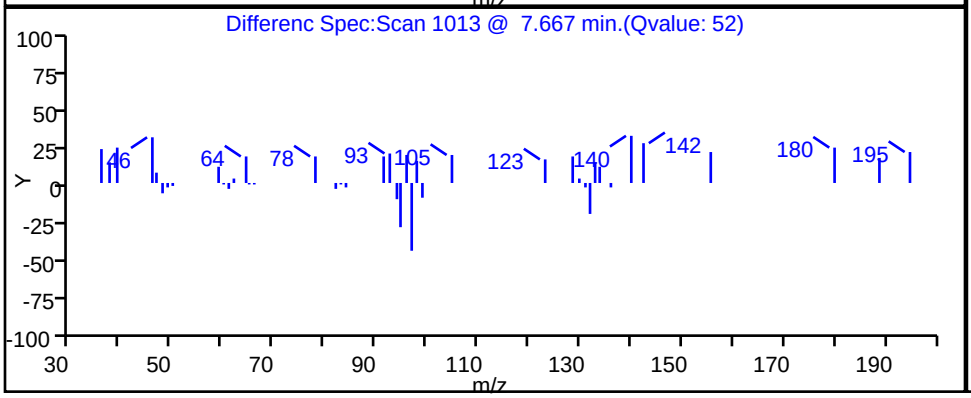












Manual Integration/User Assign Peak Report

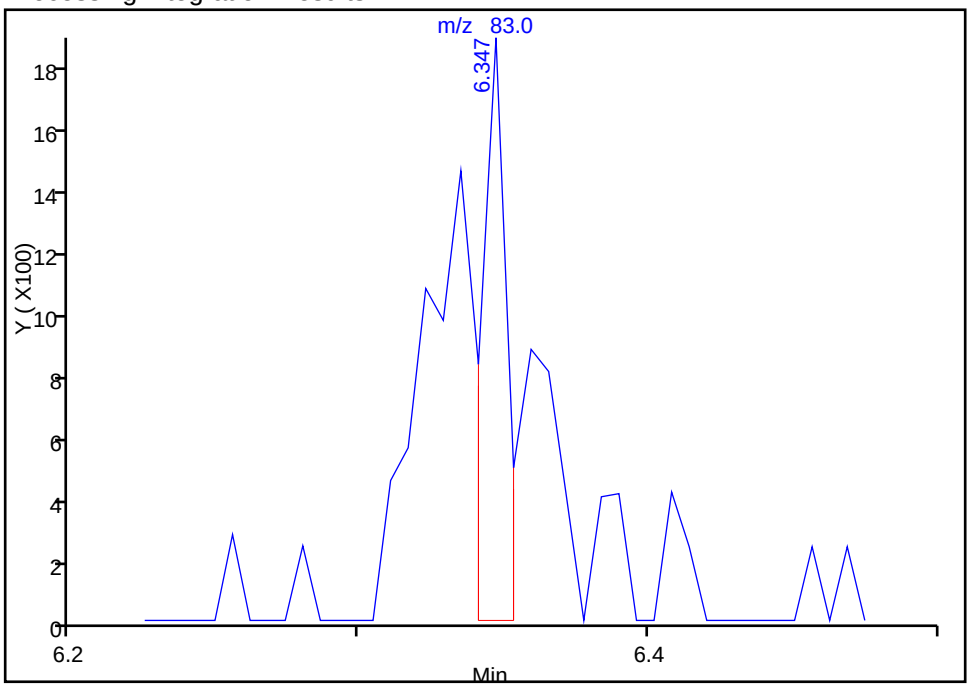
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317025.D				
Injection Date:	17-Mar-2015 22:43:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-C-15	Lab Sample ID:	180-41935-15		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	25	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

52 Chloroform, CAS: 67-66-3

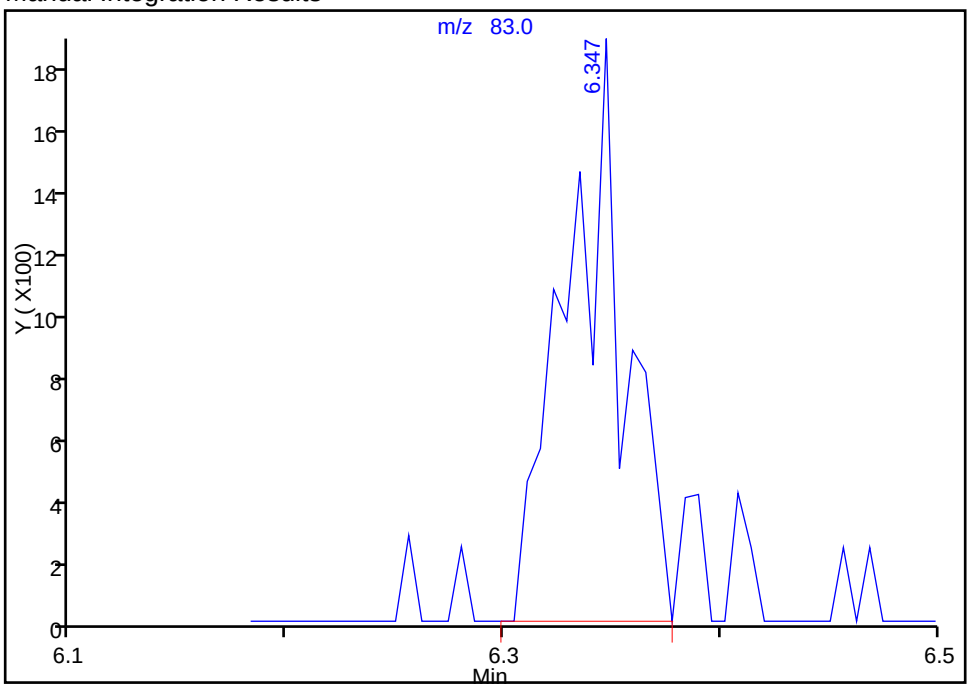
Processing Integration Results

RT: 6.35
Area: 1159
Amount: 0.265952
Amount Units: ng



Manual Integration Results

RT: 6.35
Area: 3543
Amount: 0.813002
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 11:21:12
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

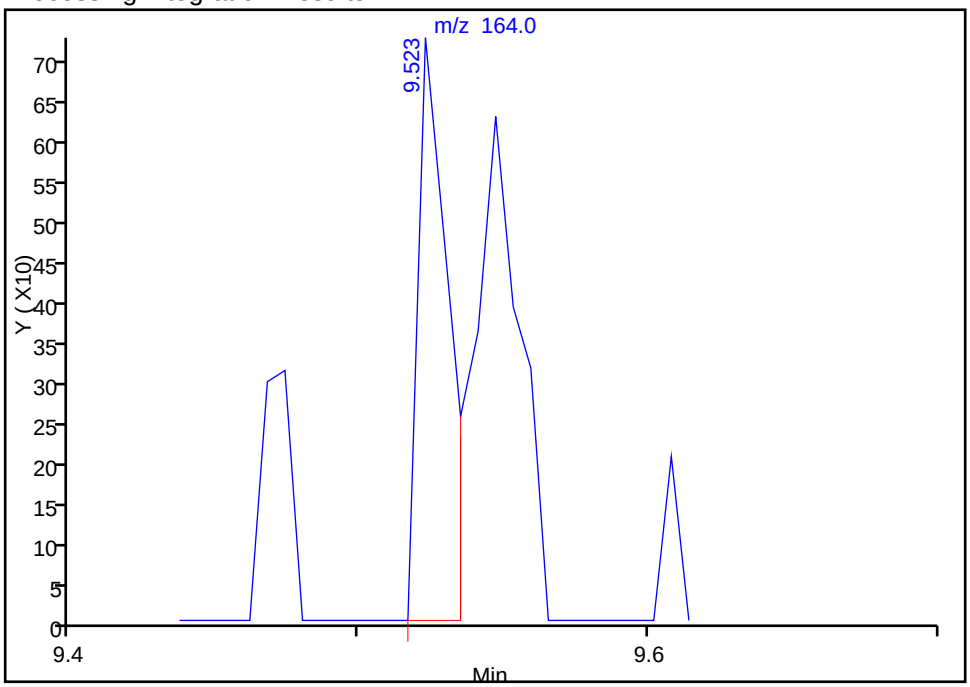
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317025.D				
Injection Date:	17-Mar-2015 22:43:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-C-15	Lab Sample ID:	180-41935-15		
Client ID:	HD-COD-SW-28-0/1-0				
Operator ID:	001562	ALS Bottle#:	25	Worklist Smp#:	25
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

80 Tetrachloroethene, CAS: 127-18-4

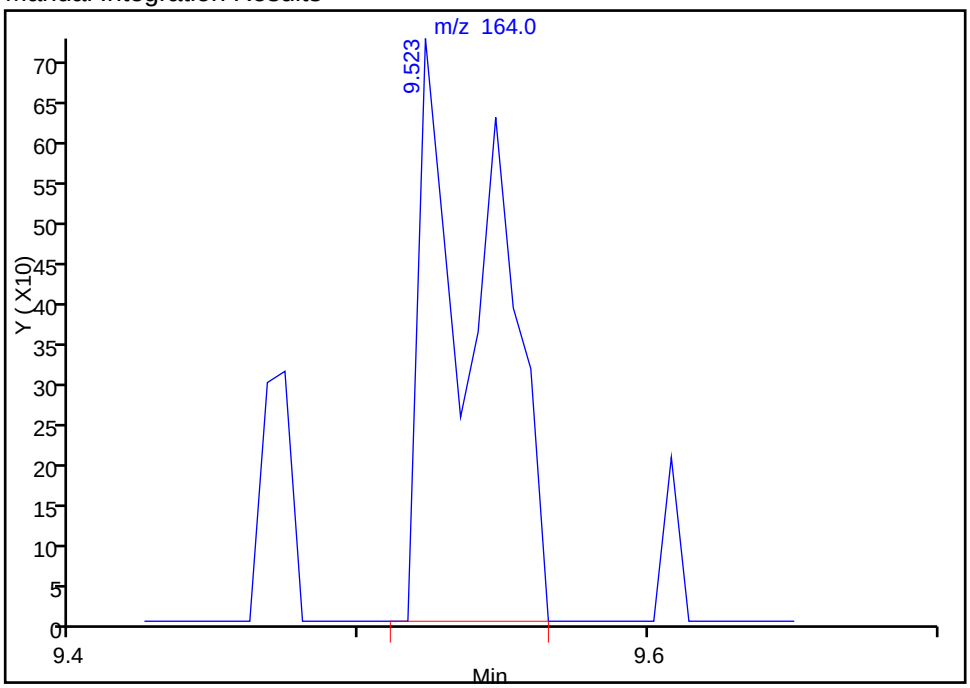
Processing Integration Results

RT: 9.52
Area: 537
Amount: 0.264430
Amount Units: ng



Manual Integration Results

RT: 9.52
Area: 1154
Amount: 0.568254
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 11:21:12
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 | Lab Sample ID: 180-41935-16

Matrix: Water | Lab File ID: 50317026.D

Analysis Method: 8260C | Date Collected: 03/10/2015 09:25

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 23:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	4.0	J	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-41935-16

Matrix: Water Lab File ID: 50317026.D

Analysis Method: 8260C Date Collected: 03/10/2015 09:25

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 23:07

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	111		70-118
1868-53-7	Dibromofluoromethane (Surr)	103		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317026.D
Lims ID: 180-41935-D-16 Lab Sample ID: 180-41935-16
Client ID: HD-COD-SW-29-0/1-0
Sample Type: Client
Inject. Date: 17-Mar-2015 23:07:30 ALS Bottle#: 26 Worklist Smp#: 26
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-16
Misc. Info.: 180-0006051-026
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 11:22:33 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 11:22:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.290	4.311	-0.021	85	97648	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.274	-0.003	99	416429	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	72	92833	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.679	12.682	-0.003	95	154481	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.522	6.526	-0.004	55	97660	51.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	96	128039	51.3	
$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	100	384460	51.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	97	147955	55.5	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.493	3.496	-0.003	67	17013	19.9	M
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.669				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

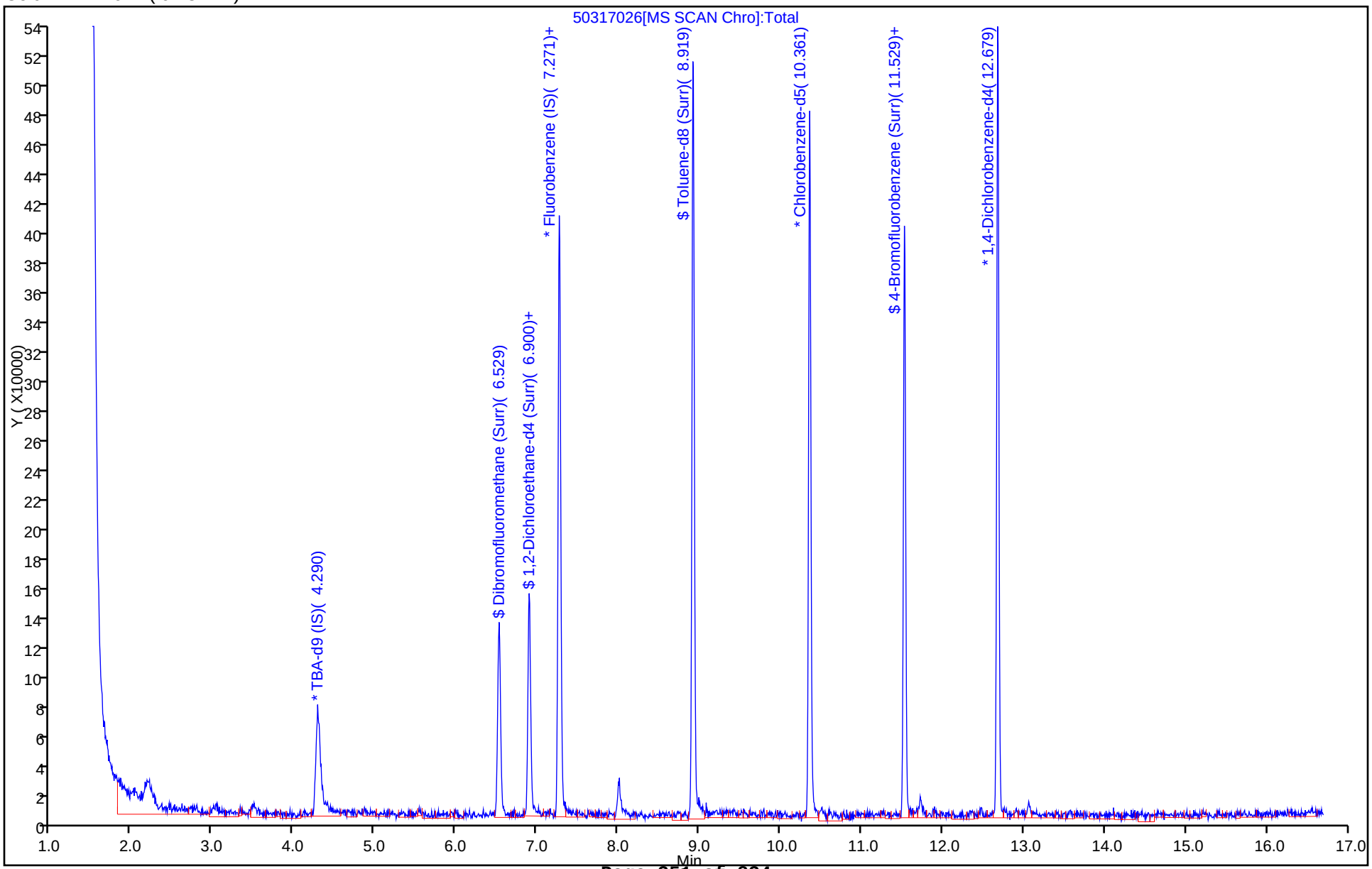
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

Report Date: 18-Mar-2015 11:22:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317026.D				
Injection Date:	17-Mar-2015 23:07:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-16	Lab Sample ID:	180-41935-16	Worklist Smp#:	26
Client ID:	HD-COD-SW-29-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	26
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)

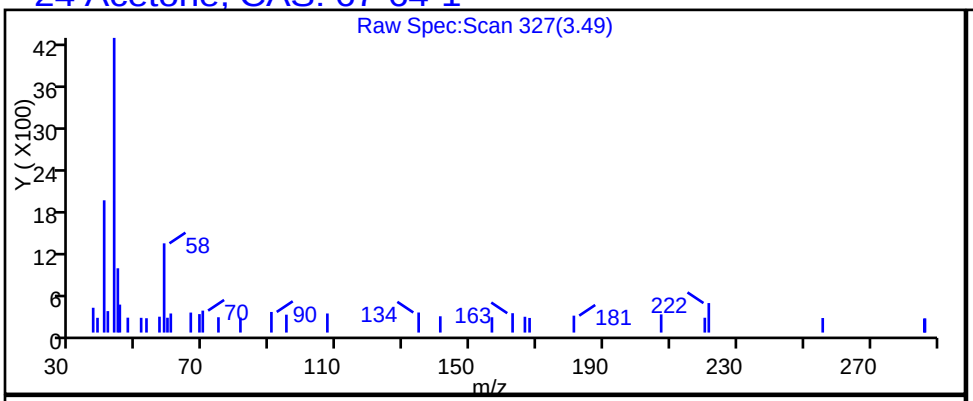


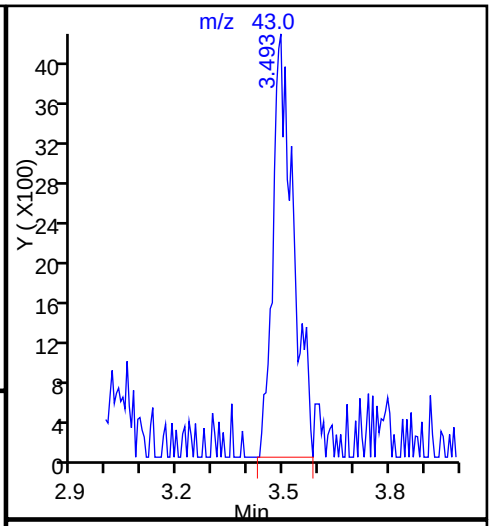
Report Date: 18-Mar-2015 11:22:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

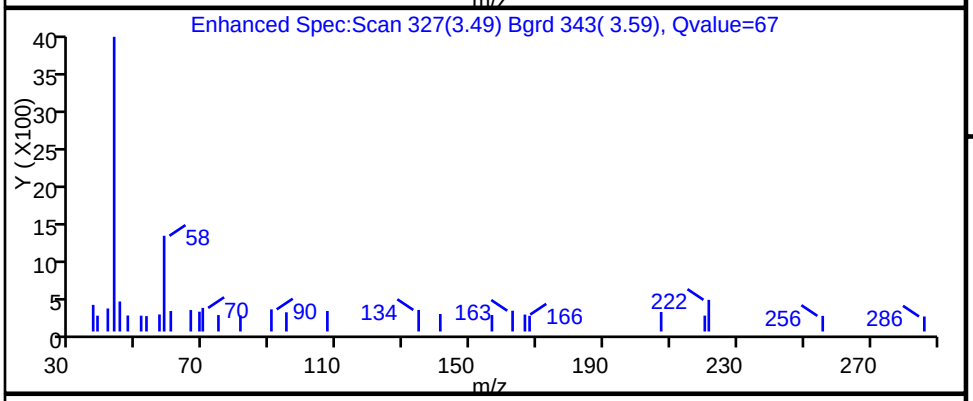
TestAmerica Pittsburgh

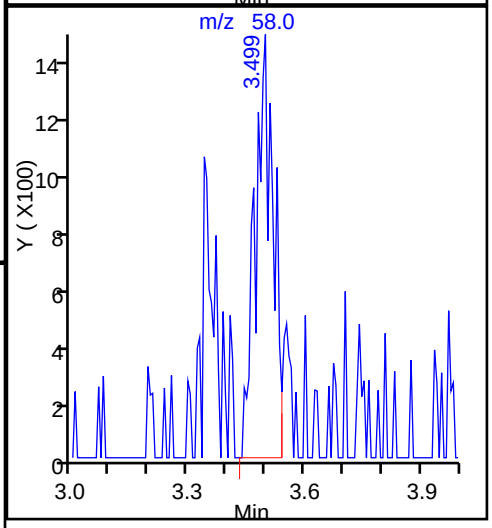
Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317026.D				
Injection Date:	17-Mar-2015 23:07:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-16	Lab Sample ID:	180-41935-16		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	001562	ALS Bottle#:	26	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

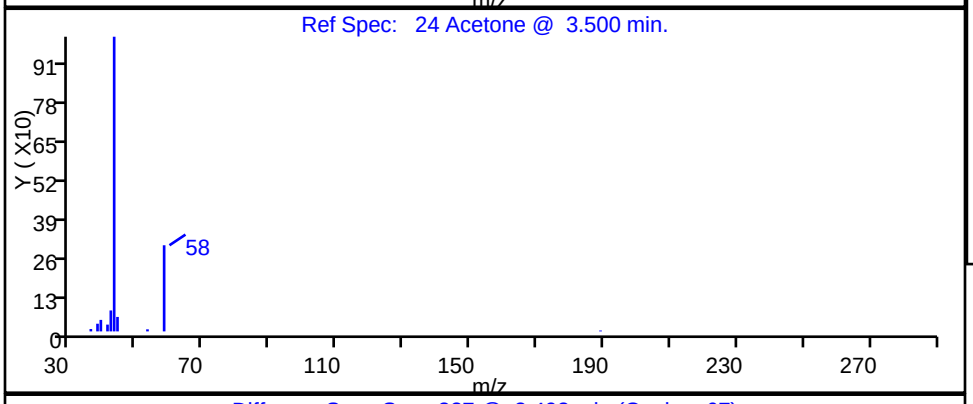
24 Acetone, CAS: 67-64-1

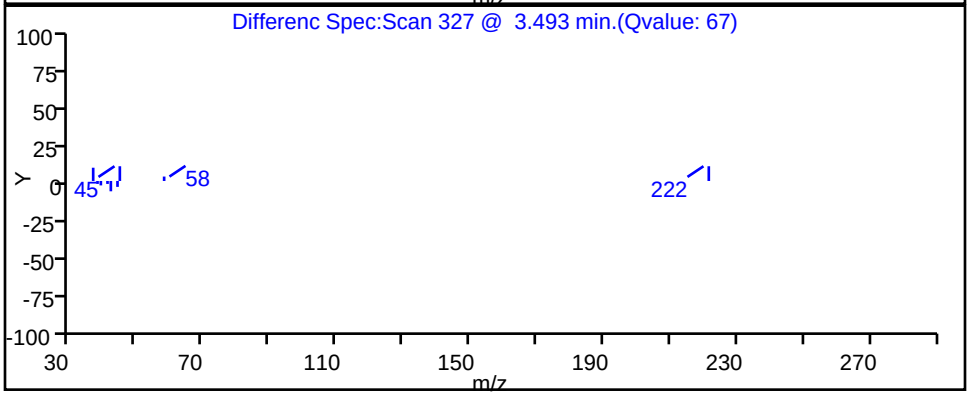












Manual Integration/User Assign Peak Report

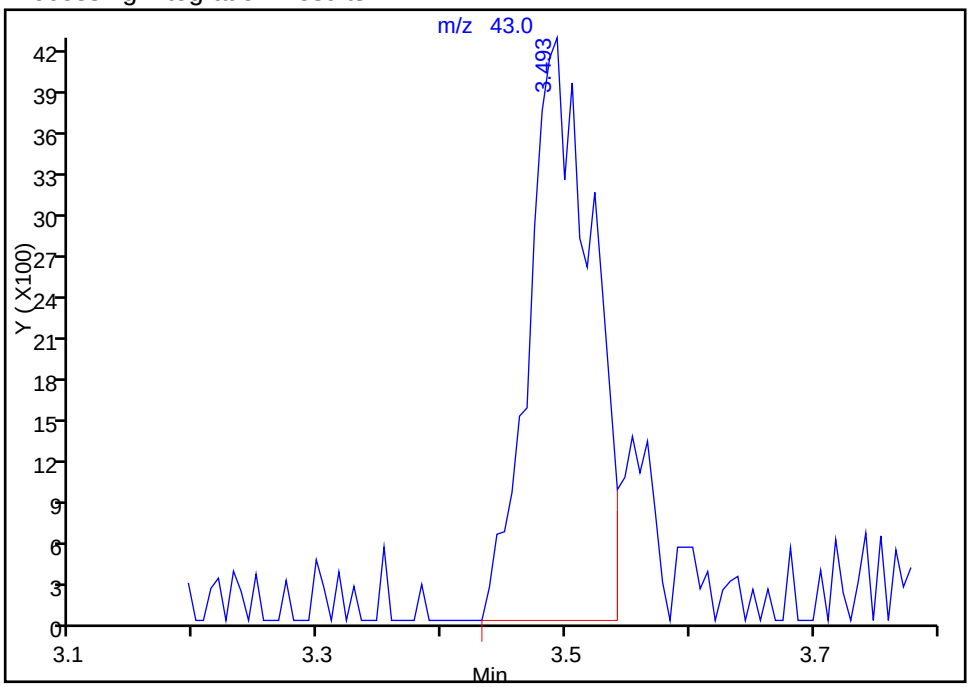
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317026.D				
Injection Date:	17-Mar-2015 23:07:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-D-16	Lab Sample ID:	180-41935-16		
Client ID:	HD-COD-SW-29-0/1-0				
Operator ID:	001562	ALS Bottle#:	26	Worklist Smp#:	26
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

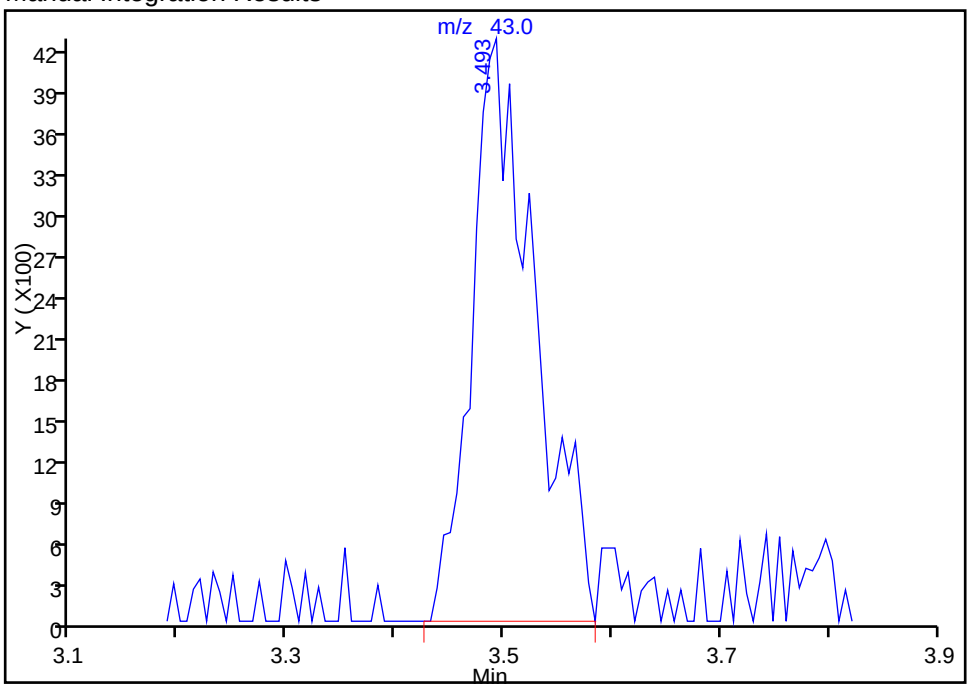
Processing Integration Results

RT: 3.49
Area: 14890
Amount: 17.454705
Amount Units: ng



Manual Integration Results

RT: 3.49
Area: 17013
Amount: 19.943377
Amount Units: ng



Reviewer: fergusond, 18-Mar-2015 11:22:33
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41935-17

Matrix: Water Lab File ID: 50319019.D

Analysis Method: 8260C Date Collected: 03/10/2015 08:00

Sample wt/vol: 5(mL) Date Analyzed: 03/19/2015 19:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135984 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	0.37	J	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	0.22	J B	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	0.15	J	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.3		1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	0.17	J	1.0	0.17
71-55-6	1,1,1-Trichloroethane	0.48	J	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	7.7		1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	4.7		1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41935-17

Matrix: Water Lab File ID: 50319019.D

Analysis Method: 8260C Date Collected: 03/10/2015 08:00

Sample wt/vol: 5(mL) Date Analyzed: 03/19/2015 19:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135984 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-135
2037-26-5	Toluene-d8 (Surr)	103		71-118
460-00-4	4-Bromofluorobenzene (Surr)	112		70-118
1868-53-7	Dibromofluoromethane (Surr)	102		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D
Lims ID: 180-41935-E-17 Lab Sample ID: 180-41935-17
Client ID: HD-QC1-0/1-1
Sample Type: Client
Inject. Date: 19-Mar-2015 19:33:30 ALS Bottle#: 19 Worklist Smp#: 19
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-E-17
Misc. Info.: 180-0006092-019
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 20-Mar-2015 07:58:29 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: fergusond Date: 20-Mar-2015 07:58:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.298	0.007	98	121177	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.273	0.000	100	426896	50.0	
* 3 Chlorobenzene-d5	119	10.358	10.363	-0.005	99	97530	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.681	12.687	-0.006	94	157595	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.531	0.000	58	99182	51.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.896	0.006	97	133380	52.1	
$ 7 Toluene-d8 (Surr)	98	8.922	8.922	0.000	100	400769	51.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.531	0.001	98	157133	56.1	
12 Chloromethane	50		1.780				ND	
13 Vinyl chloride	62		1.907				ND	
15 Bromomethane	94		2.254				ND	
16 Chloroethane	64		2.394				ND	
22 1,1-Dichloroethene	96	3.386	3.386	0.000	92	4544	1.85	
24 Acetone	43	3.495	3.501	-0.006	71	5700	6.52	
26 Carbon disulfide	76		3.647				ND	
31 Methylene Chloride	84	4.159	4.146	0.013	53	3141	1.10	
33 Acrylonitrile	53		4.554				ND	
34 trans-1,2-Dichloroethene	96		4.560				ND	
35 Methyl tert-butyl ether	73	4.615	4.590	0.025	2	1776	0.3155	
37 1,1-Dichloroethane	63	5.187	5.174	0.013	10	3364	0.7402	
45 cis-1,2-Dichloroethene	96	5.941	5.935	0.006	83	125315	46.7	
46 2-Butanone (MEK)	43		5.983				ND	
49 Chlorobromomethane	128		6.220				ND	
52 Chloroform	83	6.355	6.342	0.013	38	3587	0.8688	M
53 1,1,1-Trichloroethane	97	6.537	6.525	0.012	41	6383	2.42	
56 Carbon tetrachloride	117		6.713				ND	
58 Benzene	78		6.950				ND	
59 1,2-Dichloroethane	62		6.981				ND	
64 Trichloroethene	130	7.669	7.662	0.007	98	96954	38.3	
67 1,2-Dichloropropane	63		7.900				ND	
70 1,4-Dioxane	88		8.052				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.198				ND	
74 cis-1,3-Dichloropropene	75		8.654				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.824				ND	
76 Toluene	91		8.988				ND	
77 trans-1,3-Dichloropropene	75		9.214				ND	
79 1,1,2-Trichloroethane	97		9.402				ND	
80 Tetrachloroethene	164	9.536	9.536	0.000	97	46092	23.6	
82 2-Hexanone	43		9.658				ND	
84 Chlorodibromomethane	129		9.785				ND	
85 Ethylene Dibromide	107		9.901				ND	
87 Chlorobenzene	112		10.388				ND	
89 1,1,1,2-Tetrachloroethane	131		10.473				ND	
90 Ethylbenzene	106		10.497				ND	
91 m-Xylene & p-Xylene	106		10.619				ND	
92 o-Xylene	106		11.008				ND	
93 Styrene	104		11.026				ND	
94 Bromoform	173		11.215				ND	
99 1,1,2,2-Tetrachloroethane	83		11.677				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

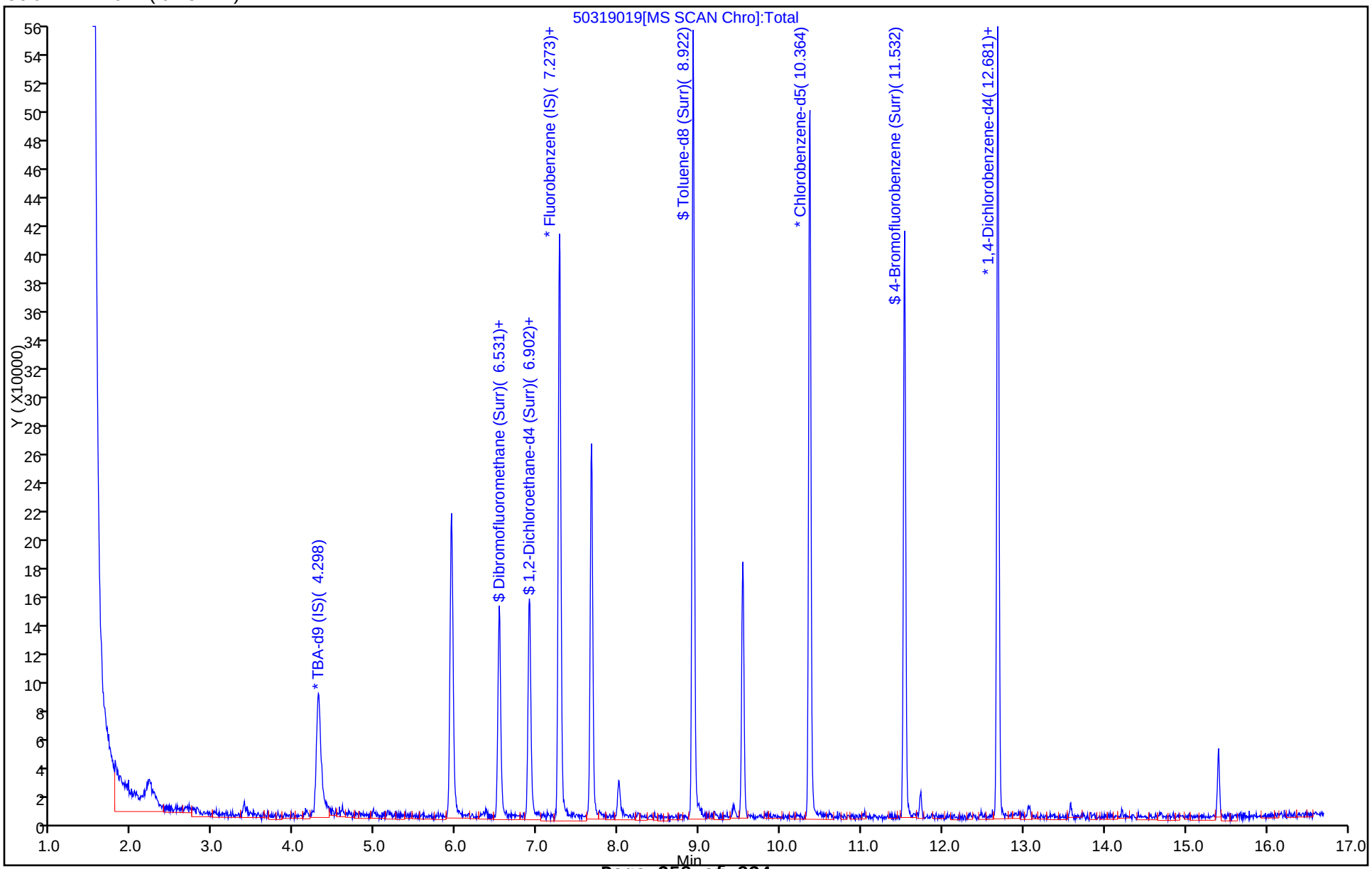
Report Date: 20-Mar-2015 07:58:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D

Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17	Worklist Smp#:	19
Client ID:	HD-QC1-0/1-1				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	19
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



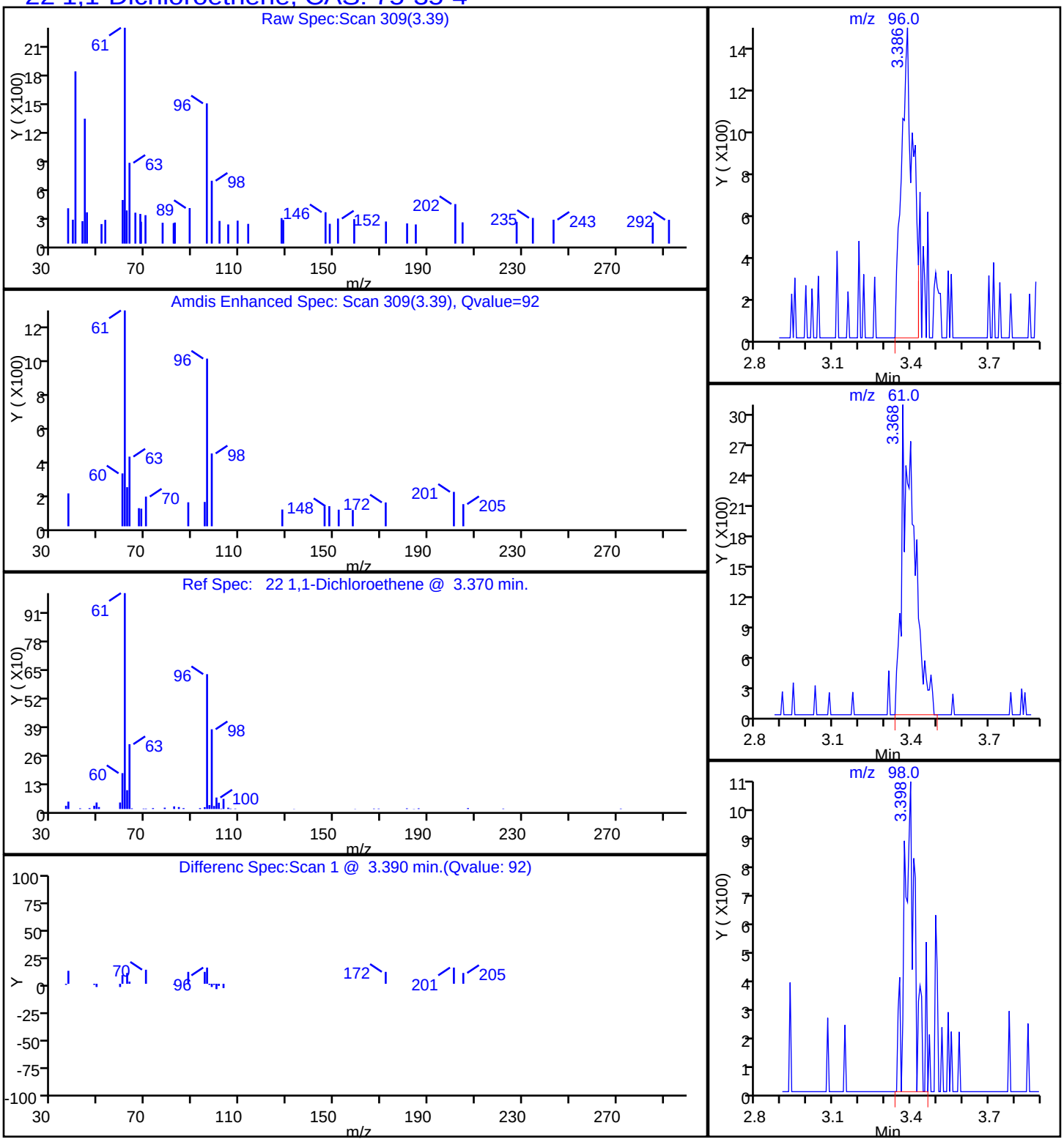
Report Date: 20-Mar-2015 07:58:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D

Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	19 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

22 1,1-Dichloroethene, CAS: 75-35-4



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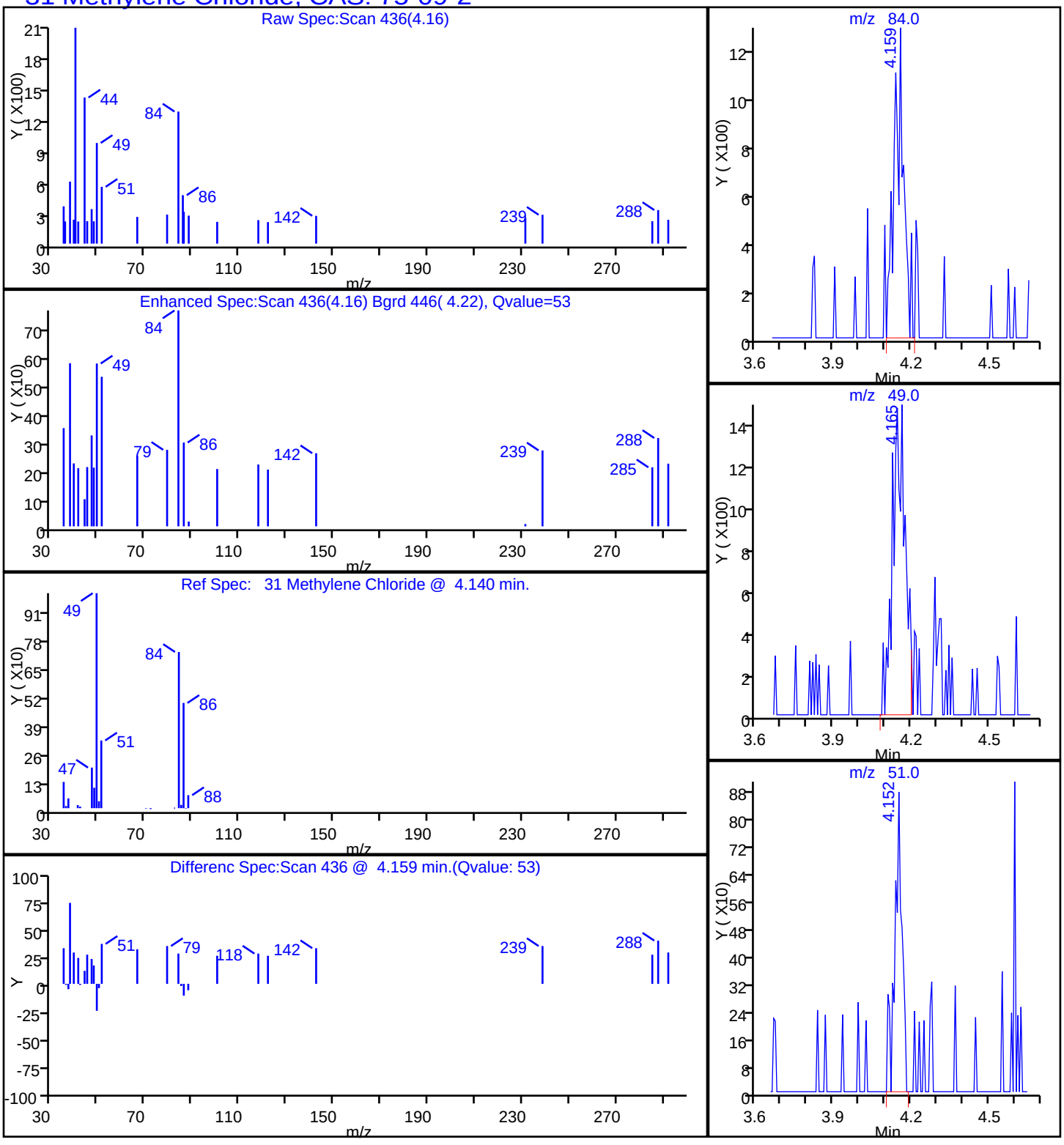
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D

Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

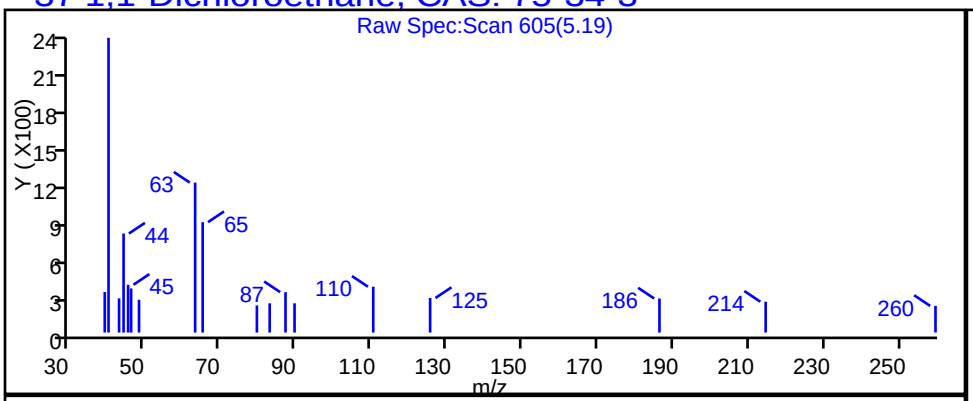


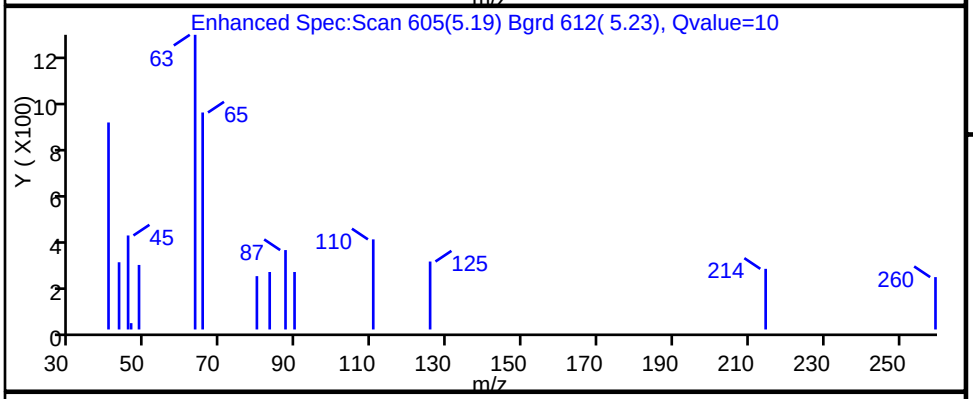
Report Date: 20-Mar-2015 07:58:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

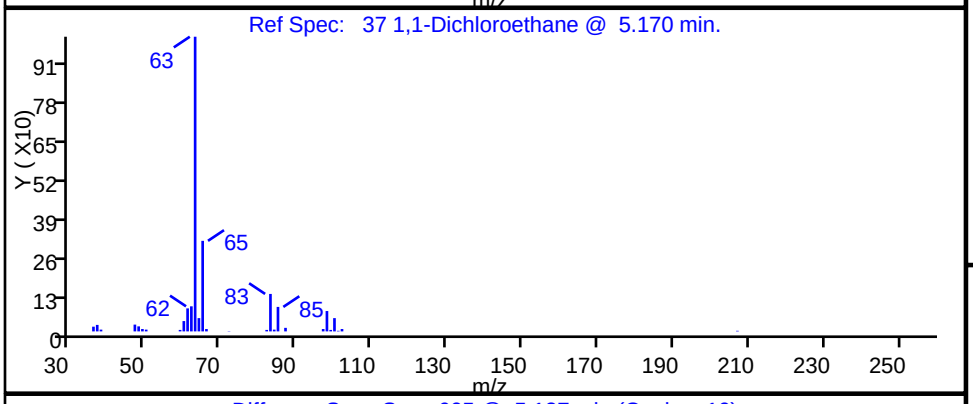
TestAmerica Pittsburgh

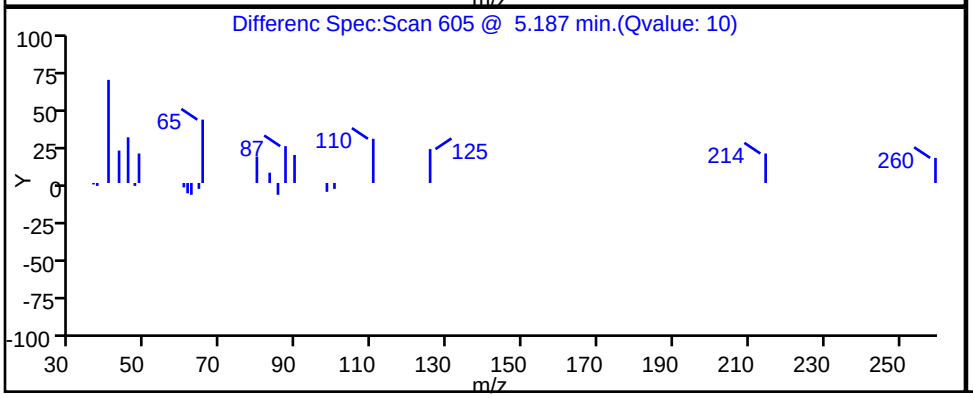
Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D				
Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

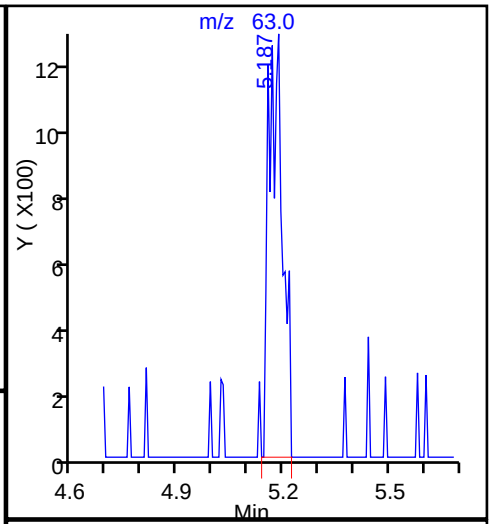
37 1,1-Dichloroethane, CAS: 75-34-3

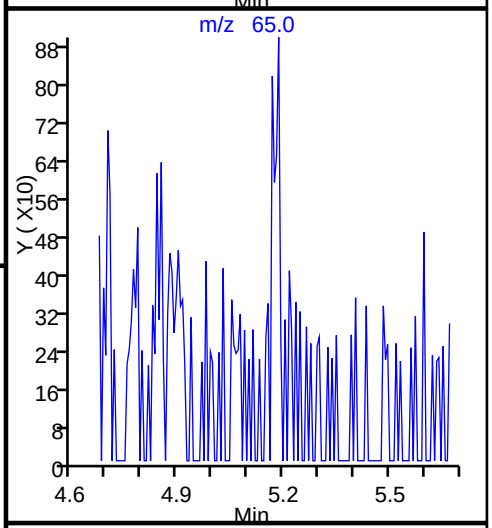


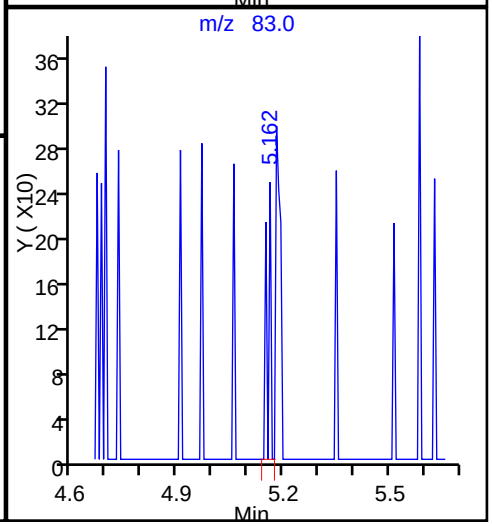












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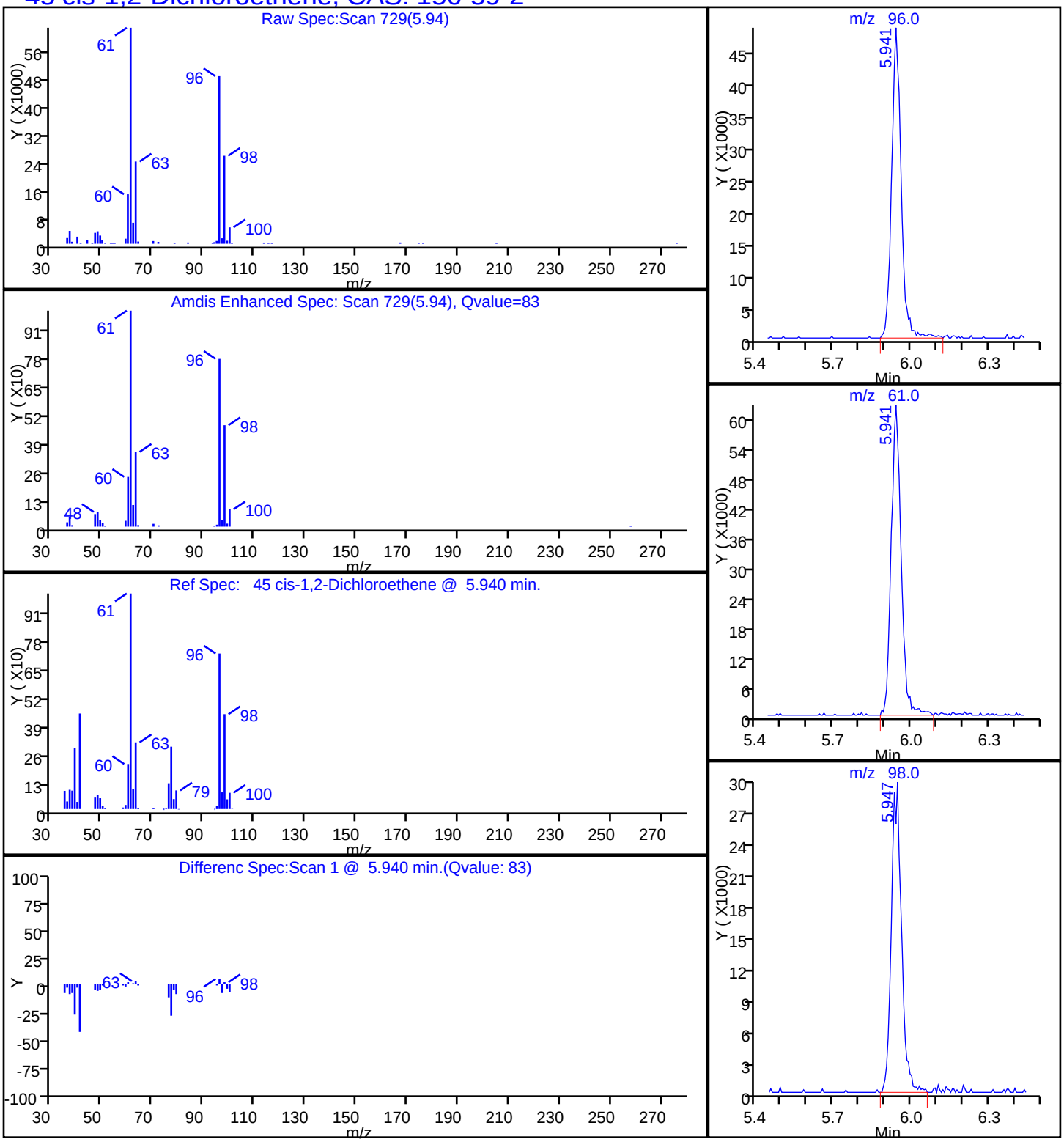
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D

Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

45 cis-1,2-Dichloroethene, CAS: 156-59-2



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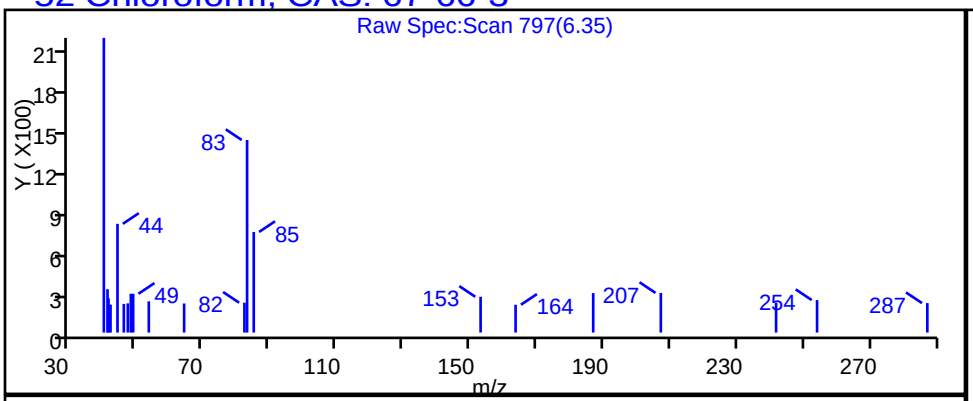
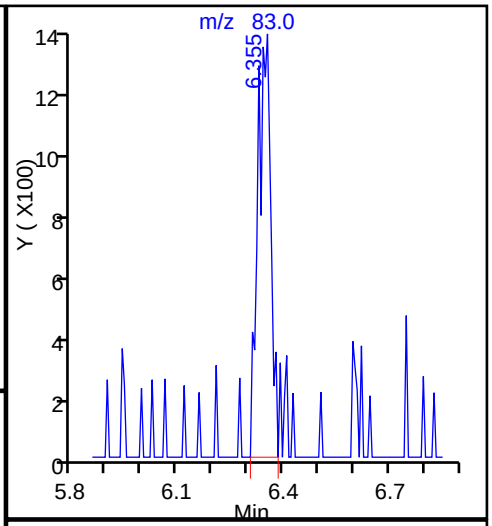
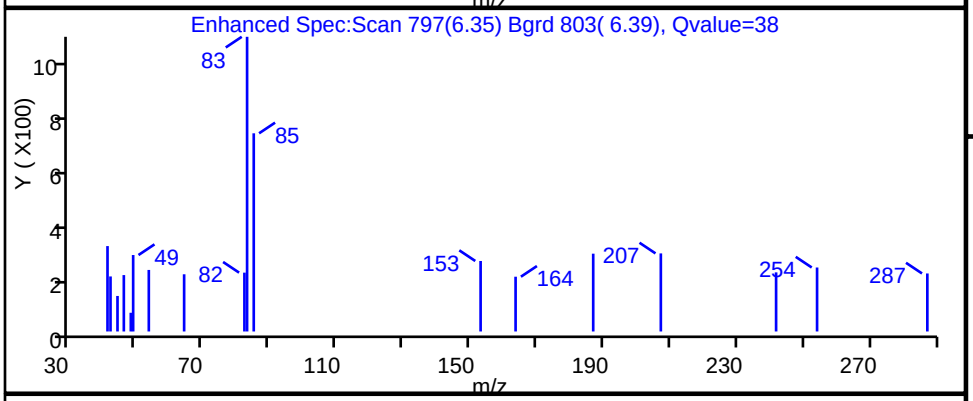
TestAmerica Pittsburgh

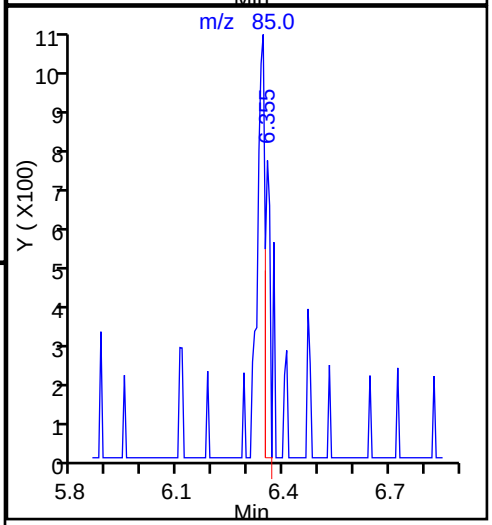
Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D				
Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

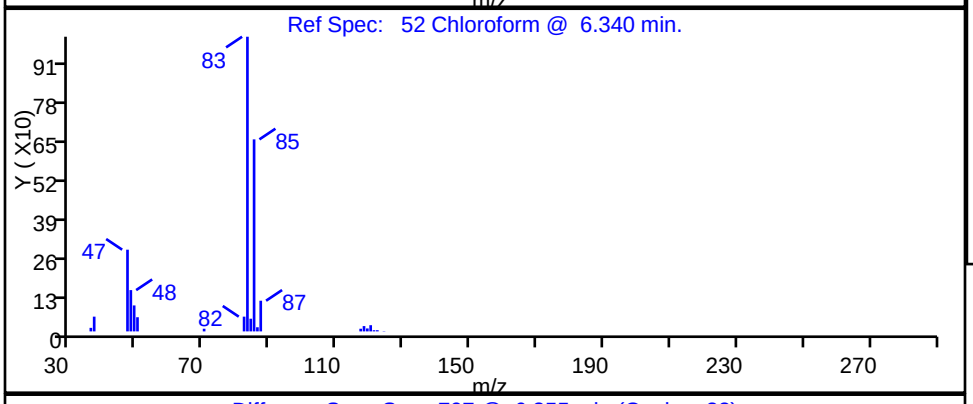
52 Chloroform, CAS: 67-66-3

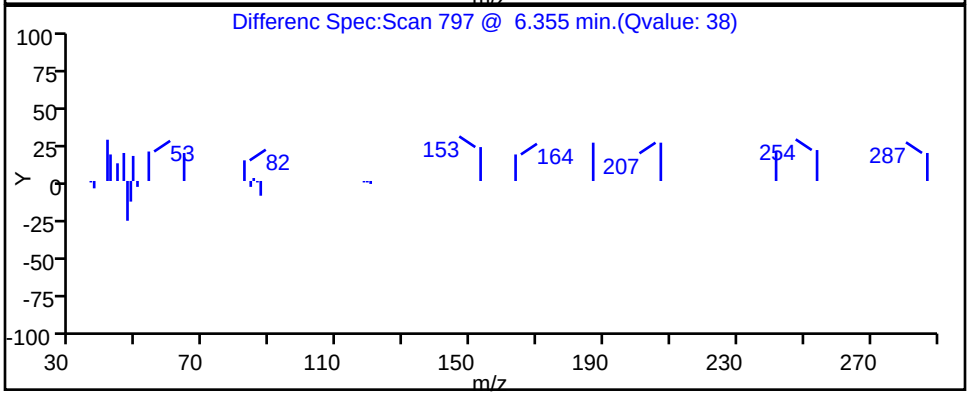












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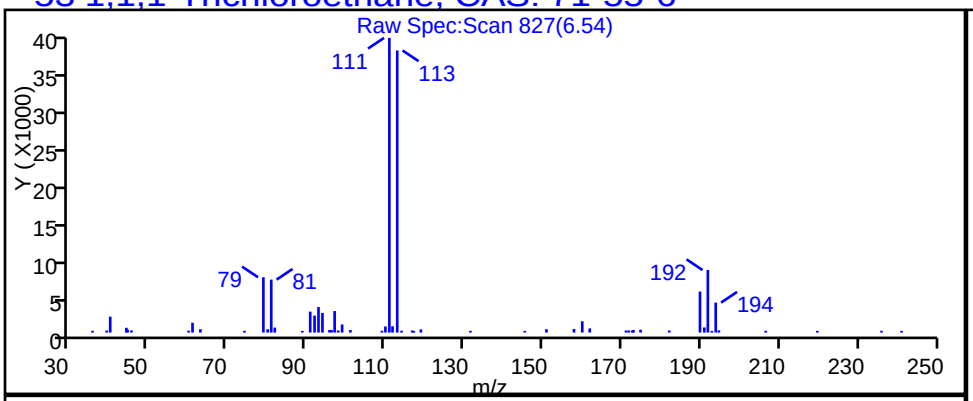
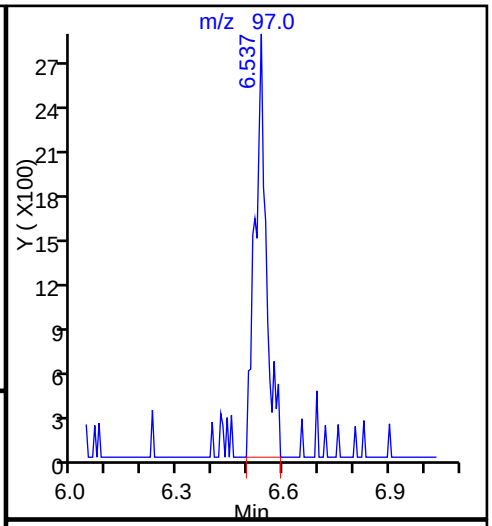
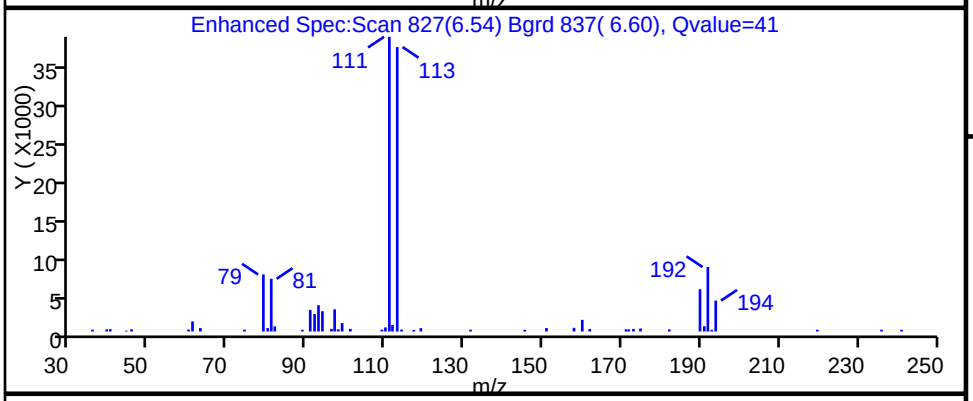
TestAmerica Pittsburgh

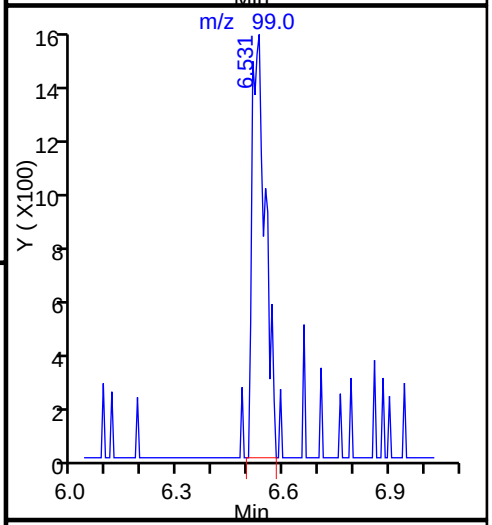
Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D				
Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

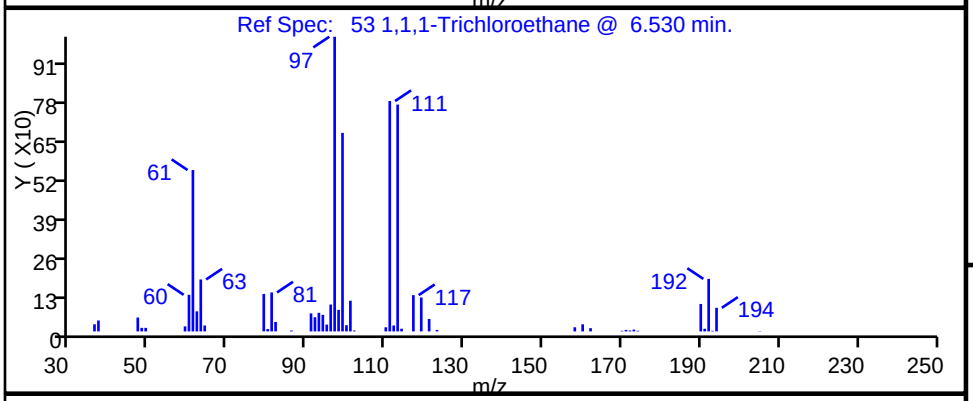
53 1,1,1-Trichloroethane, CAS: 71-55-6

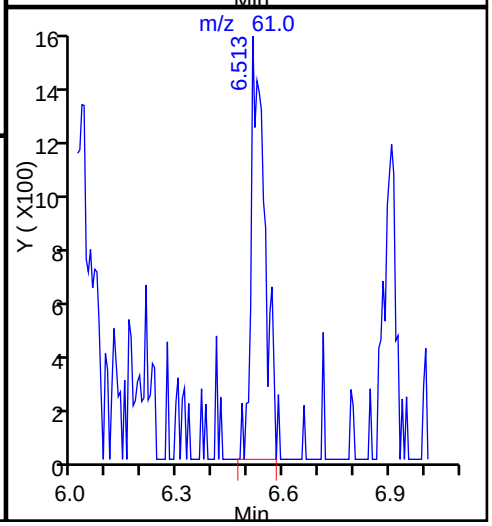


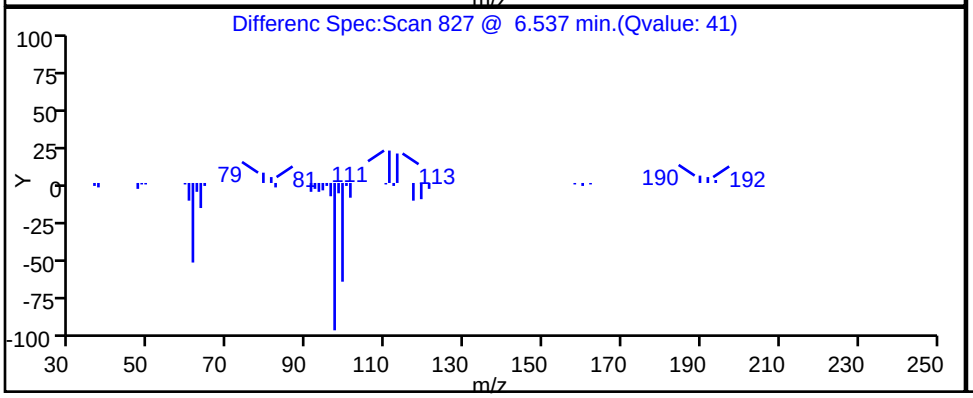












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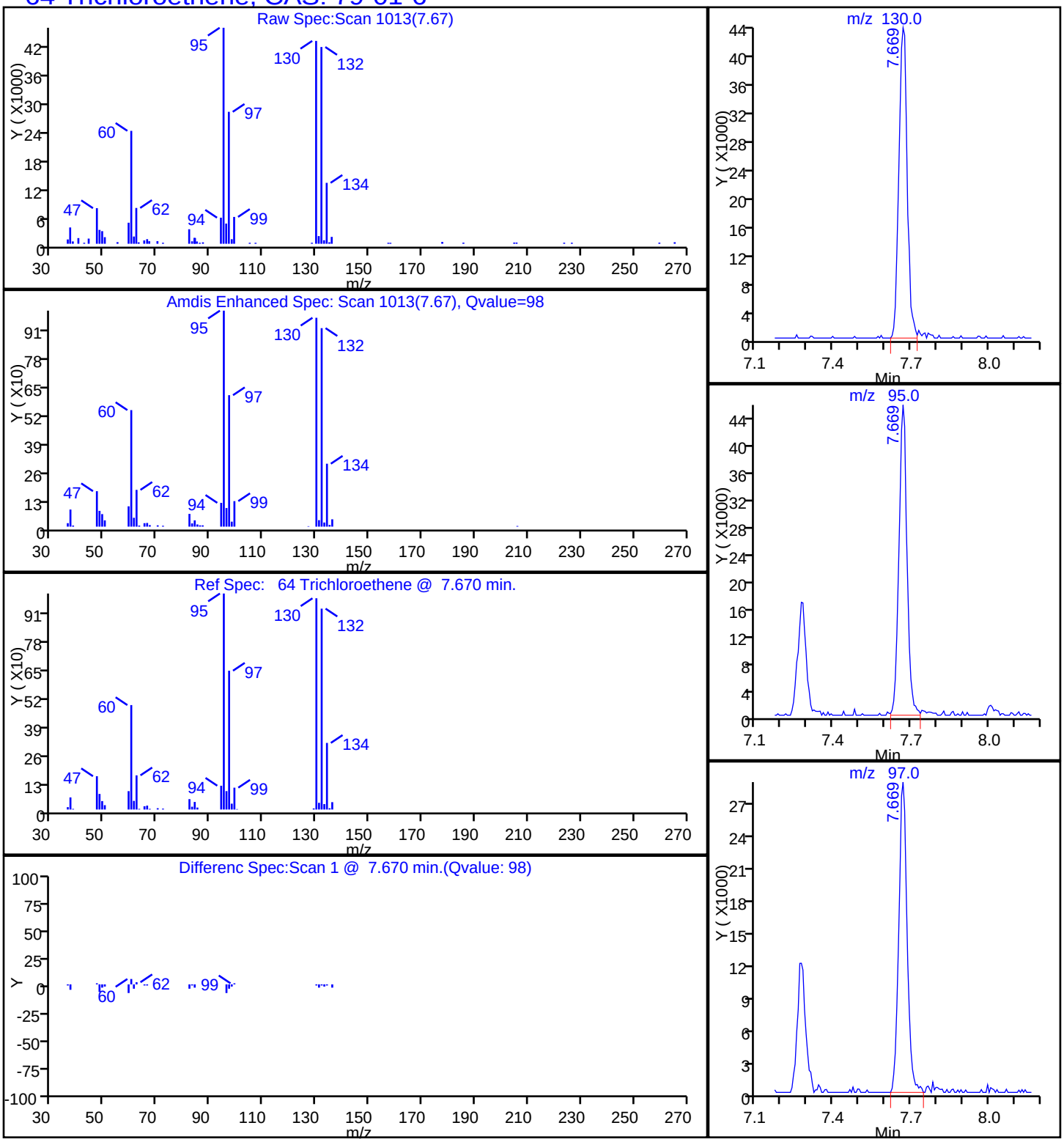
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D				
Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

64 Trichloroethene, CAS: 79-01-6



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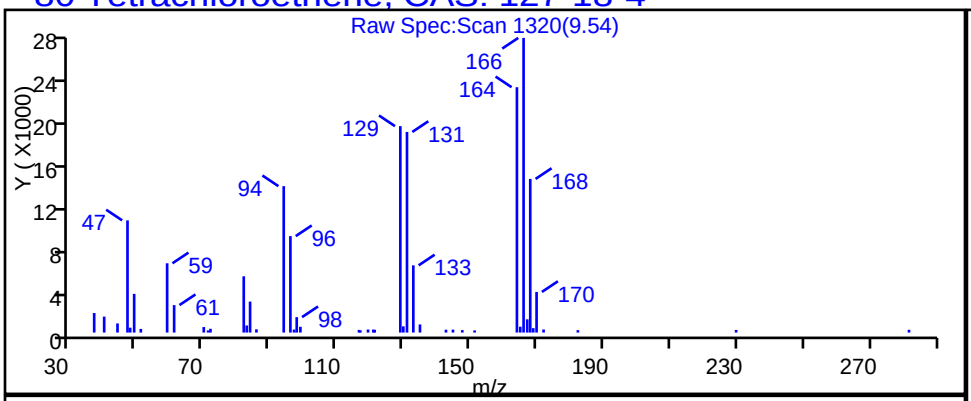
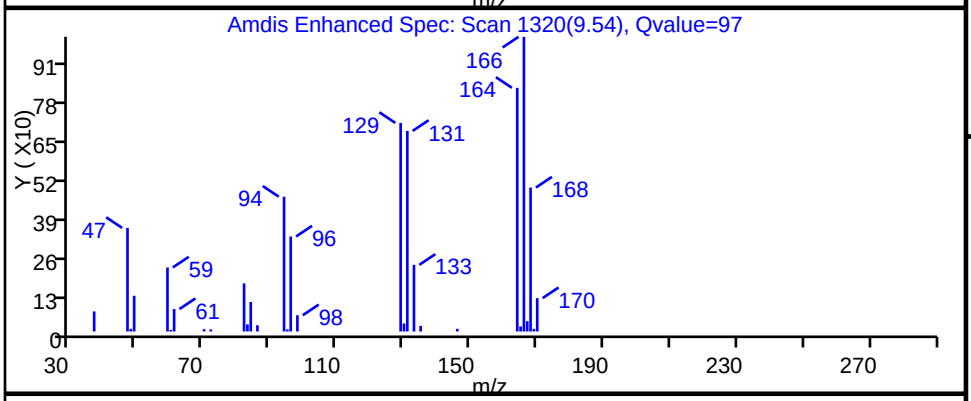
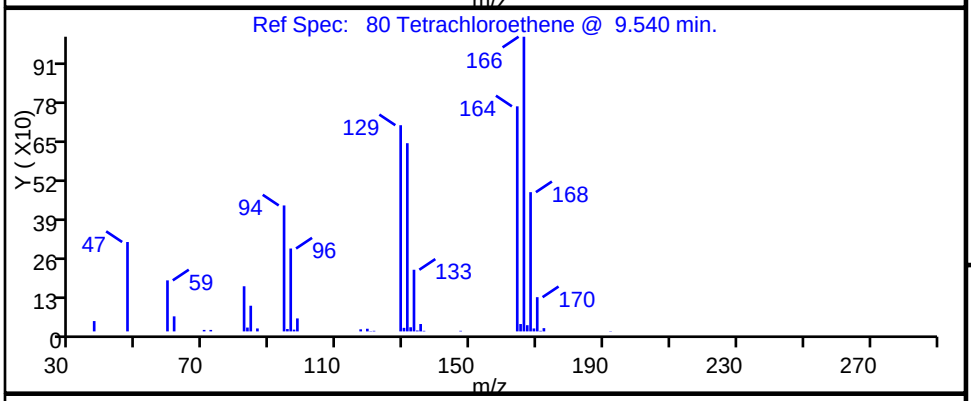
Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D

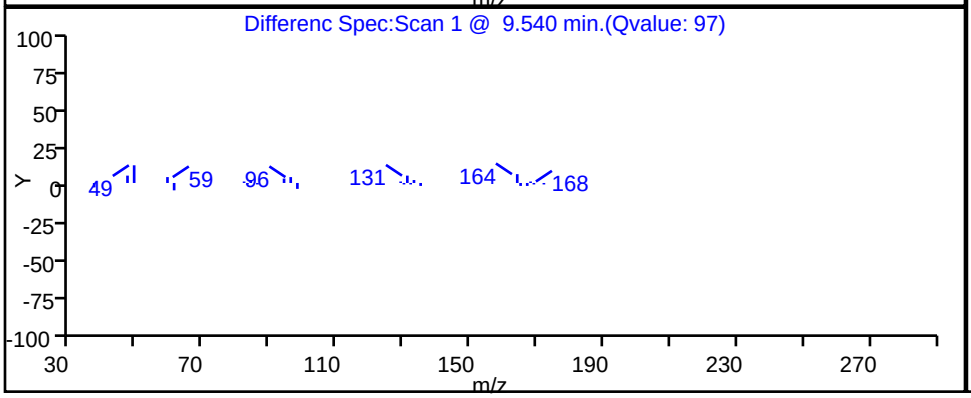
Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17
Client ID:	HD-QC1-0/1-1		
Operator ID:	001562	ALS Bottle#:	19 Worklist Smp#: 19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL
Column:	DB-624 (0.18 mm)	Detector	MS SCAN

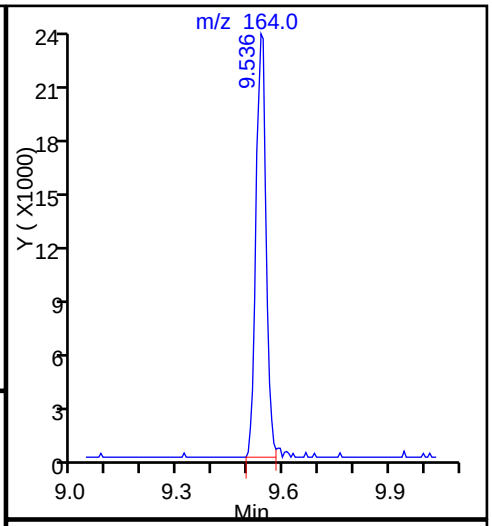
80 Tetrachloroethene, CAS: 127-18-4

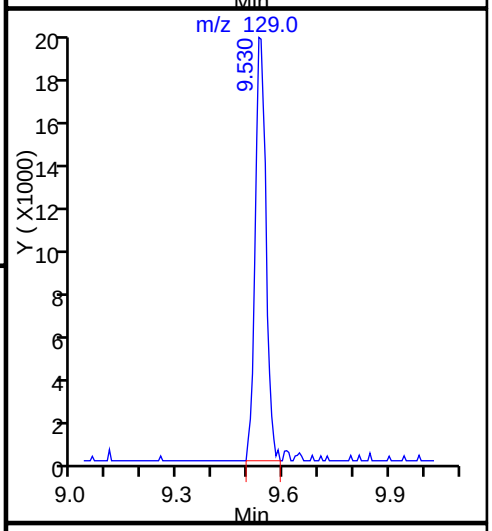


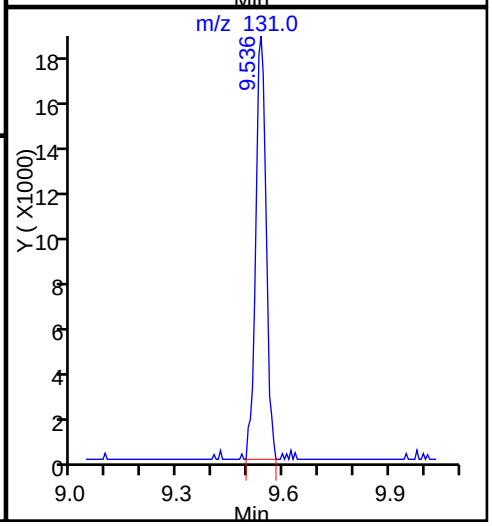












Manual Integration/User Assign Peak Report

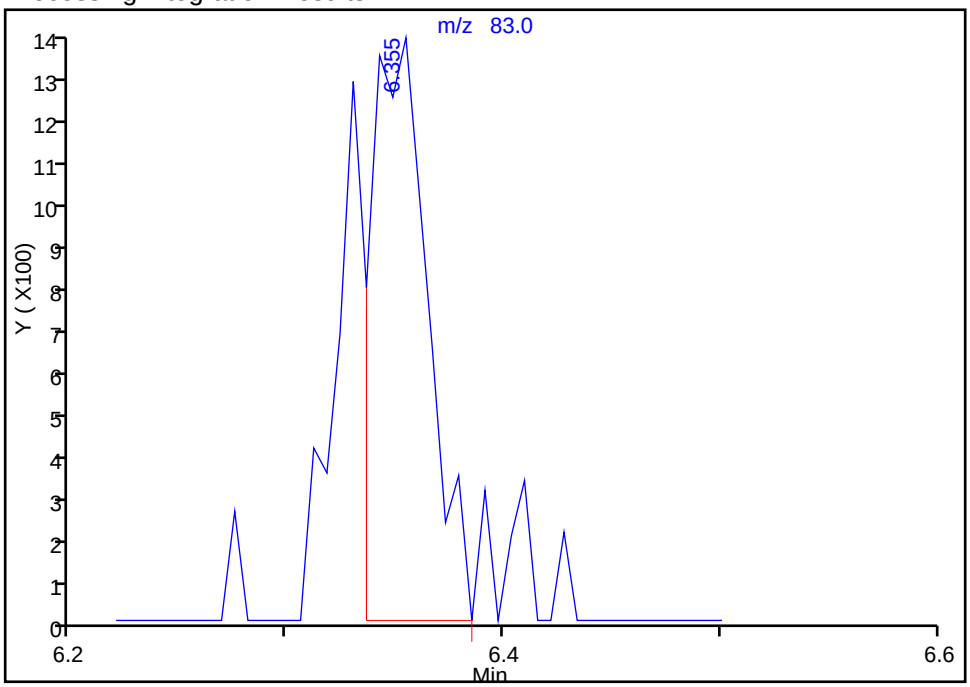
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319019.D				
Injection Date:	19-Mar-2015 19:33:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-E-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Operator ID:	001562	ALS Bottle#:	19	Worklist Smp#:	19
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

52 Chloroform, CAS: 67-66-3

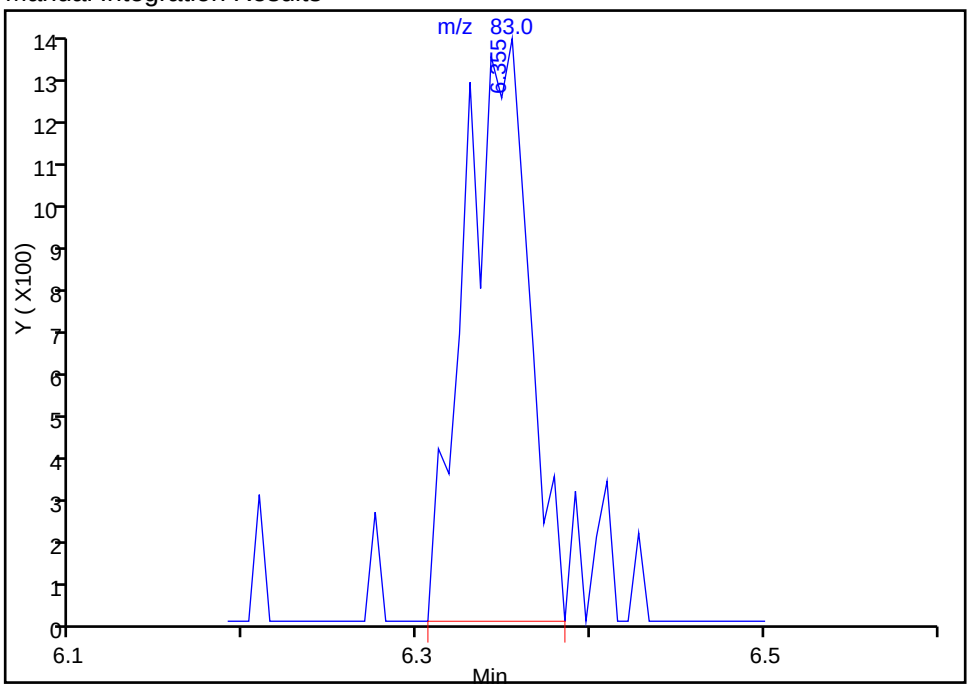
Processing Integration Results

RT: 6.35
Area: 2582
Amount: 0.625372
Amount Units: ng



Manual Integration Results

RT: 6.35
Area: 3587
Amount: 0.868787
Amount Units: ng



Reviewer: fergusond, 20-Mar-2015 07:58:28
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-41935-18

Matrix: Water Lab File ID: 50317006.D

Analysis Method: 8260C Date Collected: 03/10/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 15:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-QC1-0/1-2 Lab Sample ID: 180-41935-18

Matrix: Water Lab File ID: 50317006.D

Analysis Method: 8260C Date Collected: 03/10/2015 12:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 15:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	110		70-118
1868-53-7	Dibromofluoromethane (Surr)	97		70-128

Report Date: 17-Mar-2015 16:05:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317006.D
Lims ID: 180-41935-A-18 Lab Sample ID: 180-41935-18
Client ID: HD-QC1-0/1-2
Sample Type: Client
Inject. Date: 17-Mar-2015 15:06:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-A-18
Misc. Info.: 180-0006051-006
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 16:05:33 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 16:05:33

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.311	-0.009	88	142354	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	494258	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.358	0.009	72	114570	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	96	188848	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.526	0.003	55	108798	48.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.897	0.009	98	146232	49.3	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	473974	51.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.536	11.532	0.004	98	181716	55.2	
12 Chloromethane	50		1.781				ND	
13 Vinyl chloride	62		1.908				ND	
15 Bromomethane	94		2.249				ND	
16 Chloroethane	64		2.377				ND	
22 1,1-Dichloroethene	96		3.381				ND	
24 Acetone	43	3.505	3.496	0.009	58	5242	5.18	M
26 Carbon disulfide	76		3.654				ND	
31 Methylene Chloride	84		4.147				ND	
33 Acrylonitrile	53		4.549				ND	
34 trans-1,2-Dichloroethene	96		4.561				ND	
35 Methyl tert-butyl ether	73		4.597				ND	
37 1,1-Dichloroethane	63		5.163				ND	
45 cis-1,2-Dichloroethene	96		5.936				ND	
46 2-Butanone (MEK)	43		5.984				ND	
49 Chlorobromomethane	128		6.222				ND	
52 Chloroform	83		6.343				ND	
53 1,1,1-Trichloroethane	97		6.526				ND	
56 Carbon tetrachloride	117		6.720				ND	
58 Benzene	78		6.952				ND	
59 1,2-Dichloroethane	62		6.982				ND	
64 Trichloroethene	130		7.669				ND	
67 1,2-Dichloropropane	63		7.901				ND	
70 1,4-Dioxane	88		8.065				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ng	Flags
71 Dichlorobromomethane	83		8.199				ND	
74 cis-1,3-Dichloropropene	75		8.655				ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825				ND	
76 Toluene	91		8.990				ND	
77 trans-1,3-Dichloropropene	75		9.221				ND	
79 1,1,2-Trichloroethane	97		9.403				ND	
80 Tetrachloroethene	164		9.537				ND	
82 2-Hexanone	43		9.659				ND	
84 Chlorodibromomethane	129		9.786				ND	
85 Ethylene Dibromide	107		9.902				ND	
87 Chlorobenzene	112		10.395				ND	
89 1,1,1,2-Tetrachloroethane	131		10.474				ND	
90 Ethylbenzene	106		10.504				ND	
91 m-Xylene & p-Xylene	106		10.620				ND	
92 o-Xylene	106		11.015				ND	
93 Styrene	104		11.021				ND	
94 Bromoform	173		11.210				ND	
99 1,1,2,2-Tetrachloroethane	83		11.672				ND	
S 133 Xylenes, Total	106		1.000				ND	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

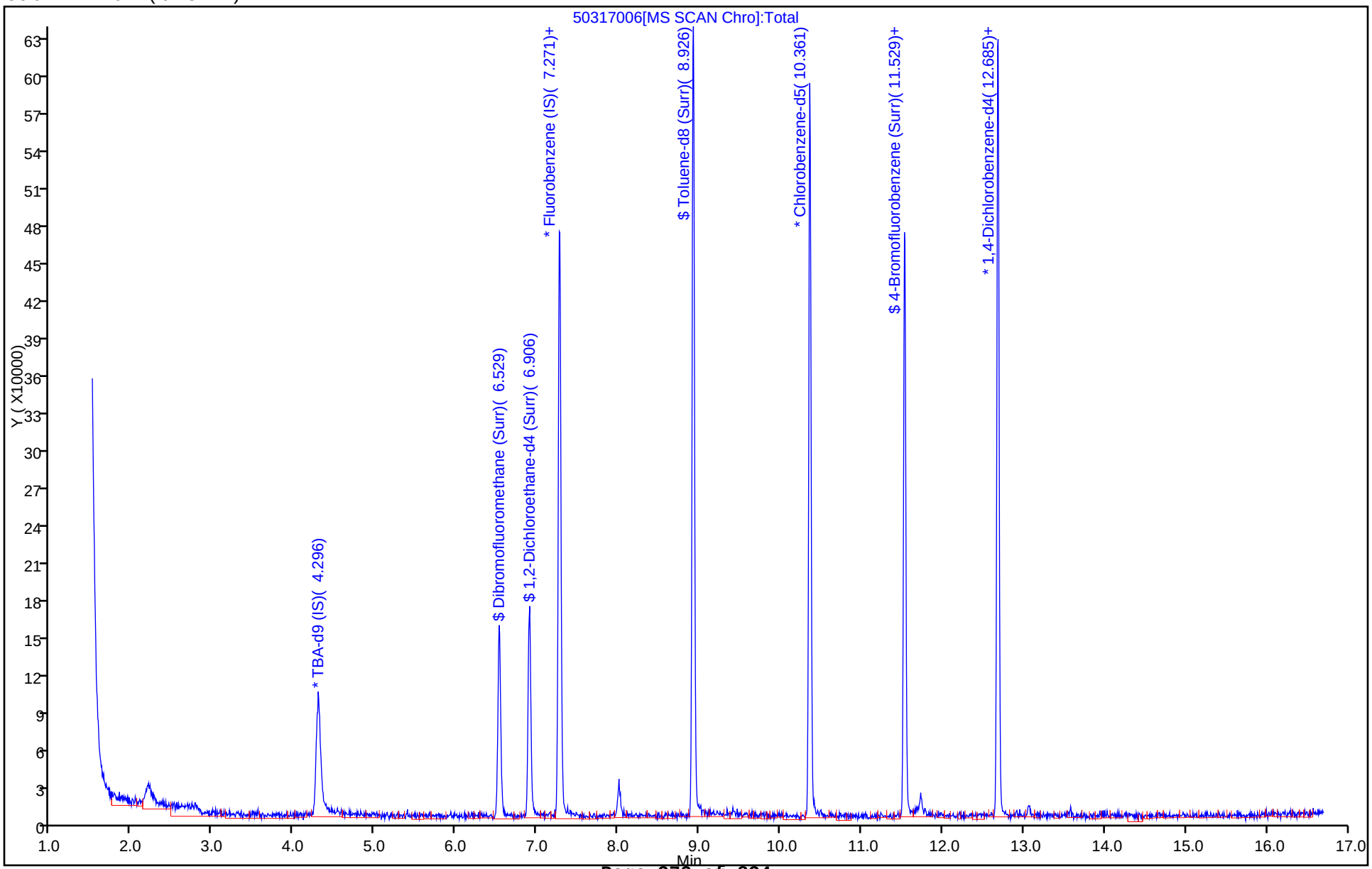
Report Date: 17-Mar-2015 16:05:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317006.D

Injection Date:	17-Mar-2015 15:06:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-A-18	Lab Sample ID:	180-41935-18	Worklist Smp#:	6
Client ID:	HD-QC1-0/1-2				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

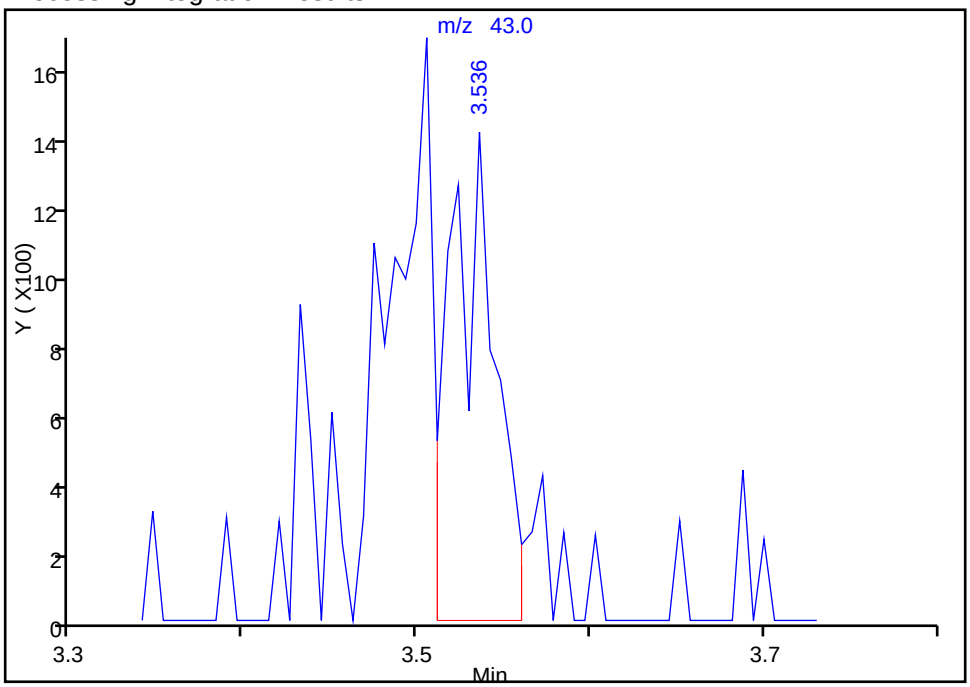
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317006.D				
Injection Date:	17-Mar-2015 15:06:30	Instrument ID:	CHHP5		
Lims ID:	180-41935-A-18	Lab Sample ID:	180-41935-18		
Client ID:	HD-QC1-0/1-2				
Operator ID:	001562	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

24 Acetone, CAS: 67-64-1

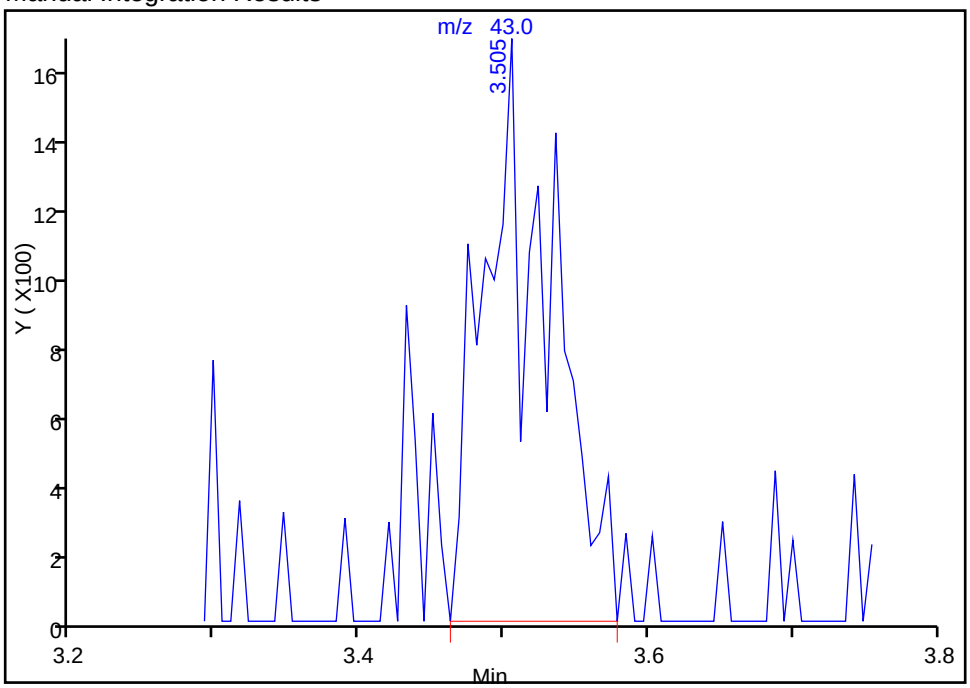
Processing Integration Results

RT: 3.54
Area: 2497
Amount: 2.466173
Amount Units: ng



Manual Integration Results

RT: 3.51
Area: 5242
Amount: 5.177285
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 16:05:33
Audit Action: Manually Integrated
Audit Reason: Split Peak

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-135593/13	50316013.D
Level 2	IC 180-135593/4	50316004.D
Level 3	ICIS 180-135593/5	50316005.D
Level 4	IC 180-135593/6	50316006.D
Level 5	IC 180-135593/7	50316007.D
Level 6	IC 180-135593/8	50316008.D
Level 7	IC 180-135593/9	50316009.D
Level 8	IC 180-135593/10	50316010.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1981 0.2196	0.2184 0.2203	0.2158 0.2064	0.2176	0.2184	Ave		0.2143			0.1000	3.7		20.0			
Chloromethane	0.3161 0.2913	0.3036 0.2846	0.2971 0.2760	0.3139	0.2839	Ave		0.2958			0.1000	4.9		20.0			
Vinyl chloride	0.3339 0.3170	0.3476 0.3238	0.3406 0.2981	0.3521	0.3317	Ave		0.3306			0.1000	5.3		20.0			
1,3-Butadiene	0.4238 0.3606	0.3989 0.3546	0.3880 0.3243	0.3988	0.3720	Ave		0.3776			0.0100	8.3		20.0			
Bromomethane	0.3177 0.1565	0.2026 0.1546	0.1872 0.1489	0.2009	0.1727	Lin2	0.7885	0.1633			0.0500				0.9910		0.9900
Chloroethane	0.2320 0.2316	0.2215 0.2239	0.2348 0.2259	0.2403	0.2201	Ave		0.2287			0.0500	3.1		20.0			
Dichlorofluoromethane	0.6033 0.4953	0.5246 0.5015	0.5246 0.4874	0.5502	0.4911	Ave		0.5222			0.0100	7.5		20.0			
Trichlorofluoromethane	0.3610 0.3924	0.3936 0.3991	0.4043 0.3800	0.4504	0.3921	Ave		0.3966			0.1000	6.4		20.0			
Ethyl ether	0.2888 0.2638	0.2444 0.2500	0.2576 0.2556	0.2691	0.2633	Ave		0.2615			0.0100	5.2		20.0			
Acrolein	0.0310 0.0323	0.0302 0.0321	0.0313 0.0320	0.0335	0.0318	Ave		0.0318			0.0100	3.1		20.0			
1,1-Dichloroethene	0.3207 0.2859	0.2901 0.2792	0.2822 0.2667	0.2965	0.2853	Ave		0.2883			0.1000	5.4		20.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	0.2914 0.2935	0.2973 0.2885	0.2973 0.2692	0.3100	0.2859	Ave		0.2916			0.1000	4.0		20.0			
Acetone	0.1044 0.1092	0.0964 0.1031	0.0956 0.1001	0.1134	0.0972	Ave		0.1024			0.0500	6.2		20.0			
Iodomethane	0.4015 0.3985	0.4019 0.3989	0.4026 0.3873	0.4200	0.3937	Ave		0.4005			0.0100	2.3		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Carbon disulfide	0.7271 0.7017	0.7065 0.6934	0.7209 0.6551	0.7444	0.6916	Ave		0.7051			0.1000	3.8		20.0			
Allyl chloride	0.1408 0.1596	0.1433 0.1659	0.1497 0.1554	0.1576	0.1468	Ave		0.1524			0.0100	5.7		20.0			
Methyl acetate	0.2499 0.2446	0.2206 0.2371	0.2383 0.2398	0.2500	0.2368	Ave		0.2396			0.1000	3.9		20.0			
Methylene Chloride	0.4921 0.3038	0.3340 0.2965	0.3132 0.2964	0.3223	0.3092	Ave		0.3335			0.1000	20.0		20.0			
tert-Butyl alcohol	1.4634 1.1634	1.1166 1.0879	1.2271 1.0609	1.1679	1.1362	Ave		1.1779			0.0100	11.0		20.0			
Acrylonitrile	0.1262 0.1243	0.1185 0.1210	0.1238 0.1200	0.1302	0.1222	Ave		0.1233			0.0100	3.0		20.0			
trans-1,2-Dichloroethene	0.3010 0.2955	0.3039 0.2920	0.2999 0.2846	0.3158	0.2932	Ave		0.2982			0.1000	3.1		20.0			
Methyl tert-butyl ether	0.7046 0.6848	0.5895 0.6670	0.6262 0.6870	0.6643	0.6513	Ave		0.6593			0.1000	5.6		20.0			
Hexane	0.5105 0.4724	0.4808 0.4625	0.4867 0.4447	0.4928	0.4612	Ave		0.4764			0.0100	4.3		20.0			
1,1-Dichloroethane	0.5210 0.5346	0.5355 0.5274	0.5415 0.5173	0.5479	0.5333	Ave		0.5323			0.2000	1.9		20.0			
Vinyl acetate	0.3354 0.4226	0.3143 0.4225	0.3492 0.4312	0.3701	0.3754	Ave		0.3776			0.0100	12.0		20.0			
2,2-Dichloropropane	0.1102 0.1425	0.1245 0.1427	0.1303 0.1457	0.1368	0.1319	Ave		0.1331			0.0100	8.8		20.0			
cis-1,2-Dichloroethene	0.3333 0.3114	0.3188 0.3041	0.3064 0.2999	0.3262	0.3133	Ave		0.3142			0.1000	3.6		20.0			
2-Butanone (MEK)	0.1479 0.1689	0.1544 0.1707	0.1682 0.1707	0.1629	0.1664	Ave		0.1638			0.0500	5.1		20.0			
Bromochloromethane	0.1516 0.1369	0.1328 0.1312	0.1322 0.1303	0.1382	0.1345	Ave		0.1360			0.0100	5.1		20.0			
Tetrahydrofuran	0.1048 0.1057	0.0960 0.1019	0.1025 0.1042	0.1047	0.1007	Ave		0.1026			0.0100	3.0		20.0			
Chloroform	0.5131 0.4845	0.4800 0.4679	0.4876 0.4593	0.4976	0.4787	Ave		0.4836			0.2000	3.5		20.0			
1,1,1-Trichloroethane	0.2755 0.3251	0.2860 0.3242	0.3106 0.3133	0.3267	0.3088	Ave		0.3088			0.1000	6.1		20.0			
Cyclohexane	0.6382 0.5901	0.5930 0.5765	0.5992 0.5384	0.6258	0.5817	Ave		0.5929			0.1000	5.2		20.0			
Carbon tetrachloride	0.2289 0.2566	0.2357 0.2582	0.2463 0.2549	0.2561	0.2457	Ave		0.2478			0.1000	4.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,1-Dichloropropene	0.4232 0.3982	0.4094 0.3936	0.4088 0.3740	0.4106	0.3910	Ave		0.4011			0.0100	3.8		20.0			
Isobutyl alcohol	0.0062 0.0078	0.0044 0.0073	0.0062 0.0083	0.0069	0.0062	Ave		0.0067		*	0.0100	18.0		20.0			
Benzene	1.2964 1.1615	1.1929 1.1190	1.2156 1.0805	1.2375	1.1757	Ave		1.1849			0.5000	5.7		20.0			
1,2-Dichloroethane	0.3889 0.3972	0.3853 0.3828	0.3878 0.3740	0.4029	0.3849	Ave		0.3880			0.1000	2.3		20.0			
n-Heptane	0.4132 0.4165	0.4157 0.3968	0.4135 0.3813	0.4223	0.3971	Ave		0.4071			0.0100	3.4		20.0			
Trichloroethene	0.3236 0.2977	0.2885 0.2885	0.3022 0.2774	0.3045	0.2926	Ave		0.2969			0.2000	4.7		20.0			
Methylcyclohexane	0.5265 0.5361	0.5390 0.5114	0.5500 0.4900	0.5614	0.5230	Ave		0.5297			0.1000	4.2		20.0			
1,2-Dichloropropane	0.2976 0.3036	0.2675 0.2956	0.2870 0.2962	0.2996	0.2976	Ave		0.2931			0.1000	3.9		20.0			
Dibromomethane	0.1682 0.1567	0.1491 0.1563	0.1532 0.1546	0.1640	0.1603	Ave		0.1578			0.0100	3.9		20.0			
1,4-Dioxane	0.0033 0.0034	0.0029 0.0031	0.0029 0.0030	0.0032	0.0030	Ave		0.0031		*	0.0100	5.9		20.0			
Bromodichloromethane	0.2966 0.3370	0.3114 0.3262	0.3286 0.3235	0.3266	0.3259	Ave		0.3220			0.2000	3.9		20.0			
cis-1,3-Dichloropropene	0.2720 0.3463	0.2598 0.3498	0.2835 0.3541	0.3106	0.3095	Ave		0.3107			0.2000	12.0		20.0			
4-Methyl-2-pentanone (MIBK)	1.2503 1.3434	1.2818 1.3687	1.4091 1.3065	1.4145	1.4492	Ave		1.3529			0.1000	5.2		20.0			
Toluene	5.9882 4.5343	5.4946 4.5939	5.5890 4.1718	5.4186	5.2011	Ave		5.1239			0.4000	12.0		20.0			
trans-1,3-Dichloropropene	0.8645 0.9716	0.7455 1.0385	0.8963 1.0484	0.8911	0.9475	Ave		0.9254			0.1000	11.0		20.0			
Ethyl methacrylate	1.1000 1.2637	0.9953 1.3239	1.1753 1.3175	1.1818	1.2989	Ave		1.2070			0.0100	9.7		20.0			
1,1,2-Trichloroethane	1.0794 0.8993	0.9278 0.9152	1.0316 0.8752	0.9797	0.9793	Ave		0.9609			0.1000	7.3		20.0			
Tetrachloroethene	1.1314 0.9214	1.0730 0.9231	1.0654 0.8552	1.0357	1.0130	Ave		1.0023			0.2000	9.3		20.0			
1,3-Dichloropropane	1.9127 1.6507	1.8290 1.6948	1.9187 1.6444	1.8257	1.8122	Ave		1.7860			0.0100	6.1		20.0			
2-Hexanone	0.8865 1.0653	0.9324 1.1043	1.1169 1.0437	1.0718	1.0506	Ave		1.0339			0.1000	7.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.6589 0.7861	0.7302 0.8019	0.7961 0.7741	0.7741	0.8146	Ave		0.7670			0.1000	6.6		20.0			
1,2-Dibromoethane (EDB)	0.9462 0.8909	0.8507 0.9041	0.9478 0.8836	0.9579	0.9540	Ave		0.9169			0.1000	4.4		20.0			
3-Chlorobenzotrifluoride	2.1568 1.7885	2.0616 1.8999	2.0657 1.6136	2.0676	1.9855	Ave		1.9549			0.0100	9.2		20.0			
Chlorobenzene	3.9165 2.9120	3.3811 2.9538	3.4265 2.7856	3.3185	3.2780	Ave		3.2465			0.5000	11.0		20.0			
4-Chlorobenzotrifluoride	2.1386 1.7554	1.9292 1.8762	1.9271 1.5481	1.9634	1.9831	Ave		1.8901			0.0100	9.2		20.0			
1,1,1,2-Tetrachloroethane	0.7551 0.8493	0.8012 0.8680	0.8363 0.8428	0.8482	0.9047	Ave		0.8382			0.0100	5.3		20.0			
Ethylbenzene	1.9914 1.7179	1.9333 1.7672	1.9980 1.6464	1.9518	1.8953	Ave		1.8627			0.1000	7.2		20.0			
m-Xylene & p-Xylene	2.4849 2.1093	2.3674 2.1267	2.4171 1.9994	2.4234	2.2969	Ave		2.2781			0.1000	7.8		20.0			
o-Xylene	2.6403 2.0475	2.2064 2.0545	2.3516 1.9292	2.3257	2.2716	Ave		2.2283			0.3000	10.0		20.0			
Styrene	3.8818 3.3296	3.6611 3.3147	3.8658 3.1277	3.7940	3.7504	Ave		3.5907			0.3000	8.1		20.0			
Bromoform	0.4254 0.4898	0.4398 0.4974	0.4744 0.4894	0.4822	0.4911	Ave		0.4737			0.1000	5.6		20.0			
2-Chlorobenzotrifluoride	2.0985 1.7811	2.0764 1.8958	2.0751 1.6078	2.0615	2.0224	Ave		1.9523			0.0100	9.1		20.0			
Isopropylbenzene	6.2252 4.9838	6.1153 4.8827	6.0965 4.4013	6.0579	5.7184	Ave		5.5601			0.1000	13.0		20.0			
1,1,2,2-Tetrachloroethane	1.5778 1.3165	1.3921 1.3063	1.4139 1.2430	1.4088	1.3646	Ave		1.3779			0.3000	7.2		20.0			
Bromobenzene	0.9601 0.9043	0.9163 0.9102	0.9670 0.9012	0.9241	0.9202	Ave		0.9254			0.0100	2.7		20.0			
1,2,3-Trichloropropane	0.3380 0.3040	0.2838 0.2874	0.3205 0.3069	0.2961	0.2961	Ave		0.3041			0.0100	5.9		20.0			
trans-1,4-Dichloro-2-butene	0.2572 0.2562	0.2443 0.2601	0.2456 0.2696	0.2438	0.2460	Ave		0.2528			0.0100	3.7		20.0			
N-Propylbenzene	1.2305 1.1066	1.1620 1.0908	1.2081 1.0656	1.1555	1.1135	Ave		1.1416			0.0100	5.1		20.0			
2-Chlorotoluene	1.0248 0.9458	0.9575 0.9297	1.0195 0.9076	0.9558	0.9319	Ave		0.9591			0.0100	4.4		20.0			
3-Chlorotoluene	1.1523 1.0737	1.0357 1.0942	1.0635 0.9927	1.0618	1.1018	Ave		1.0720			0.0100	4.4		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	3.5091 3.0301	3.2905 2.9338	3.3765 2.8104	3.3601	3.1525	Ave		3.1829			0.0100	7.6		20.0			
4-Chlorotoluene	1.1316 1.0097	1.0151 0.9774	1.0863 1.0009	1.0825	1.0021	Ave		1.0382			0.0100	5.2		20.0			
tert-Butylbenzene	3.1830 2.5928	2.8173 2.5318	2.9656 2.3701	2.8959	2.7052	Ave		2.7577			0.0100	9.5		20.0			
1,2,4-Trimethylbenzene	3.6039 3.1029	3.3270 3.0238	3.4986 2.8908	3.4674	3.2206	Ave		3.2669			0.0100	7.7		20.0			
3,4-Dichlorobenzotrifluoride	1.1042 1.0202	0.9953 1.0227	1.0269 0.9335	1.1049	1.0507	Ave		1.0323			0.0100	5.5		20.0			
sec-Butylbenzene	4.3054 3.6389	4.1108 3.5066	4.1991 3.2620	4.1487	3.8794	Ave		3.8814			0.0100	9.7		20.0			
1,3-Dichlorobenzene	1.9132 1.6438	1.7258 1.6071	1.7369 1.5897	1.7497	1.6725	Ave		1.7048			0.6000	6.1		20.0			
4-Isopropyltoluene	3.4872 3.0606	3.2348 2.9586	3.4694 2.7984	3.4562	3.1691	Ave		3.2043			0.0100	8.0		20.0			
1,4-Dichlorobenzene	1.9760 1.6976	1.7145 1.6569	1.7807 1.6355	1.7648	1.7035	Ave		1.7412			0.5000	6.1		20.0			
2,4-Dichlorobenzotrifluoride	1.0162 0.9585	0.9307 0.9665	1.0004 0.8567	1.0551	0.9508	Ave		0.9669			0.0100	6.2		20.0			
2,5-Dichlorobenzotrifluoride	1.1811 1.0613	1.0765 1.0776	1.0685 0.9818	1.1269	1.0793	Ave		1.0816			0.0100	5.2		20.0			
n-Butylbenzene	3.1276 2.8128	2.9811 2.7148	3.1079 2.5582	3.1414	2.9001	Ave		2.9180			0.0100	7.3		20.0			
1,2-Dichlorobenzene	1.7371 1.5488	1.5543 1.5042	1.6235 1.4749	1.6066	1.5803	Ave		1.5787			0.4000	5.1		20.0			
1,2-Dibromo-3-Chloropropane	0.1313 0.1386	0.1067 0.1383	0.1229 0.1385	0.1324	0.1248	Ave		0.1292			0.0500	8.5		20.0			
1,2,4-Trichlorobenzene	0.9720 0.8625	0.7083 0.8349	0.7579 0.7778	0.8780	0.7835	Ave		0.8219			0.2000	10.0		20.0			
Hexachlorobutadiene	0.4883 0.3899	0.3825 0.3778	0.3866 0.3464	0.4091	0.3724	Ave		0.3941			0.0100	11.0		20.0			
Naphthalene	2.3899 2.2683	1.8332 2.1948	1.9931 2.0920	2.3983	2.0941	Ave		2.1580			0.0100	9.0		20.0			
1,2,3-Trichlorobenzene	0.7895 0.7155	0.5376 0.7162	0.6024 0.6573	0.7303	0.6432	Ave		0.6740			0.0100	12.0		20.0			
2,4,5-Trichlorotoluene	0.4907 0.3881	0.2750 0.3876	0.2929 0.3431	0.3938	0.3283	Ave		0.3624			0.0100	19.0		20.0			
2,3,6-Trichlorotoluene	0.4374 0.3491	0.2501 0.3509	0.2713 0.3051	0.3608	0.2936	Ave		0.3273			0.0100	18.0		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
Dibromofluoromethane (Surr)	0.2497 0.2212	0.2276 0.2219	0.2284 0.2143	0.2334	0.2228	Ave		0.2274				4.7		20.0			
1,2-Dichloroethane-d4 (Surr)	0.3017 0.2995	0.3055 0.2914	0.3015 0.2867	0.3115	0.3008	Ave		0.2998				2.6		20.0			
Toluene-d8 (Surr)	4.5313 3.5890	4.2126 3.6439	4.3365 3.2599	4.2301	4.0882	Ave		3.9864				11.0		20.0			
4-Bromofluorobenzene (Surr)	1.5722 1.3558	1.4371 1.3519	1.5107 1.2944	1.4891	1.4730	Ave		1.4356				6.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-135593/13	50316013.D
Level 2	IC 180-135593/4	50316004.D
Level 3	ICIS 180-135593/5	50316005.D
Level 4	IC 180-135593/6	50316006.D
Level 5	IC 180-135593/7	50316007.D
Level 6	IC 180-135593/8	50316008.D
Level 7	IC 180-135593/9	50316009.D
Level 8	IC 180-135593/10	50316010.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	11265 432190	59394 522240	116111 640090	173113	243823	5.00 175	25.0 200	50.0 250	75.0	100
Chloromethane	FB	Ave	17972 573343	82552 674845	159885 855933	249772	316915	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl chloride	FB	Ave	18981 624000	94520 767804	183317 924535	280135	370271	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Butadiene	FB	Ave	24095 709784	108469 840803	208815 1005925	317272	415323	5.00 175	25.0 200	50.0 250	75.0	100
Bromomethane	FB	Lin2	18060 307964	55097 366671	100717 461680	159846	192846	5.00 175	25.0 200	50.0 250	75.0	100
Chloroethane	FB	Ave	13187 455903	60248 530813	126349 700467	191164	245673	5.00 175	25.0 200	50.0 250	75.0	100
Dichlorofluoromethane	FB	Ave	34297 974888	142662 1188936	282324 1511714	437737	548270	5.00 175	25.0 200	50.0 250	75.0	100
Trichlorofluoromethane	FB	Ave	20521 772293	107038 946313	217544 1178605	358375	437688	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl ether	FB	Ave	16416 519119	66452 592652	138609 792637	214135	293889	5.00 175	25.0 200	50.0 250	75.0	100
Acrolein	FB	Ave	35289 81646	41017 95028	50582 109180	62132	71073	100 225	125 250	150 275	175	200
1,1-Dichloroethene	FB	Ave	18234 562804	78897 662050	151843 827120	235889	318457	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloro-1,2,2-trifluoroetha ne	FB	Ave	16567 577719	80854 684103	159979 834802	246660	319162	5.00 175	25.0 200	50.0 250	75.0	100
Acetone	FB	Ave	29674 429781	52410 489133	102899 621064	180387	217095	25.0 350	50.0 400	100 500	150	200
Iodomethane	FB	Ave	22824 784350	109309 945860	216640 1201056	334141	439512	5.00 175	25.0 200	50.0 250	75.0	100
Carbon disulfide	FB	Ave	41336 1381152	192118 1643948	387934 2031733	592248	772081	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Allyl chloride	FB	Ave	8006 314052	38957 393345	80577 482122	125423	163875	5.00 175	25.0 200	50.0 250	75.0	100
Methyl acetate	FB	Ave	71022 2407305	299965 2810332	641136 3718382	994505	1321970	25.0 875	125 1000	250 1250	375	500
Methylene Chloride	FB	Ave	27978 597904	90836 703059	168570 919183	256424	345226	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butyl alcohol	TBA	Ave	10830 351016	39251 399281	83098 537174	133756	175500	50.0 1750	250 2000	500 2500	750	1000
Acrylonitrile	FB	Ave	71728 2446379	322268 2868164	666088 3721902	1035956	1363975	50.0 1750	250 2000	500 2500	750	1000
trans-1,2-Dichloroethene	FB	Ave	17111 581552	82640 692220	161381 882651	251288	327278	5.00 175	25.0 200	50.0 250	75.0	100
Methyl tert-butyl ether	FB	Ave	40058 1347848	160325 1581345	336961 2130684	528520	727030	5.00 175	25.0 200	50.0 250	75.0	100
Hexane	FB	Ave	29021 929791	130741 1096478	261916 1379168	392065	514868	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloroethane	FB	Ave	29622 1052201	145639 1250453	291408 1604398	435915	595324	5.00 175	25.0 200	50.0 250	75.0	100
Vinyl acetate	FB	Ave	19067 831670	85462 1001771	187915 1337263	294456	419086	5.00 175	25.0 200	50.0 250	75.0	100
2,2-Dichloropropane	FB	Ave	6267 280515	33850 338302	70106 452022	108858	147216	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,2-Dichloroethene	FB	Ave	18951 612812	86701 721075	164893 930230	259517	349805	5.00 175	25.0 200	50.0 250	75.0	100
2-Butanone (MEK)	FB	Ave	42054 665013	83987 809232	180996 1059138	259227	371447	25.0 350	50.0 400	100 500	150	200
Bromochloromethane	FB	Ave	8619 269375	36107 311076	71124 404105	109930	150204	5.00 175	25.0 200	50.0 250	75.0	100
Tetrahydrofuran	FB	Ave	11913 415944	52231 483324	110274 646482	166594	224920	10.0 350	50.0 400	100 500	150	200
Chloroform	FB	Ave	29168 953676	130523 1109416	262371 1424461	395935	534362	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1-Trichloroethane	FB	Ave	15663 639960	77770 768585	167130 971626	259963	344772	5.00 175	25.0 200	50.0 250	75.0	100
Cyclohexane	FB	Ave	36280 1161488	161271 1366913	322468 1669676	497889	649387	5.00 175	25.0 200	50.0 250	75.0	100
Carbon tetrachloride	FB	Ave	13013 504991	64089 612080	132517 790495	203736	274328	5.00 175	25.0 200	50.0 250	75.0	100
1,1-Dichloropropene	FB	Ave	24060 783682	111342 933326	219974 1159811	326699	436454	5.00 175	25.0 200	50.0 250	75.0	100
Isobutyl alcohol	FB	Ave	8820 386141	29897 433313	83109 644697	137203	174166	125 4375	625 5000	1250 6250	1875	2500

FORM VI

GC/MS VOA INITIAL CALIBRATION DATA

INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Benzene	FB	Ave	73700 2286079	324419 2653105	654151 3351151	984614	1312435	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane	FB	Ave	22108 781760	104777 907622	208683 1159879	320594	429724	5.00 175	25.0 200	50.0 250	75.0	100
n-Heptane	FB	Ave	23490 819785	113041 940924	222515 1182643	335961	443357	5.00 175	25.0 200	50.0 250	75.0	100
Trichloroethene	FB	Ave	18397 586010	78459 684010	162608 860273	242252	326599	5.00 175	25.0 200	50.0 250	75.0	100
Methylcyclohexane	FB	Ave	29934 1055175	146574 1212427	295972 1519674	446628	583894	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloropropane	FB	Ave	16916 597514	72742 700921	154467 918714	238331	332279	5.00 175	25.0 200	50.0 250	75.0	100
Dibromomethane	FB	Ave	9562 308441	40542 370624	82469 479407	130496	178905	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dioxane	FB	Ave	3746 132396	15563 146272	31354 185631	50907	66490	100 3500	500 4000	1000 5000	1500	2000
Bromodichloromethane	FB	Ave	16863 663337	84673 773432	176851 1003399	259871	363842	5.00 175	25.0 200	50.0 250	75.0	100
cis-1,3-Dichloropropene	FB	Ave	15462 681682	70642 829306	152581 1098242	247138	345528	5.00 175	25.0 200	50.0 250	75.0	100
4-Methyl-2-pentanone (MIBK)	CBZ	Ave	75787 1390980	154453 1617802	342539 2109966	531084	747218	25.0 350	50.0 400	100 500	150	200
Toluene	CBZ	Ave	72597 2347437	331041 2714932	679332 3368812	1017198	1340817	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,3-Dichloropropene	CBZ	Ave	10481 502980	44917 613747	108942 846559	167274	244258	5.00 175	25.0 200	50.0 250	75.0	100
Ethyl methacrylate	CBZ	Ave	13336 654210	59964 782394	142858 1063861	221852	334858	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2-Trichloroethane	CBZ	Ave	13086 465584	55897 540864	125390 706748	183907	252461	5.00 175	25.0 200	50.0 250	75.0	100
Tetrachloroethene	CBZ	Ave	13716 477004	64647 545517	129494 690601	194422	261148	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichloropropane	CBZ	Ave	23188 854593	110194 1001573	233217 1327847	342719	467174	5.00 175	25.0 200	50.0 250	75.0	100
2-Hexanone	CBZ	Ave	53734 1103034	112348 1305223	271508 1685534	402386	541680	25.0 350	50.0 400	100 500	150	200
Dibromochloromethane	CBZ	Ave	7988 406960	43996 473922	96762 625118	145315	210013	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromoethane (EDB)	CBZ	Ave	11471 461219	51254 534328	115204 713501	179814	245946	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorobenzotrifluoride	CBZ	Ave	26148 925933	124209 1122812	251080 1303041	388132	511845	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
Chlorobenzene	CBZ	Ave	47481 1507544	203702 1745676	416488 2249414	622968	845046	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorobenzotrifluoride	CBZ	Ave	25927 908777	116232 1108797	234233 1250140	368570	511237	5.00 175	25.0 200	50.0 250	75.0	100
1,1,1,2-Tetrachloroethane	CBZ	Ave	9154 439701	48269 512980	101650 680608	159225	233228	5.00 175	25.0 200	50.0 250	75.0	100
Ethylbenzene	CBZ	Ave	24142 889389	116477 1044399	242856 1329470	366398	488611	5.00 175	25.0 200	50.0 250	75.0	100
m-Xylene & p-Xylene	CBZ	Ave	30126 1092005	142634 1256840	293796 1614511	454933	592135	5.00 175	25.0 200	50.0 250	75.0	100
o-Xylene	CBZ	Ave	32009 1059986	132929 1214164	285835 1557898	436586	585609	5.00 175	25.0 200	50.0 250	75.0	100
Styrene	CBZ	Ave	47061 1723778	220574 1958961	469890 2525667	712222	966850	5.00 175	25.0 200	50.0 250	75.0	100
Bromoform	CBZ	Ave	5157 253560	26498 293938	57667 395201	90522	126605	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorobenzotrifluoride	CBZ	Ave	25441 922108	125099 1120386	252226 1298335	386985	521379	5.00 175	25.0 200	50.0 250	75.0	100
Isopropylbenzene	CBZ	Ave	75470 2580136	368436 2885608	741027 3554151	1137215	1474178	5.00 175	25.0 200	50.0 250	75.0	100
1,1,2,2-Tetrachloroethane	CBZ	Ave	19128 681581	83874 772016	171864 1003707	264462	351798	5.00 175	25.0 200	50.0 250	75.0	100
Bromobenzene	DCB	Ave	16809 637569	80670 740842	168649 956763	253502	346996	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichloropropane	DCB	Ave	5918 214358	24990 233938	55900 325768	81225	111668	5.00 175	25.0 200	50.0 250	75.0	100
trans-1,4-Dichloro-2-butene	DCB	Ave	4503 180624	21505 211691	42827 286166	66879	92761	5.00 175	25.0 200	50.0 250	75.0	100
N-Propylbenzene	DCB	Ave	21543 780243	102304 887838	210687 1131297	316980	419888	5.00 175	25.0 200	50.0 250	75.0	100
2-Chlorotoluene	DCB	Ave	17942 666866	84295 756732	177793 963573	262207	351403	5.00 175	25.0 200	50.0 250	75.0	100
3-Chlorotoluene	DCB	Ave	20174 757051	91182 890638	185477 1053875	291288	415463	5.00 175	25.0 200	50.0 250	75.0	100
1,3,5-Trimethylbenzene	DCB	Ave	61438 2136446	289696 2387945	588847 2983647	921783	1188743	5.00 175	25.0 200	50.0 250	75.0	100
4-Chlorotoluene	DCB	Ave	19812 711885	89370 795532	189449 1062581	296950	377870	5.00 175	25.0 200	50.0 250	75.0	100
tert-Butylbenzene	DCB	Ave	55729 1828125	248042 2060731	517188 2516209	794422	1020106	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trimethylbenzene	DCB	Ave	63098 2187785	292909 2461131	610150 3068942	951216	1214438	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
3,4-Dichlorobenzotrifluoride	DCB	Ave	19333 719294	87627 832435	179092 991010	303120	396211	5.00 175	25.0 200	50.0 250	75.0	100
sec-Butylbenzene	DCB	Ave	75379 2565671	361915 2854173	732318 3463106	1138120	1462842	5.00 175	25.0 200	50.0 250	75.0	100
1,3-Dichlorobenzene	DCB	Ave	33497 1159025	151937 1308081	302903 1687649	480001	630675	5.00 175	25.0 200	50.0 250	75.0	100
4-Isopropyltoluene	DCB	Ave	61054 2157955	284792 2408127	605051 2970922	948139	1195021	5.00 175	25.0 200	50.0 250	75.0	100
1,4-Dichlorobenzene	DCB	Ave	34596 1196958	150942 1348596	310551 1736319	484138	642365	5.00 175	25.0 200	50.0 250	75.0	100
2,4-Dichlorobenzotrifluoride	DCB	Ave	17792 675783	81937 786683	174468 909481	289446	358539	5.00 175	25.0 200	50.0 250	75.0	100
2,5-Dichlorobenzotrifluoride	DCB	Ave	20678 748317	94772 877059	186350 1042359	309155	406971	5.00 175	25.0 200	50.0 250	75.0	100
n-Butylbenzene	DCB	Ave	54758 1983203	262455 2209671	542017 2715831	861784	1093564	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichlorobenzene	DCB	Ave	30414 1092014	136843 1224311	283138 1565775	440732	595901	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dibromo-3-Chloropropane	DCB	Ave	2299 97714	9396 112547	21428 147059	36318	47067	5.00 175	25.0 200	50.0 250	75.0	100
1,2,4-Trichlorobenzene	DCB	Ave	17018 608110	62363 679520	132179 825772	240861	295444	5.00 175	25.0 200	50.0 250	75.0	100
Hexachlorobutadiene	DCB	Ave	8549 274932	33676 307470	67414 367792	112236	140410	5.00 175	25.0 200	50.0 250	75.0	100
Naphthalene	DCB	Ave	41842 1599300	161398 1786434	347596 2220927	657935	789643	5.00 175	25.0 200	50.0 250	75.0	100
1,2,3-Trichlorobenzene	DCB	Ave	13823 504504	47333 582911	105062 697862	200345	242534	5.00 175	25.0 200	50.0 250	75.0	100
2,4,5-Trichlorotoluene	DCB	Ave	8592 273662	24209 315499	51080 364223	108037	123791	5.00 175	25.0 200	50.0 250	75.0	100
2,3,6-Trichlorotoluene	DCB	Ave	7658 246163	22020 285573	47319 323920	98974	110702	5.00 175	25.0 200	50.0 250	75.0	100
Dibromofluoromethane (Surr)	FB	Ave	14193 435320	61901 526164	122918 664693	185698	248750	5.00 175	25.0 200	50.0 250	75.0	100
1,2-Dichloroethane-d4 (Surr)	FB	Ave	17152 589491	83077 691002	162227 889045	247858	335757	5.00 175	25.0 200	50.0 250	75.0	100
Toluene-d8 (Surr)	CBZ	Ave	54935 1858068	253798 2153477	527093 2632400	794092	1053927	5.00 175	25.0 200	50.0 250	75.0	100
4-Bromofluorobenzene (Surr)	CBZ	Ave	19061 701915	86585 798953	183629 1045249	279546	379740	5.00 175	25.0 200	50.0 250	75.0	100

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 135593

SDG No.:

Instrument ID: CHHP5 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 03/16/2015 12:41 Calibration End Date: 03/16/2015 16:17 Calibration ID: 22457

Curve Type Legend:

Ave = Average ISTD
Lin2 = Linear 1/conc^2 ISTD

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316004.D
Lims ID: IC VSTD5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 16-Mar-2015 12:41:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD5
Misc. Info.: 180-0006031-004
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:20 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 09:28:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.302	4.305	-0.003	88	140612	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.273	0.004	97	543896	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.364	-0.003	99	120496	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	97	176082	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.525	0.010	94	61901	25.0	25.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.902	0.004	96	83077	25.0	25.5	
$ 7 Toluene-d8 (Surr)	98	8.919	8.922	-0.003	100	253798	25.0	26.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	95	86585	25.0	25.0	
11 Dichlorodifluoromethane	85	1.619	1.616	0.003	98	59394	25.0	25.5	
12 Chloromethane	50	1.771	1.774	-0.003	100	82552	25.0	25.7	
13 Vinyl chloride	62	1.905	1.902	0.003	99	94520	25.0	26.3	
14 Butadiene	39	1.948	1.944	0.004	98	108469	25.0	26.4	
15 Bromomethane	94	2.252	2.249	0.003	90	55097	25.0	26.2	M
16 Chloroethane	64	2.392	2.370	0.022	97	60248	25.0	24.2	
17 Dichlorofluoromethane	67	2.660	2.650	0.010	98	142662	25.0	25.1	
18 Trichlorofluoromethane	101	2.690	2.711	-0.021	96	107038	25.0	24.8	
20 Ethyl ether	59	3.085	3.088	-0.003	98	66452	25.0	23.4	
21 Acrolein	56	3.256	3.252	0.004	96	41017	125.0	118.7	
22 1,1-Dichloroethene	96	3.371	3.386	-0.015	97	78897	25.0	25.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.444	3.429	0.015	97	80854	25.0	25.5	
24 Acetone	43	3.493	3.496	-0.003	98	52410	50.0	47.0	
25 Iodomethane	142	3.572	3.587	-0.015	98	109309	25.0	25.1	
26 Carbon disulfide	76	3.651	3.654	-0.003	100	192118	25.0	25.0	
28 3-Chloro-1-propene	76	3.931	3.940	-0.009	92	38957	25.0	23.5	
30 Methyl acetate	43	4.022	4.019	0.003	100	299965	125.0	115.1	
31 Methylene Chloride	84	4.144	4.134	0.010	95	90836	25.0	25.0	
32 2-Methyl-2-propanol	59	4.430	4.445	-0.015	90	39251	250.0	237.0	
33 Acrylonitrile	53	4.552	4.554	-0.002	100	322268	250.0	240.3	
34 trans-1,2-Dichloroethene	96	4.564	4.560	0.004	61	82640	25.0	25.5	
35 Methyl tert-butyl ether	73	4.594	4.591	0.003	96	160325	25.0	22.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.983	4.980	0.003	97	130741	25.0	25.2	
37 1,1-Dichloroethane	63	5.178	5.169	0.009	99	145639	25.0	25.2	
38 Vinyl acetate	43	5.300	5.290	0.010	100	85462	25.0	20.8	
44 2,2-Dichloropropane	77	5.926	5.923	0.003	85	33850	25.0	23.4	
45 cis-1,2-Dichloroethene	96	5.939	5.935	0.004	94	86701	25.0	25.4	
46 2-Butanone (MEK)	43	5.987	5.990	-0.003	99	83987	50.0	47.1	
49 Chlorobromomethane	128	6.224	6.233	-0.009	96	36107	25.0	24.4	
51 Tetrahydrofuran	42	6.285	6.288	-0.003	97	52231	50.0	46.8	
52 Chloroform	83	6.340	6.343	-0.003	96	130523	25.0	24.8	
53 1,1,1-Trichloroethane	97	6.529	6.531	-0.002	95	77770	25.0	23.2	
54 Cyclohexane	56	6.589	6.586	0.003	96	161271	25.0	25.0	
56 Carbon tetrachloride	117	6.723	6.720	0.003	69	64089	25.0	23.8	
55 1,1-Dichloropropene	75	6.729	6.726	0.003	96	111342	25.0	25.5	
57 Isobutyl alcohol	41	6.942	6.945	-0.003	33	29897	625.0	411.8	
58 Benzene	78	6.954	6.957	-0.003	98	324419	25.0	25.2	
59 1,2-Dichloroethane	62	6.985	6.981	0.004	98	104777	25.0	24.8	
62 n-Heptane	43	7.277	7.280	-0.003	65	113041	25.0	25.5	
64 Trichloroethene	130	7.666	7.669	-0.003	99	78459	25.0	24.3	
66 Methylcyclohexane	83	7.867	7.864	0.003	96	146574	25.0	25.4	
67 1,2-Dichloropropane	63	7.903	7.906	-0.003	95	72742	25.0	22.8	
68 Dibromomethane	93	8.031	8.028	0.003	94	40542	25.0	23.6	
70 1,4-Dioxane	88	8.068	8.058	0.010	87	15563	500.0	463.6	
71 Dichlorobromomethane	83	8.196	8.198	-0.002	97	84673	25.0	24.2	
74 cis-1,3-Dichloropropene	75	8.658	8.661	-0.002	98	70642	25.0	20.9	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.825	-0.003	98	154453	50.0	47.4	
76 Toluene	91	8.992	8.989	0.003	99	331041	25.0	26.8	
77 trans-1,3-Dichloropropene	75	9.224	9.220	0.004	95	44917	25.0	20.1	
78 Ethyl methacrylate	69	9.321	9.318	0.003	97	59964	25.0	20.6	
79 1,1,2-Trichloroethane	97	9.400	9.397	0.003	98	55897	25.0	24.1	
80 Tetrachloroethene	164	9.534	9.537	-0.003	96	64647	25.0	26.8	
81 1,3-Dichloropropane	76	9.570	9.567	0.003	98	110194	25.0	25.6	
82 2-Hexanone	43	9.662	9.658	0.004	99	112348	50.0	45.1	
84 Chlorodibromomethane	129	9.795	9.786	0.009	98	43996	25.0	23.8	
85 Ethylene Dibromide	107	9.899	9.902	-0.003	99	51254	25.0	23.2	
86 3-Chlorobenzotrifluoride	180	10.373	10.370	0.003	89	124209	25.0	26.4	
87 Chlorobenzene	112	10.392	10.394	-0.002	99	203702	25.0	26.0	
88 4-Chlorobenzotrifluoride	180	10.434	10.431	0.003	99	116232	25.0	25.5	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.473	0.004	96	48269	25.0	23.9	
90 Ethylbenzene	106	10.501	10.498	0.003	100	116477	25.0	25.9	
91 m-Xylene & p-Xylene	106	10.617	10.619	-0.002	99	142634	25.0	26.0	
92 o-Xylene	106	11.012	11.015	-0.003	97	132929	25.0	24.8	
93 Styrene	104	11.024	11.027	-0.003	99	220574	25.0	25.5	
94 Bromoform	173	11.213	11.209	0.004	97	26498	25.0	23.2	
96 2-Chlorobenzotrifluoride	180	11.274	11.276	-0.002	97	125099	25.0	26.6	
97 Isopropylbenzene	105	11.377	11.380	-0.003	99	368436	25.0	27.5	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.672	0.003	70	83874	25.0	25.3	
100 Bromobenzene	156	11.681	11.684	-0.003	98	80670	25.0	24.8	
101 1,2,3-Trichloropropane	110	11.718	11.720	-0.002	95	24990	25.0	23.3	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.727	0.003	85	21505	25.0	24.2	
103 N-Propylbenzene	120	11.791	11.787	0.004	100	102304	25.0	25.4	
104 2-Chlorotoluene	126	11.876	11.873	0.003	99	84295	25.0	25.0	
105 3-Chlorotoluene	126	11.937	11.933	0.004	98	91182	25.0	24.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.964	-0.003	100	289696	25.0	25.8	
107 4-Chlorotoluene	126	11.986	11.982	0.004	96	89370	25.0	24.4	
108 tert-Butylbenzene	119	12.290	12.286	0.004	98	248042	25.0	25.5	
110 1,2,4-Trimethylbenzene	105	12.338	12.335	0.003	99	292909	25.0	25.5	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.402	-0.003	98	87627	25.0	24.1	
112 sec-Butylbenzene	105	12.509	12.505	0.004	100	361915	25.0	26.5	
113 1,3-Dichlorobenzene	146	12.618	12.615	0.003	99	151937	25.0	25.3	
114 4-Isopropyltoluene	119	12.655	12.651	0.004	99	284792	25.0	25.2	
115 1,4-Dichlorobenzene	146	12.709	12.706	0.003	98	150942	25.0	24.6	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.761	-0.003	94	81937	25.0	24.1	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.809	-0.002	97	94772	25.0	24.9	
120 n-Butylbenzene	91	13.062	13.059	0.003	100	262455	25.0	25.5	
121 1,2-Dichlorobenzene	146	13.081	13.083	-0.002	99	136843	25.0	24.6	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.862	-0.003	92	9396	25.0	20.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.011	14.008	0.003	99	300911	75.0	71.6	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.428	-0.003	99	191256	50.0	46.8	
126 1,2,4-Trichlorobenzene	180	14.693	14.689	0.004	98	62363	25.0	21.5	
127 Hexachlorobutadiene	225	14.863	14.860	0.003	95	33676	25.0	24.3	
128 Naphthalene	128	14.942	14.939	0.003	99	161398	25.0	21.2	
129 1,2,3-Trichlorobenzene	180	15.185	15.188	-0.003	97	47333	25.0	19.9	
131 2,4,5-Trichlorotoluene	159	15.964	15.961	0.003	95	24209	25.0	19.0	
130 2,3,6-Trichlorotoluene	159	16.061	16.064	-0.003	95	22020	25.0	19.1	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		50.0	50.7	
S 134 1,2-Dichloroethene, Total	96				0		50.0	50.8	
S 135 1,3-Dichloropropene, Total	1				0		50.0	41.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added:	5.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	1.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	1.00	Units: uL	
VOA8260SURR_00032	Amount Added:	1.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	1.00	Units: uL	
VOAVAPRI_00005	Amount Added:	1.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

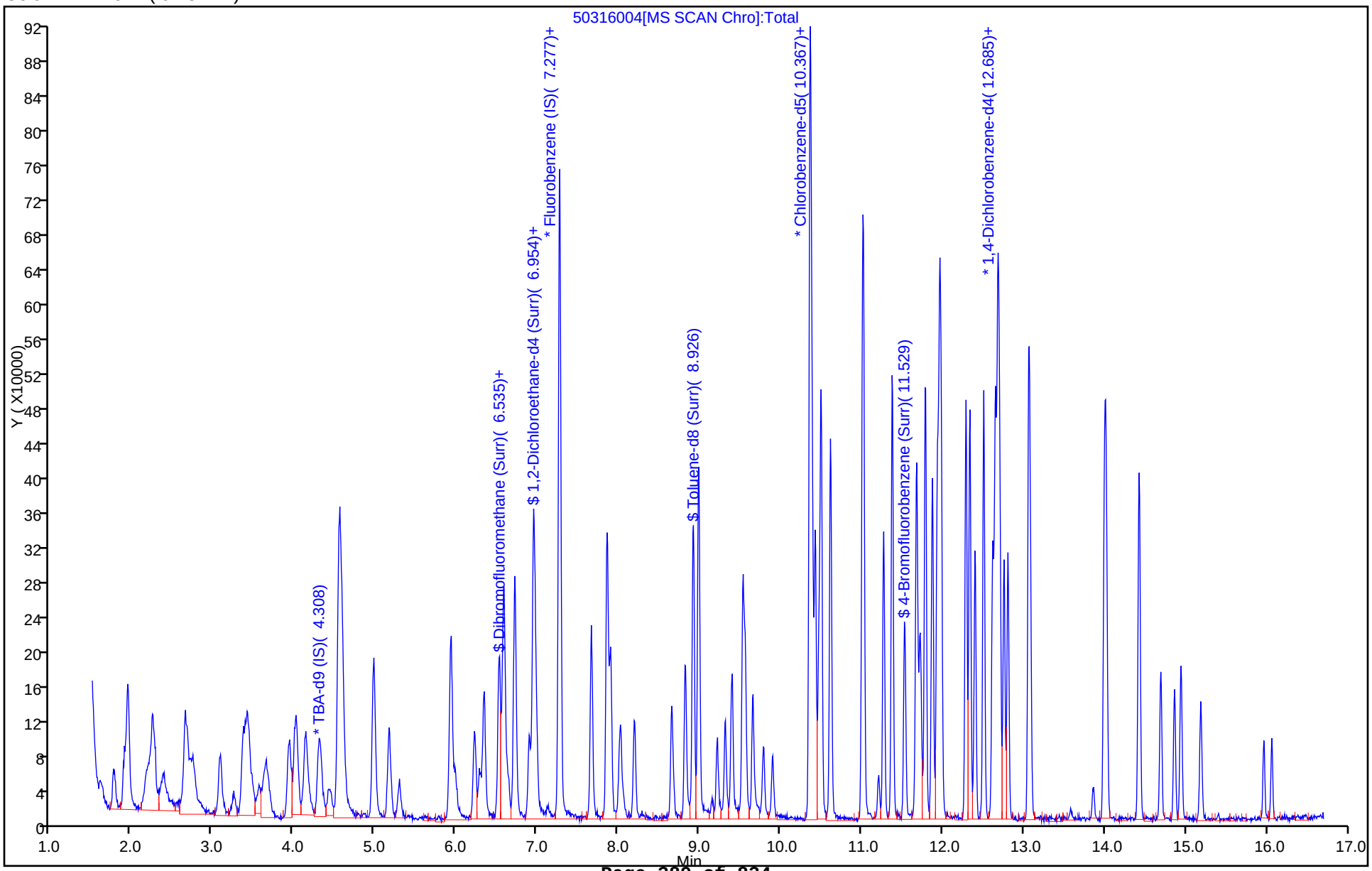
Report Date: 17-Mar-2015 10:59:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316004.D

Injection Date:	16-Mar-2015 12:41:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD5			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

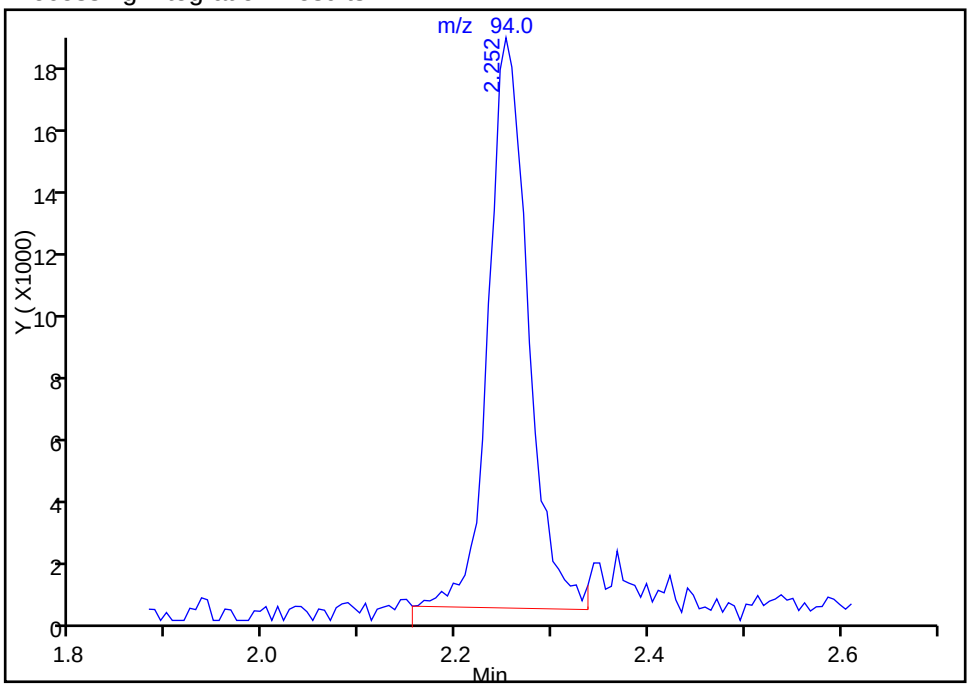
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316004.D				
Injection Date:	16-Mar-2015 12:41:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD5				
Client ID:					
Operator ID:	001562	ALS Bottle#:	4	Worklist Smp#:	4
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

15 Bromomethane, CAS: 74-83-9

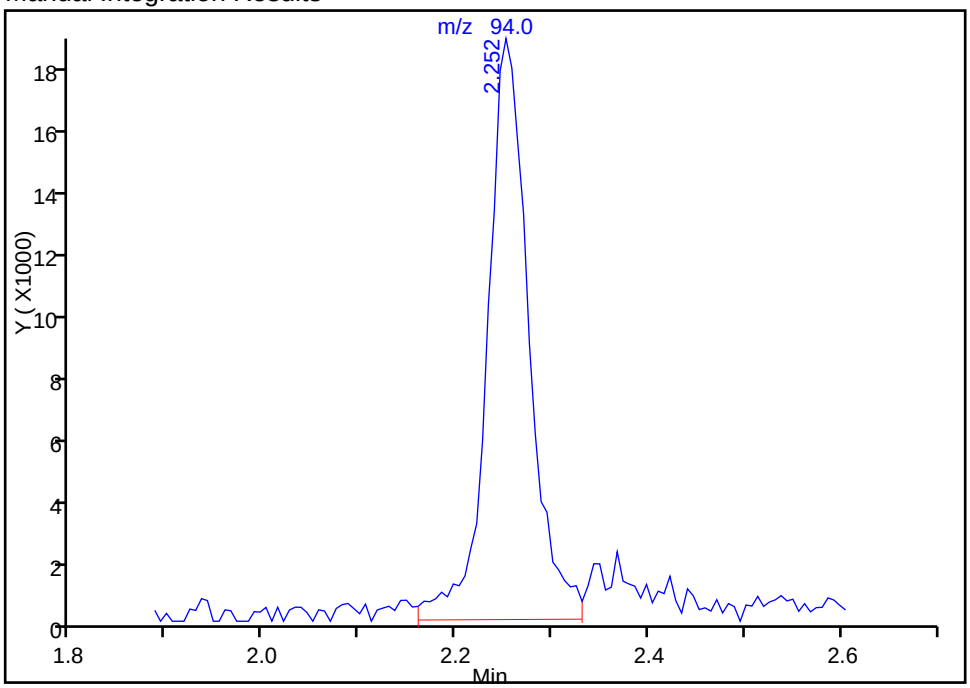
Processing Integration Results

RT: 2.25
Area: 51742
Amount: 22.147125
Amount Units: ng



Manual Integration Results

RT: 2.25
Area: 55097
Amount: 26.195176
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 09:42:10
Audit Action: Manually Integrated
Audit Reason: Baseline

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316005.D
Lims ID: ICIS VSTD10
Client ID:
Sample Type: ICIS Calib Level: 3
Inject. Date: 16-Mar-2015 13:05:30 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: ICIS VSTD10
Misc. Info.: 180-0006031-005
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:21 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 16-Mar-2015 15:03:52

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.305	0.000	86	135440	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.273	0.000	99	538139	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	97	121549	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	98	174397	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.525	6.525	0.000	95	122918	50.0	50.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.902	0.000	99	162227	50.0	50.3	
$ 7 Toluene-d8 (Surr)	98	8.922	8.922	0.000	100	527093	50.0	54.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	95	183629	50.0	52.6	
11 Dichlorodifluoromethane	85	1.616	1.616	0.000	100	116111	50.0	50.3	
12 Chloromethane	50	1.774	1.774	0.000	100	159885	50.0	50.2	
13 Vinyl chloride	62	1.902	1.902	0.000	100	183317	50.0	51.5	
14 Butadiene	39	1.944	1.944	0.000	99	208815	50.0	51.4	
15 Bromomethane	94	2.249	2.249	0.000	93	100717	50.0	52.5	
16 Chloroethane	64	2.370	2.370	0.000	98	126349	50.0	51.3	
17 Dichlorofluoromethane	67	2.650	2.650	0.000	100	282324	50.0	50.2	
18 Trichlorofluoromethane	101	2.711	2.711	0.000	98	217544	50.0	51.0	
20 Ethyl ether	59	3.088	3.088	0.000	98	138609	50.0	49.2	
21 Acrolein	56	3.252	3.252	0.000	98	50582	150.0	147.9	
22 1,1-Dichloroethene	96	3.386	3.386	0.000	99	151843	50.0	48.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.429	3.429	0.000	97	159979	50.0	51.0	
24 Acetone	43	3.496	3.496	0.000	99	102899	100.0	93.3	
25 Iodomethane	142	3.587	3.587	0.000	96	216640	50.0	50.3	
26 Carbon disulfide	76	3.654	3.654	0.000	100	387934	50.0	51.1	
28 3-Chloro-1-propene	76	3.940	3.940	0.000	96	80577	50.0	49.1	
30 Methyl acetate	43	4.019	4.019	0.000	100	641136	250.0	248.6	
31 Methylene Chloride	84	4.134	4.134	0.000	86	168570	50.0	47.0	
32 2-Methyl-2-propanol	59	4.445	4.445	0.000	86	83098	500.0	520.9	
33 Acrylonitrile	53	4.554	4.554	0.000	99	666088	500.0	502.1	
34 trans-1,2-Dichloroethene	96	4.560	4.560	0.000	59	161381	50.0	50.3	
35 Methyl tert-butyl ether	73	4.591	4.591	0.000	96	336961	50.0	47.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.980	4.980	0.000	98	261916	50.0	51.1	
37 1,1-Dichloroethane	63	5.169	5.169	0.000	100	291408	50.0	50.9	
38 Vinyl acetate	43	5.290	5.290	0.000	100	187915	50.0	46.2	
44 2,2-Dichloropropane	77	5.923	5.923	0.000	67	70106	50.0	48.9	
45 cis-1,2-Dichloroethene	96	5.935	5.935	0.000	92	164893	50.0	48.8	
46 2-Butanone (MEK)	43	5.990	5.990	0.000	100	180996	100.0	102.7	
49 Chlorobromomethane	128	6.233	6.233	0.000	95	71124	50.0	48.6	
51 Tetrahydrofuran	42	6.288	6.288	0.000	98	110274	100.0	99.9	
52 Chloroform	83	6.343	6.343	0.000	96	262371	50.0	50.4	
53 1,1,1-Trichloroethane	97	6.531	6.531	0.000	95	167130	50.0	50.3	
54 Cyclohexane	56	6.586	6.586	0.000	95	322468	50.0	50.5	
56 Carbon tetrachloride	117	6.720	6.720	0.000	69	132517	50.0	49.7	
55 1,1-Dichloropropene	75	6.726	6.726	0.000	97	219974	50.0	51.0	
57 Isobutyl alcohol	41	6.945	6.945	0.000	37	83109	1250.0	1157.0	
58 Benzene	78	6.957	6.957	0.000	99	654151	50.0	51.3	
59 1,2-Dichloroethane	62	6.981	6.981	0.000	97	208683	50.0	50.0	
62 n-Heptane	43	7.280	7.280	0.000	81	222515	50.0	50.8	
64 Trichloroethene	130	7.669	7.669	0.000	98	162608	50.0	50.9	
66 Methylcyclohexane	83	7.864	7.864	0.000	96	295972	50.0	51.9	
67 1,2-Dichloropropane	63	7.906	7.906	0.000	95	154467	50.0	49.0	
68 Dibromomethane	93	8.028	8.028	0.000	95	82469	50.0	48.6	
70 1,4-Dioxane	88	8.058	8.058	0.000	96	31354	1000.0	944.0	M
71 Dichlorobromomethane	83	8.198	8.198	0.000	99	176851	50.0	51.0	
74 cis-1,3-Dichloropropene	75	8.661	8.661	0.000	99	152581	50.0	45.6	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	99	342539	100.0	104.1	
76 Toluene	91	8.989	8.989	0.000	100	679332	50.0	54.5	
77 trans-1,3-Dichloropropene	75	9.220	9.220	0.000	94	108942	50.0	48.4	
78 Ethyl methacrylate	69	9.318	9.318	0.000	96	142858	50.0	48.7	
79 1,1,2-Trichloroethane	97	9.397	9.397	0.000	99	125390	50.0	53.7	
80 Tetrachloroethene	164	9.537	9.537	0.000	95	129494	50.0	53.1	
81 1,3-Dichloropropane	76	9.567	9.567	0.000	98	233217	50.0	53.7	
82 2-Hexanone	43	9.658	9.658	0.000	99	271508	100.0	108.0	
84 Chlorodibromomethane	129	9.786	9.786	0.000	99	96762	50.0	51.9	
85 Ethylene Dibromide	107	9.902	9.902	0.000	98	115204	50.0	51.7	
86 3-Chlorobenzotrifluoride	180	10.370	10.370	0.000	97	251080	50.0	52.8	
87 Chlorobenzene	112	10.394	10.394	0.000	99	416488	50.0	52.8	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	99	234233	50.0	51.0	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.473	0.000	97	101650	50.0	49.9	
90 Ethylbenzene	106	10.498	10.498	0.000	100	242856	50.0	53.6	
91 m-Xylene & p-Xylene	106	10.619	10.619	0.000	99	293796	50.0	53.0	
92 o-Xylene	106	11.015	11.015	0.000	97	285835	50.0	52.8	
93 Styrene	104	11.027	11.027	0.000	99	469890	50.0	53.8	
94 Bromoform	173	11.209	11.209	0.000	96	57667	50.0	50.1	
96 2-Chlorobenzotrifluoride	180	11.276	11.276	0.000	99	252226	50.0	53.1	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	741027	50.0	54.8	
99 1,1,2,2-Tetrachloroethane	83	11.672	11.672	0.000	97	171864	50.0	51.3	
100 Bromobenzene	156	11.684	11.684	0.000	98	168649	50.0	52.2	
101 1,2,3-Trichloropropane	110	11.720	11.720	0.000	97	55900	50.0	52.7	
102 trans-1,4-Dichloro-2-buten	53	11.727	11.727	0.000	88	42827	50.0	48.6	
103 N-Propylbenzene	120	11.787	11.787	0.000	100	210687	50.0	52.9	
104 2-Chlorotoluene	126	11.873	11.873	0.000	100	177793	50.0	53.1	
105 3-Chlorotoluene	126	11.933	11.933	0.000	99	185477	50.0	49.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	99	588847	50.0	53.0	
107 4-Chlorotoluene	126	11.982	11.982	0.000	99	189449	50.0	52.3	
108 tert-Butylbenzene	119	12.286	12.286	0.000	100	517188	50.0	53.8	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	100	610150	50.0	53.5	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	98	179092	50.0	49.7	
112 sec-Butylbenzene	105	12.505	12.505	0.000	100	732318	50.0	54.1	
113 1,3-Dichlorobenzene	146	12.615	12.615	0.000	98	302903	50.0	50.9	
114 4-Isopropyltoluene	119	12.651	12.651	0.000	99	605051	50.0	54.1	
115 1,4-Dichlorobenzene	146	12.706	12.706	0.000	98	310551	50.0	51.1	
116 2,4-Dichloro-1-(triflourom	214	12.761	12.761	0.000	94	174468	50.0	51.7	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.809	0.000	98	186350	50.0	49.4	
120 n-Butylbenzene	91	13.059	13.059	0.000	100	542017	50.0	53.3	
121 1,2-Dichlorobenzene	146	13.083	13.083	0.000	100	283138	50.0	51.4	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.862	0.000	86	21428	50.0	47.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	99	613057	150.0	147.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	100	386758	100.0	95.5	
126 1,2,4-Trichlorobenzene	180	14.689	14.689	0.000	96	132179	50.0	46.1	
127 Hexachlorobutadiene	225	14.860	14.860	0.000	96	67414	50.0	49.0	
128 Naphthalene	128	14.939	14.939	0.000	100	347596	50.0	46.2	
129 1,2,3-Trichlorobenzene	180	15.188	15.188	0.000	98	105062	50.0	44.7	
131 2,4,5-Trichlorotoluene	159	15.961	15.961	0.000	96	51080	50.0	40.4	
130 2,3,6-Trichlorotoluene	159	16.064	16.064	0.000	97	47319	50.0	41.5	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	105.8	
S 134 1,2-Dichloroethene, Total	96				0		100.0	99.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	94.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAVAPRI_00005	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	2.00	Units: uL	
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL	
VOAACRPRI_00003	Amount Added:	6.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

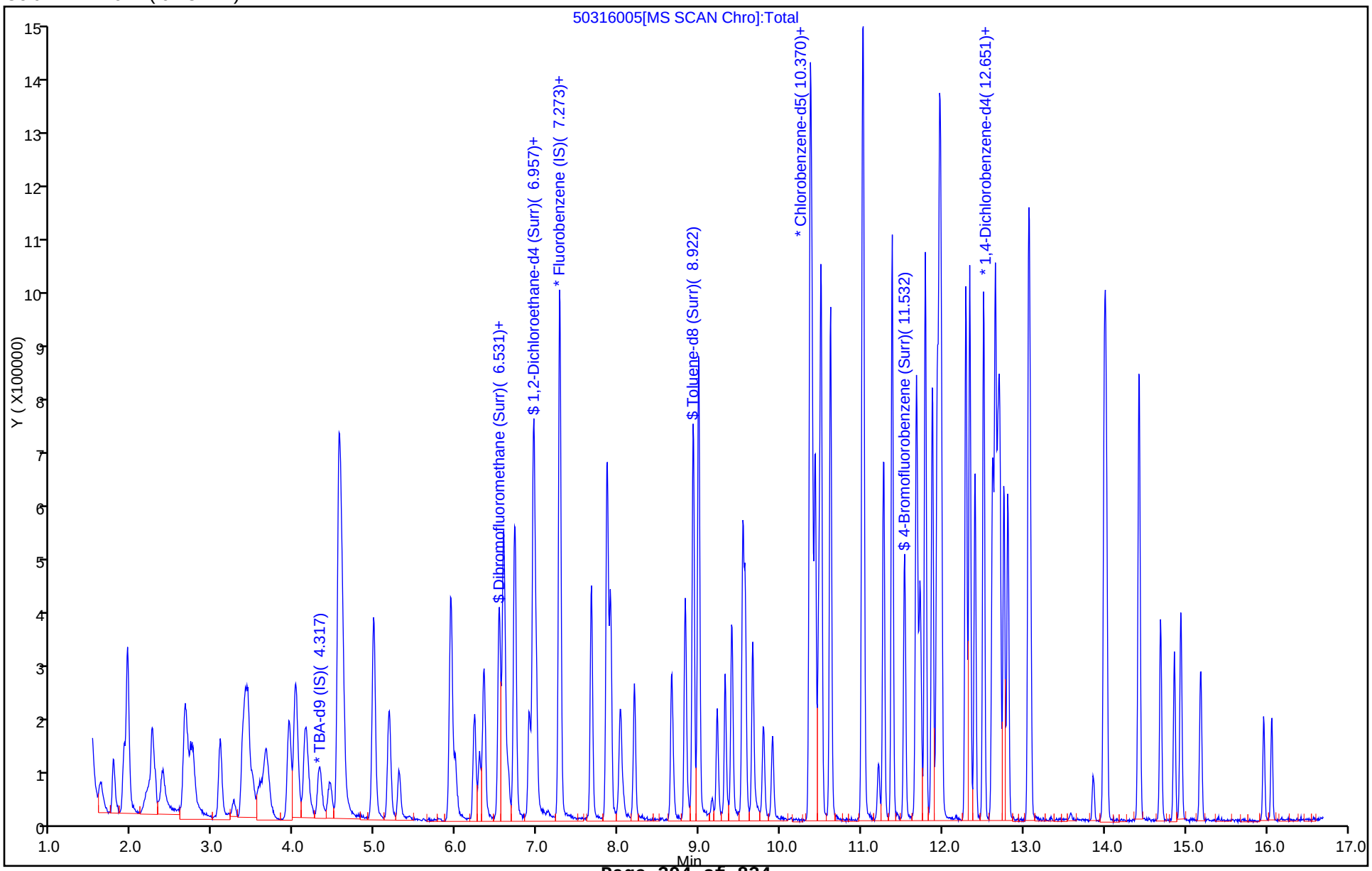
Report Date: 17-Mar-2015 10:59:23 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316005.D

Injection Date:	16-Mar-2015 13:05:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	ICIS VSTD10			Worklist Smp#:	5
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

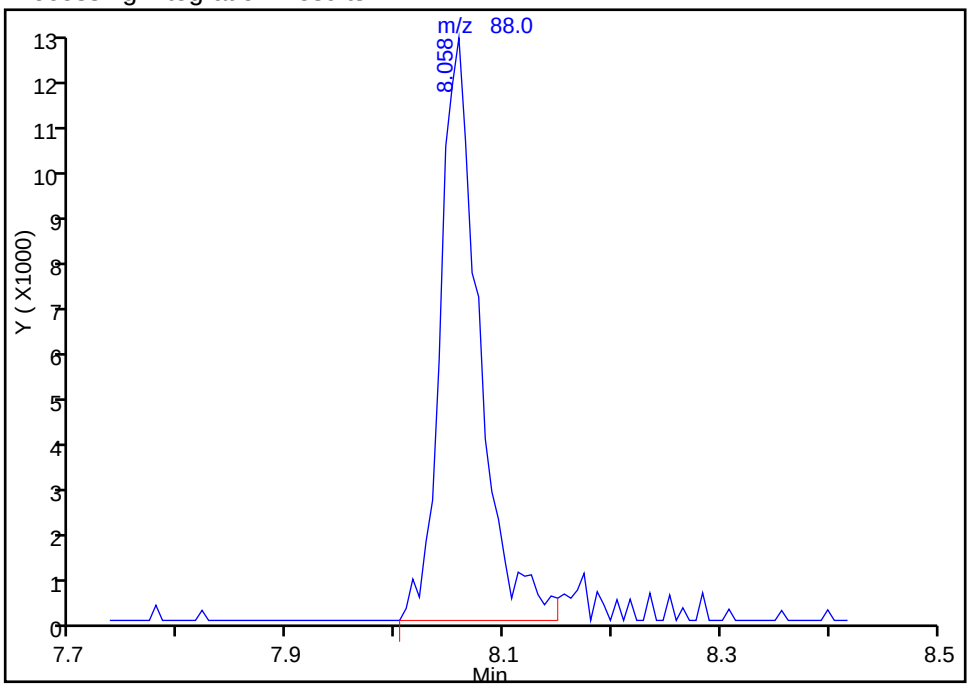
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316005.D
Injection Date: 16-Mar-2015 13:05:30 Instrument ID: CHHP5
Lims ID: ICIS VSTD10
Client ID:
Operator ID: 001562 ALS Bottle#: 5 Worklist Smp#: 5
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

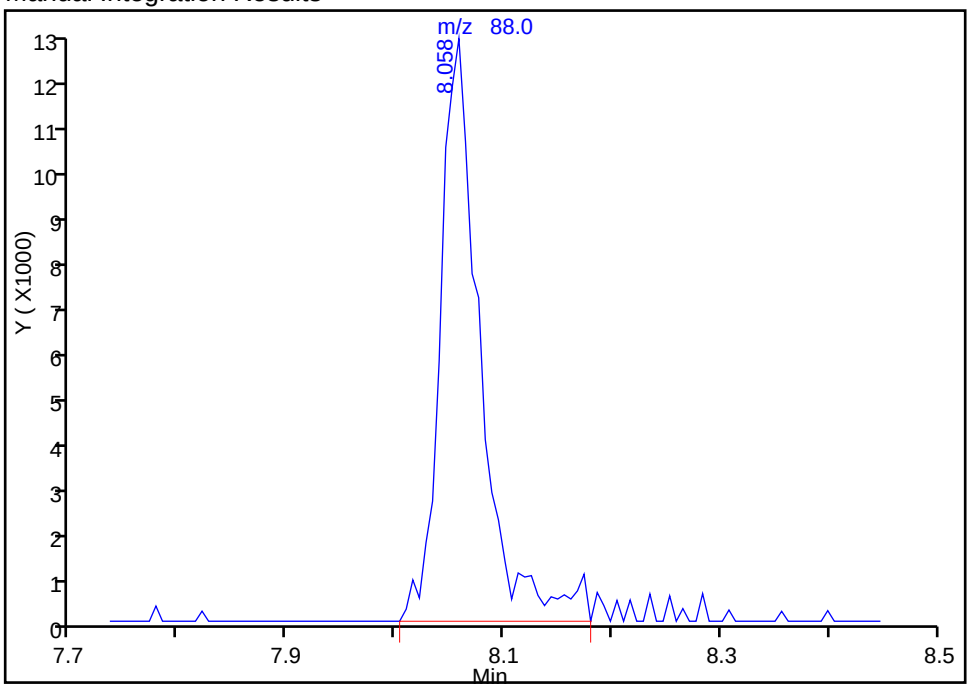
Processing Integration Results

RT: 8.06
Area: 30397
Amount: 939.9751
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 31354
Amount: 944.0403
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 09:27:38
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316006.D
Lims ID: IC VSTD15
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 16-Mar-2015 13:29:30 ALS Bottle#: 6 Worklist Smp#: 6
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD15
Misc. Info.: 180-0006031-006
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:26 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 09:45:06

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.305	4.305	0.000	89	152705	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.273	7.273	0.000	99	530419	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	99	125149	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	95	182887	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.525	6.525	0.000	97	185698	75.0	77.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.902	6.902	0.000	96	247858	75.0	77.9	
$ 7 Toluene-d8 (Surr)	98	8.922	8.922	0.000	100	794092	75.0	79.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	97	279546	75.0	77.8	
11 Dichlorodifluoromethane	85	1.622	1.622	0.000	99	173113	75.0	76.1	
12 Chloromethane	50	1.768	1.768	0.000	99	249772	75.0	79.6	
13 Vinyl chloride	62	1.896	1.896	0.000	100	280135	75.0	79.9	
14 Butadiene	39	1.944	1.944	0.000	99	317272	75.0	79.2	
15 Bromomethane	94	2.249	2.249	0.000	92	159846	75.0	87.5	
16 Chloroethane	64	2.376	2.376	0.000	96	191164	75.0	78.8	
17 Dichlorofluoromethane	67	2.644	2.644	0.000	99	437737	75.0	79.0	
18 Trichlorofluoromethane	101	2.723	2.723	0.000	96	358375	75.0	85.2	
20 Ethyl ether	59	3.082	3.082	0.000	100	214135	75.0	77.2	
21 Acrolein	56	3.258	3.258	0.000	100	62132	175.0	184.3	
22 1,1-Dichloroethene	96	3.374	3.374	0.000	100	235889	75.0	77.1	
23 1,1,2-Trichloro-1,2,2-trif	101	3.423	3.423	0.000	100	246660	75.0	79.7	
24 Acetone	43	3.496	3.496	0.000	100	180387	150.0	166.0	
25 Iodomethane	142	3.581	3.581	0.000	100	334141	75.0	78.6	
26 Carbon disulfide	76	3.660	3.660	0.000	100	592248	75.0	79.2	
28 3-Chloro-1-propene	76	3.934	3.934	0.000	100	125423	75.0	77.6	
30 Methyl acetate	43	4.019	4.019	0.000	100	994505	375.0	391.2	
31 Methylene Chloride	84	4.147	4.147	0.000	100	256424	75.0	72.5	
32 2-Methyl-2-propanol	59	4.439	4.439	0.000	100	133756	750.0	743.6	
33 Acrylonitrile	53	4.554	4.554	0.000	100	1035956	750.0	792.2	
34 trans-1,2-Dichloroethene	96	4.560	4.560	0.000	100	251288	75.0	79.4	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	100	528520	75.0	75.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.980	4.980	0.000	100	392065	75.0	77.6	
37 1,1-Dichloroethane	63	5.175	5.175	0.000	100	435915	75.0	77.2	
38 Vinyl acetate	43	5.296	5.296	0.000	100	294456	75.0	73.5	
44 2,2-Dichloropropane	77	5.929	5.929	0.000	100	108858	75.0	77.1	
45 cis-1,2-Dichloroethene	96	5.941	5.941	0.000	100	259517	75.0	77.9	
46 2-Butanone (MEK)	43	5.990	5.990	0.000	100	259227	150.0	149.2	
49 Chlorobromomethane	128	6.227	6.227	0.000	100	109930	75.0	76.2	
51 Tetrahydrofuran	42	6.282	6.282	0.000	100	166594	150.0	153.1	
52 Chloroform	83	6.343	6.343	0.000	100	395935	75.0	77.2	
53 1,1,1-Trichloroethane	97	6.531	6.531	0.000	100	259963	75.0	79.4	
54 Cyclohexane	56	6.586	6.586	0.000	100	497889	75.0	79.2	
56 Carbon tetrachloride	117	6.720	6.720	0.000	100	203736	75.0	77.5	
55 1,1-Dichloropropene	75	6.726	6.726	0.000	100	326699	75.0	76.8	
57 Isobutyl alcohol	41	6.945	6.945	0.000	100	137203	1875.0	1937.9	M
58 Benzene	78	6.957	6.957	0.000	100	984614	75.0	78.3	
59 1,2-Dichloroethane	62	6.988	6.988	0.000	100	320594	75.0	77.9	
62 n-Heptane	43	7.280	7.280	0.000	100	335961	75.0	77.8	
64 Trichloroethene	130	7.669	7.669	0.000	100	242252	75.0	76.9	
66 Methylcyclohexane	83	7.864	7.864	0.000	100	446628	75.0	79.5	
67 1,2-Dichloropropane	63	7.906	7.906	0.000	100	238331	75.0	76.7	
68 Dibromomethane	93	8.022	8.022	0.000	100	130496	75.0	78.0	
70 1,4-Dioxane	88	8.058	8.058	0.000	100	50907	1500.0	1555.1	
71 Dichlorobromomethane	83	8.198	8.198	0.000	100	259871	75.0	76.1	
74 cis-1,3-Dichloropropene	75	8.661	8.661	0.000	100	247138	75.0	75.0	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	100	531084	150.0	156.8	
76 Toluene	91	8.989	8.989	0.000	100	1017198	75.0	79.3	
77 trans-1,3-Dichloropropene	75	9.220	9.220	0.000	100	167274	75.0	72.2	
78 Ethyl methacrylate	69	9.318	9.318	0.000	100	221852	75.0	73.4	
79 1,1,2-Trichloroethane	97	9.403	9.403	0.000	100	183907	75.0	76.5	
80 Tetrachloroethene	164	9.537	9.537	0.000	100	194422	75.0	77.5	
81 1,3-Dichloropropane	76	9.561	9.561	0.000	100	342719	75.0	76.7	
82 2-Hexanone	43	9.658	9.658	0.000	100	402386	150.0	155.5	
84 Chlorodibromomethane	129	9.792	9.792	0.000	100	145315	75.0	75.7	
85 Ethylene Dibromide	107	9.902	9.902	0.000	100	179814	75.0	78.4	
86 3-Chlorobenzotrifluoride	180	10.370	10.370	0.000	100	388132	75.0	79.3	
87 Chlorobenzene	112	10.388	10.388	0.000	100	622968	75.0	76.7	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	100	368570	75.0	77.9	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.473	0.000	100	159225	75.0	75.9	
90 Ethylbenzene	106	10.504	10.504	0.000	100	366398	75.0	78.6	
91 m-Xylene & p-Xylene	106	10.619	10.619	0.000	100	454933	75.0	79.8	
92 o-Xylene	106	11.009	11.009	0.000	100	436586	75.0	78.3	
93 Styrene	104	11.027	11.027	0.000	100	712222	75.0	79.2	
94 Bromoform	173	11.209	11.209	0.000	100	90522	75.0	76.3	
96 2-Chlorobenzotrifluoride	180	11.276	11.276	0.000	100	386985	75.0	79.2	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	1137215	75.0	81.7	
99 1,1,2,2-Tetrachloroethane	83	11.678	11.678	0.000	100	264462	75.0	76.7	
100 Bromobenzene	156	11.678	11.678	0.000	100	253502	75.0	74.9	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	100	81225	75.0	73.0	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	100	66879	75.0	72.3	
103 N-Propylbenzene	120	11.787	11.787	0.000	100	316980	75.0	75.9	
104 2-Chlorotoluene	126	11.873	11.873	0.000	100	262207	75.0	74.7	
105 3-Chlorotoluene	126	11.933	11.933	0.000	100	291288	75.0	74.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	100	921783	75.0	79.2	
107 4-Chlorotoluene	126	11.982	11.982	0.000	100	296950	75.0	78.2	
108 tert-Butylbenzene	119	12.286	12.286	0.000	100	794422	75.0	78.8	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	100	951216	75.0	79.6	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	100	303120	75.0	80.3	
112 sec-Butylbenzene	105	12.511	12.511	0.000	100	1138120	75.0	80.2	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	100	480001	75.0	77.0	
114 4-Isopropyltoluene	119	12.651	12.651	0.000	100	948139	75.0	80.9	
115 1,4-Dichlorobenzene	146	12.706	12.706	0.000	100	484138	75.0	76.0	
116 2,4-Dichloro-1-(triflourom	214	12.755	12.755	0.000	100	289446	75.0	81.8	
118 2,5-Dichlorobenzotrifluori	214	12.803	12.803	0.000	100	309155	75.0	78.1	
120 n-Butylbenzene	91	13.065	13.065	0.000	100	861784	75.0	80.7	
121 1,2-Dichlorobenzene	146	13.083	13.083	0.000	100	440732	75.0	76.3	
122 1,2-Dibromo-3-Chloropropan	75	13.856	13.856	0.000	100	36318	75.0	76.9	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	100	1058653	225.0	242.5	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	100	694253	150.0	163.5	
126 1,2,4-Trichlorobenzene	180	14.695	14.695	0.000	100	240861	75.0	80.1	
127 Hexachlorobutadiene	225	14.866	14.866	0.000	100	112236	75.0	77.9	
128 Naphthalene	128	14.939	14.939	0.000	100	657935	75.0	83.4	
129 1,2,3-Trichlorobenzene	180	15.188	15.188	0.000	100	200345	75.0	81.3	
131 2,4,5-Trichlorotoluene	159	15.967	15.967	0.000	100	108037	75.0	81.5	
130 2,3,6-Trichlorotoluene	159	16.064	16.064	0.000	100	98974	75.0	82.7	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		150.0	158.1	
S 134 1,2-Dichloroethene, Total	96				0		150.0	157.3	
S 135 1,3-Dichloropropene, Total	1				0		150.0	147.2	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAACRPRI_00003	Amount Added:	7.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	3.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	3.00	Units: uL	
VOA8260SURR_00032	Amount Added:	3.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	3.00	Units: uL	
VOAVAPRI_00005	Amount Added:	3.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

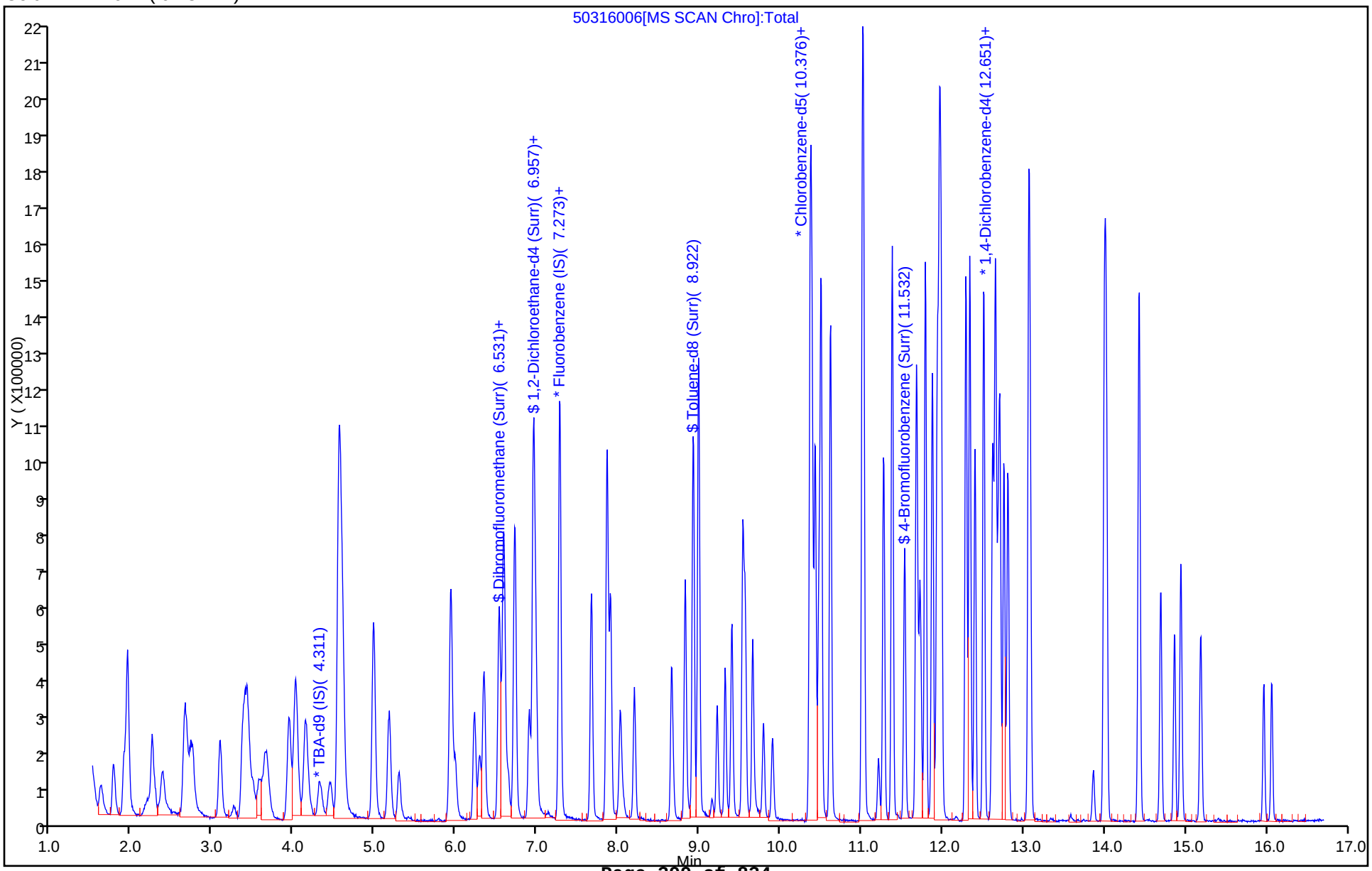
Report Date: 17-Mar-2015 10:59:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316006.D

Injection Date:	16-Mar-2015 13:29:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD15			Worklist Smp#:	6
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

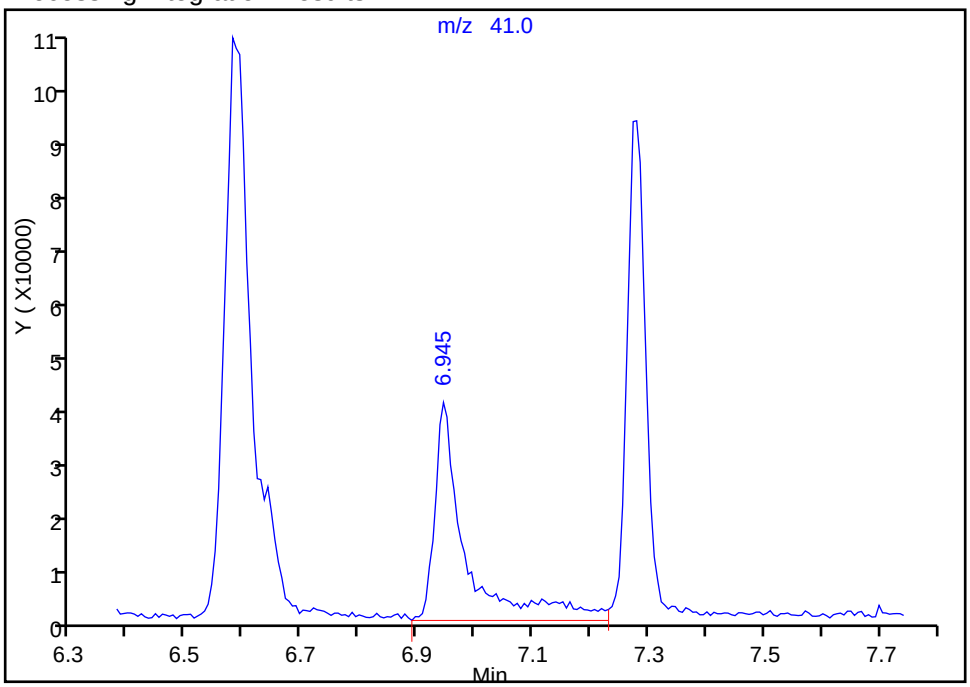
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316006.D				
Injection Date:	16-Mar-2015 13:29:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD15				
Client ID:					
Operator ID:	001562	ALS Bottle#:	6	Worklist Smp#:	6
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

57 Isobutyl alcohol, CAS: 78-83-1

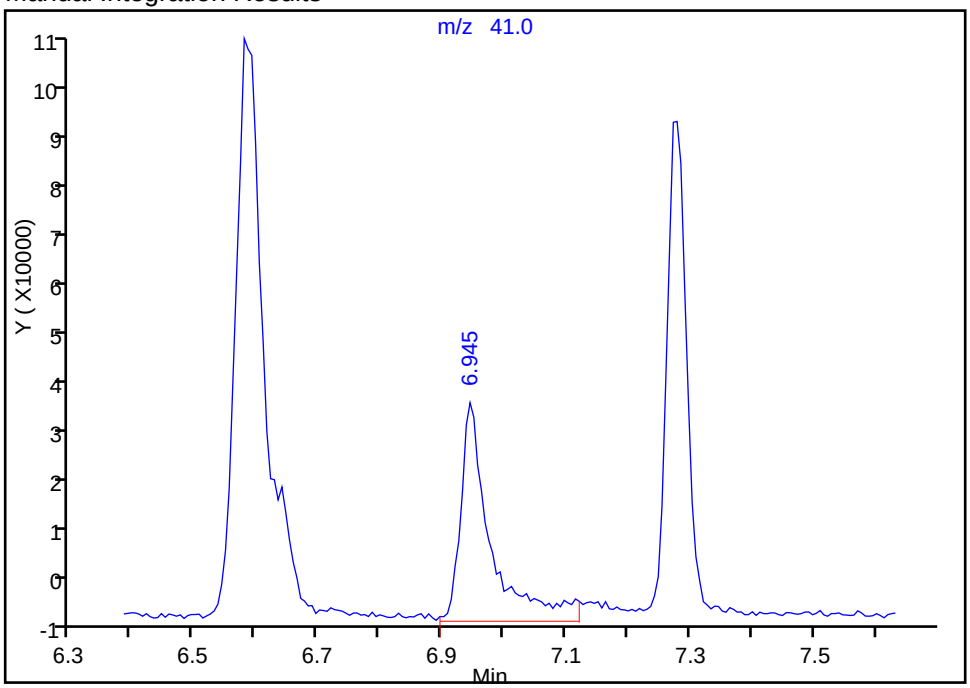
Processing Integration Results

RT: 6.94
Area: 150922
Amount: 2067.3126
Amount Units: ng



Manual Integration Results

RT: 6.94
Area: 137203
Amount: 1937.8985
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 09:45:06
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316007.D
Lims ID: IC VSTD20
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 16-Mar-2015 13:53:30 ALS Bottle#: 7 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD20
Misc. Info.: 180-0006031-007
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:28 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 09:48:25

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.326	4.305	0.021	86	154462	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.270	7.273	-0.003	99	558174	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.367	10.364	0.003	99	128898	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	99	188542	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.528	6.525	0.003	99	248750	100.0	98.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.899	6.902	-0.003	97	335757	100.0	100.3	
$ 7 Toluene-d8 (Surr)	98	8.919	8.922	-0.003	100	1053927	100.0	102.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	98	379740	100.0	102.6	
11 Dichlorodifluoromethane	85	1.619	1.622	-0.003	98	243823	100.0	101.9	
12 Chloromethane	50	1.777	1.768	0.009	100	316915	100.0	96.0	
13 Vinyl chloride	62	1.905	1.896	0.009	100	370271	100.0	100.3	
14 Butadiene	39	1.947	1.944	0.003	100	415323	100.0	98.5	
15 Bromomethane	94	2.251	2.249	0.002	99	192846	100.0	101.0	
16 Chloroethane	64	2.373	2.376	-0.003	99	245673	100.0	96.2	
17 Dichlorofluoromethane	67	2.653	2.644	0.009	100	548270	100.0	94.0	
18 Trichlorofluoromethane	101	2.702	2.723	-0.021	98	437688	100.0	98.9	
20 Ethyl ether	59	3.085	3.082	0.003	100	293889	100.0	100.7	
21 Acrolein	56	3.261	3.258	0.003	99	71073	200.0	200.4	
22 1,1-Dichloroethene	96	3.377	3.374	0.003	98	318457	100.0	98.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.423	0.009	98	319162	100.0	98.0	
24 Acetone	43	3.492	3.496	-0.004	100	217095	200.0	189.9	
25 Iodomethane	142	3.596	3.581	0.015	99	439512	100.0	98.3	
26 Carbon disulfide	76	3.669	3.660	0.009	100	772081	100.0	98.1	
28 3-Chloro-1-propene	76	3.930	3.934	-0.004	99	163875	100.0	96.3	
30 Methyl acetate	43	4.022	4.019	0.003	100	1321970	500.0	494.2	
31 Methylene Chloride	84	4.143	4.147	-0.004	98	345226	100.0	92.7	
32 2-Methyl-2-propanol	59	4.435	4.439	-0.004	99	175500	1000.0	964.6	
33 Acrylonitrile	53	4.551	4.554	-0.003	100	1363975	1000.0	991.2	
34 trans-1,2-Dichloroethene	96	4.557	4.560	-0.003	95	327278	100.0	98.3	
35 Methyl tert-butyl ether	73	4.594	4.597	-0.003	99	727030	100.0	98.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.983	4.980	0.003	99	514868	100.0	96.8	
37 1,1-Dichloroethane	63	5.171	5.175	-0.004	100	595324	100.0	100.2	
38 Vinyl acetate	43	5.293	5.296	-0.003	100	419086	100.0	99.4	
44 2,2-Dichloropropane	77	5.926	5.929	-0.003	98	147216	100.0	99.1	
45 cis-1,2-Dichloroethene	96	5.938	5.941	-0.003	98	349805	100.0	99.7	
46 2-Butanone (MEK)	43	5.987	5.990	-0.003	100	371447	200.0	203.2	
49 Chlorobromomethane	128	6.230	6.227	0.003	98	150204	100.0	99.0	
51 Tetrahydrofuran	42	6.285	6.282	0.003	99	224920	200.0	196.4	
52 Chloroform	83	6.346	6.343	0.003	100	534362	100.0	99.0	
53 1,1,1-Trichloroethane	97	6.528	6.531	-0.003	99	344772	100.0	100.0	
54 Cyclohexane	56	6.589	6.586	0.003	99	649387	100.0	98.1	
56 Carbon tetrachloride	117	6.717	6.720	-0.003	98	274328	100.0	99.2	
55 1,1-Dichloropropene	75	6.723	6.726	-0.003	98	436454	100.0	97.5	
57 Isobutyl alcohol	41	6.942	6.945	-0.003	98	174166	2500.0	2337.7	M
58 Benzene	78	6.954	6.957	-0.003	99	1312435	100.0	99.2	
59 1,2-Dichloroethane	62	6.984	6.988	-0.004	99	429724	100.0	99.2	
62 n-Heptane	43	7.276	7.280	-0.004	99	443357	100.0	97.6	
64 Trichloroethene	130	7.666	7.669	-0.003	99	326599	100.0	98.5	
66 Methylcyclohexane	83	7.860	7.864	-0.004	100	583894	100.0	98.7	
67 1,2-Dichloropropane	63	7.903	7.906	-0.003	99	332279	100.0	101.6	
68 Dibromomethane	93	8.025	8.022	0.003	99	178905	100.0	101.6	
70 1,4-Dioxane	88	8.055	8.058	-0.003	99	66490	2000.0	1930.1	
71 Dichlorobromomethane	83	8.195	8.198	-0.003	98	363842	100.0	101.2	
74 cis-1,3-Dichloropropene	75	8.657	8.661	-0.004	99	345528	100.0	99.6	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.825	-0.003	100	747218	200.0	214.2	
76 Toluene	91	8.992	8.989	0.003	100	1340817	100.0	101.5	
77 trans-1,3-Dichloropropene	75	9.217	9.220	-0.003	99	244258	100.0	102.4	
78 Ethyl methacrylate	69	9.314	9.318	-0.004	97	334858	100.0	107.6	
79 1,1,2-Trichloroethane	97	9.399	9.403	-0.004	99	252461	100.0	101.9	
80 Tetrachloroethene	164	9.539	9.537	0.002	99	261148	100.0	101.1	
81 1,3-Dichloropropane	76	9.564	9.561	0.003	100	467174	100.0	101.5	
82 2-Hexanone	43	9.655	9.658	-0.003	100	541680	200.0	203.2	
84 Chlorodibromomethane	129	9.789	9.792	-0.003	99	210013	100.0	106.2	
85 Ethylene Dibromide	107	9.898	9.902	-0.004	100	245946	100.0	104.0	
86 3-Chlorobenzotrifluoride	180	10.373	10.370	0.003	97	511845	100.0	101.6	
87 Chlorobenzene	112	10.391	10.388	0.003	100	845046	100.0	101.0	
88 4-Chlorobenzotrifluoride	180	10.428	10.431	-0.003	99	511237	100.0	104.9	
89 1,1,1,2-Tetrachloroethane	131	10.476	10.473	0.003	95	233228	100.0	107.9	
90 Ethylbenzene	106	10.501	10.504	-0.003	100	488611	100.0	101.8	
91 m-Xylene & p-Xylene	106	10.616	10.619	-0.003	100	592135	100.0	100.8	
92 o-Xylene	106	11.012	11.009	0.003	100	585609	100.0	101.9	
93 Styrene	104	11.024	11.027	-0.003	95	966850	100.0	104.4	
94 Bromoform	173	11.212	11.209	0.003	98	126605	100.0	103.7	
96 2-Chlorobenzotrifluoride	180	11.273	11.276	-0.003	99	521379	100.0	103.6	
97 Isopropylbenzene	105	11.377	11.380	-0.003	100	1474178	100.0	102.8	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.678	-0.003	98	351798	100.0	99.0	
100 Bromobenzene	156	11.681	11.678	0.003	99	346996	100.0	99.4	
101 1,2,3-Trichloropropane	110	11.717	11.721	-0.003	97	111668	100.0	97.4	
102 trans-1,4-Dichloro-2-buten	53	11.729	11.733	-0.004	97	92761	100.0	97.3	
103 N-Propylbenzene	120	11.784	11.787	-0.003	100	419888	100.0	97.5	
104 2-Chlorotoluene	126	11.875	11.873	0.002	100	351403	100.0	97.2	
105 3-Chlorotoluene	126	11.936	11.933	0.003	98	415463	100.0	102.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.964	-0.003	100	1188743	100.0	99.0	
107 4-Chlorotoluene	126	11.985	11.982	0.003	97	377870	100.0	96.5	
108 tert-Butylbenzene	119	12.289	12.286	0.003	99	1020106	100.0	98.1	
110 1,2,4-Trimethylbenzene	105	12.338	12.335	0.003	100	1214438	100.0	98.6	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.402	-0.003	100	396211	100.0	101.8	
112 sec-Butylbenzene	105	12.508	12.511	-0.003	100	1462842	100.0	99.9	
113 1,3-Dichlorobenzene	146	12.618	12.621	-0.003	99	630675	100.0	98.1	
114 4-Isopropyltoluene	119	12.648	12.651	-0.003	100	1195021	100.0	98.9	
115 1,4-Dichlorobenzene	146	12.709	12.706	0.003	99	642365	100.0	97.8	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.755	0.003	98	358539	100.0	98.3	
118 2,5-Dichlorobenzotrifluori	214	12.806	12.803	0.003	99	406971	100.0	99.8	
120 n-Butylbenzene	91	13.062	13.065	-0.003	100	1093564	100.0	99.4	
121 1,2-Dichlorobenzene	146	13.080	13.083	-0.003	99	595901	100.0	100.1	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.856	0.003	95	47067	100.0	96.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.008	-0.003	100	1333690	300.0	296.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.424	14.428	-0.004	100	866884	200.0	198.1	
126 1,2,4-Trichlorobenzene	180	14.692	14.695	-0.003	99	295444	100.0	95.3	
127 Hexachlorobutadiene	225	14.862	14.866	-0.004	98	140410	100.0	94.5	
128 Naphthalene	128	14.942	14.939	0.003	100	789643	100.0	97.0	
129 1,2,3-Trichlorobenzene	180	15.185	15.188	-0.003	98	242534	100.0	95.4	
131 2,4,5-Trichlorotoluene	159	15.964	15.967	-0.003	98	123791	100.0	90.6	
130 2,3,6-Trichlorotoluene	159	16.061	16.064	-0.003	98	110702	100.0	89.7	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		200.0	202.8	
S 134 1,2-Dichloroethene, Total	96				0		200.0	198.0	
S 135 1,3-Dichloropropene, Total	1				0		200.0	202.0	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOAVAPRI_00005	Amount Added:	4.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	4.00	Units: uL	
VOA8260SURR_00032	Amount Added:	4.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	4.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	4.00	Units: uL	
VOAACRPRI_00003	Amount Added:	8.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

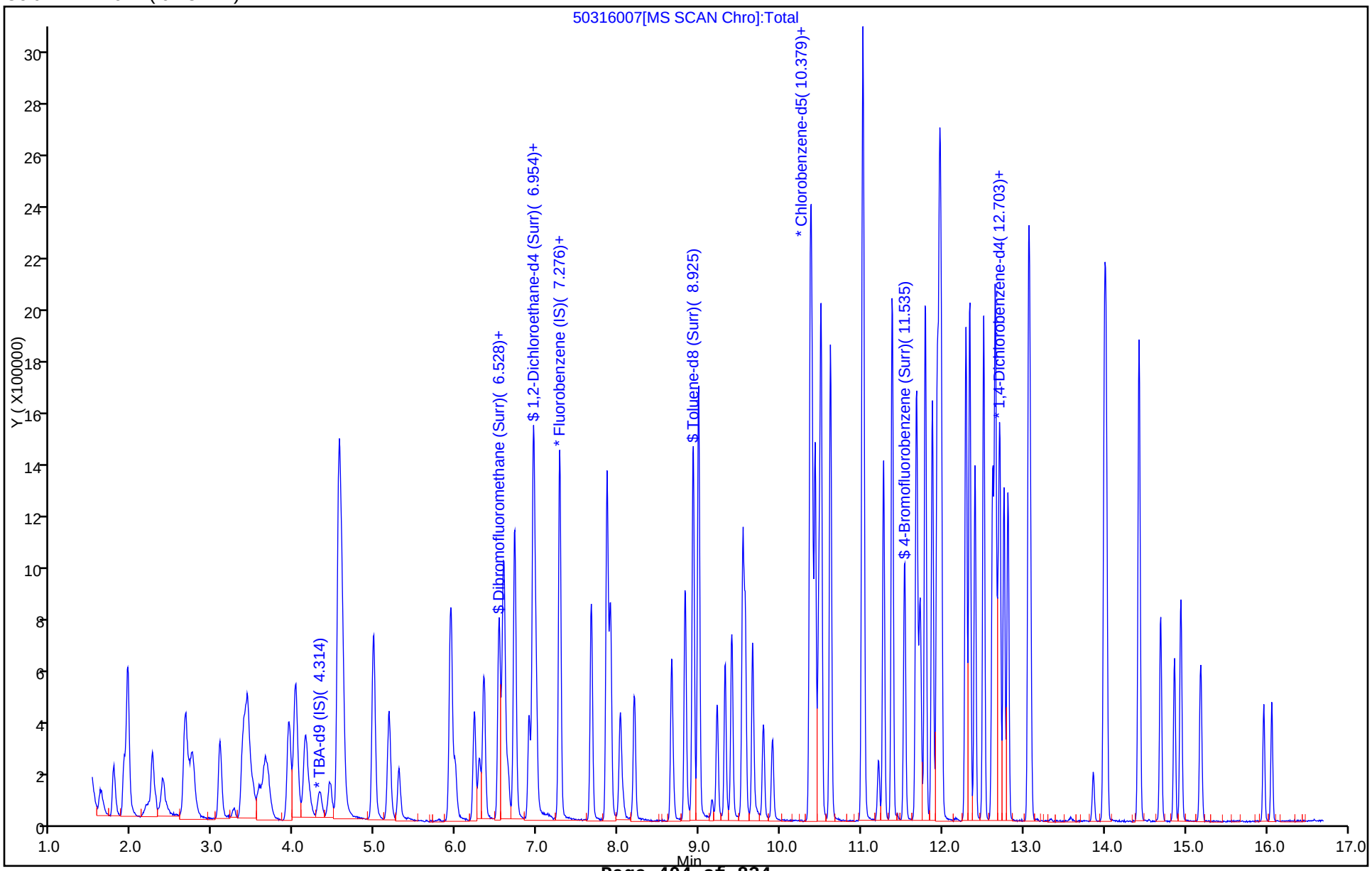
Report Date: 17-Mar-2015 10:59:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316007.D

Injection Date:	16-Mar-2015 13:53:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD20			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



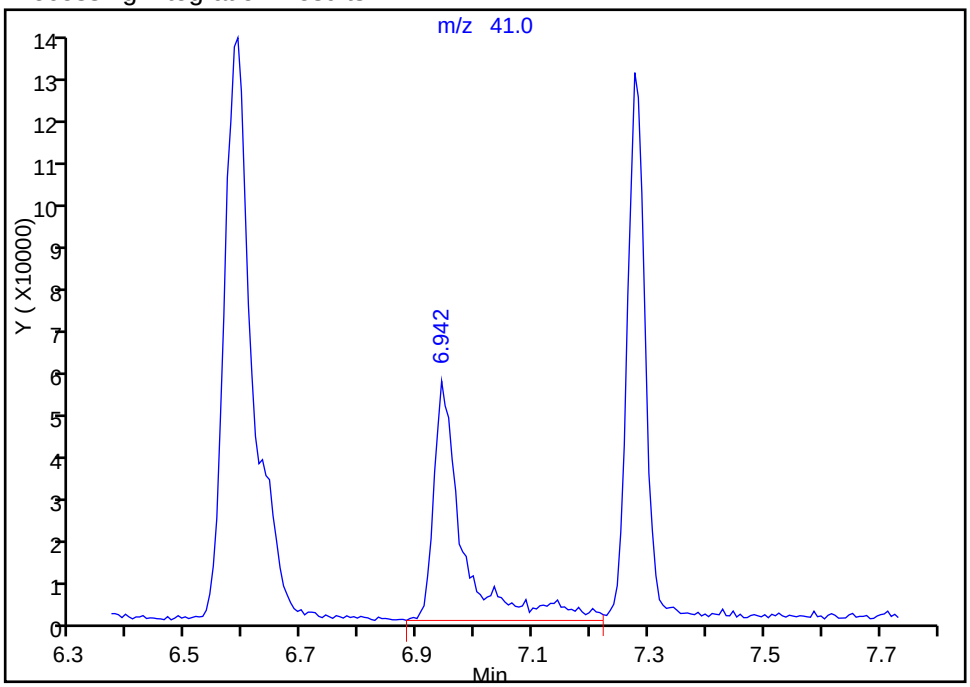
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316007.D				
Injection Date:	16-Mar-2015 13:53:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD20				
Client ID:					
Operator ID:	001562	ALS Bottle#:	7	Worklist Smp#:	7
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

57 Isobutyl alcohol, CAS: 78-83-1

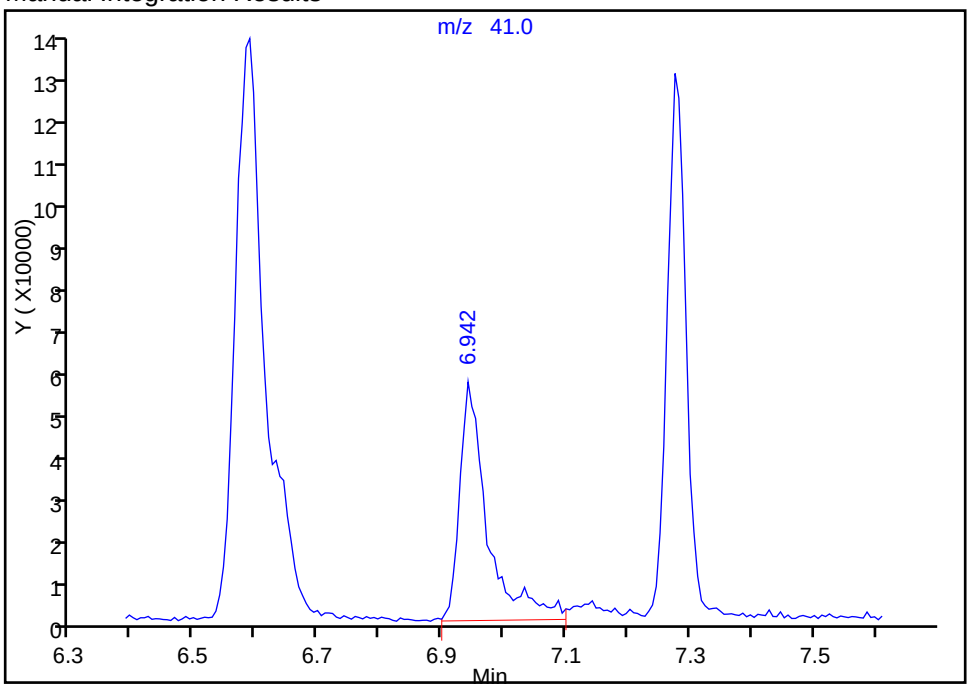
Processing Integration Results

RT: 6.94
Area: 197796
Amount: 2559.7908
Amount Units: ng



Manual Integration Results

RT: 6.94
Area: 174166
Amount: 2337.6542
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 09:48:25
Audit Action: Manually Integrated
Audit Reason: Peak Tail

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316008.D
Lims ID: IC VSTD35
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 16-Mar-2015 14:17:30 ALS Bottle#: 8 Worklist Smp#: 8
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD35
Misc. Info.: 180-0006031-008
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:29 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 09:49:39

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.309	4.305	0.004	95	172412	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.273	-0.002	99	562344	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.364	-0.002	92	147916	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.686	12.682	0.004	95	201448	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.525	0.004	99	435320	175.0	170.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.902	-0.002	98	589491	175.0	174.8	
$ 7 Toluene-d8 (Surr)	98	8.920	8.922	-0.002	99	1858068	175.0	157.6	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	98	701915	175.0	165.3	
11 Dichlorodifluoromethane	85	1.614	1.622	-0.008	99	432190	175.0	179.3	
12 Chloromethane	50	1.772	1.768	0.004	100	573343	175.0	172.3	
13 Vinyl chloride	62	1.906	1.896	0.010	100	624000	175.0	167.8	
14 Butadiene	39	1.948	1.944	0.004	99	709784	175.0	167.1	
15 Bromomethane	94	2.252	2.249	0.003	100	307964	175.0	162.9	
16 Chloroethane	64	2.380	2.376	0.004	98	455903	175.0	177.2	
17 Dichlorofluoromethane	67	2.648	2.644	0.004	100	974888	175.0	166.0	
18 Trichlorofluoromethane	101	2.703	2.723	-0.020	98	772293	175.0	173.1	
20 Ethyl ether	59	3.086	3.082	0.004	99	519119	175.0	176.5	
21 Acrolein	56	3.250	3.258	-0.008	100	81646	225.0	228.5	
22 1,1-Dichloroethene	96	3.372	3.374	-0.002	98	562804	175.0	173.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.427	3.423	0.004	98	577719	175.0	176.1	
24 Acetone	43	3.493	3.496	-0.003	100	429781	350.0	373.1	
25 Iodomethane	142	3.573	3.581	-0.008	100	784350	175.0	174.1	
26 Carbon disulfide	76	3.652	3.660	-0.008	100	1381152	175.0	174.2	
28 3-Chloro-1-propene	76	3.931	3.934	-0.003	100	314052	175.0	183.2	
30 Methyl acetate	43	4.017	4.019	-0.002	100	2407305	875.0	893.2	
31 Methylene Chloride	84	4.138	4.147	-0.009	97	597904	175.0	159.4	
32 2-Methyl-2-propanol	59	4.442	4.439	0.003	99	351016	1750.0	1728.4	
33 Acrylonitrile	53	4.546	4.554	-0.008	99	2446379	1750.0	1764.6	
34 trans-1,2-Dichloroethene	96	4.558	4.560	-0.002	92	581552	175.0	173.4	
35 Methyl tert-butyl ether	73	4.595	4.597	-0.002	98	1347848	175.0	181.8	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.978	4.980	-0.002	99	929791	175.0	173.5	
37 1,1-Dichloroethane	63	5.166	5.175	-0.009	100	1052201	175.0	175.7	
38 Vinyl acetate	43	5.294	5.296	-0.002	100	831670	175.0	195.8	
44 2,2-Dichloropropane	77	5.927	5.929	-0.002	98	280515	175.0	187.4	
45 cis-1,2-Dichloroethene	96	5.933	5.941	-0.008	98	612812	175.0	173.4	
46 2-Butanone (MEK)	43	5.982	5.990	-0.008	100	665013	350.0	361.1	
49 Chlorobromomethane	128	6.225	6.227	-0.002	99	269375	175.0	176.2	
51 Tetrahydrofuran	42	6.286	6.282	0.004	100	415944	350.0	360.6	
52 Chloroform	83	6.341	6.343	-0.003	100	953676	175.0	175.3	
53 1,1,1-Trichloroethane	97	6.529	6.531	-0.002	99	639960	175.0	184.3	
54 Cyclohexane	56	6.584	6.586	-0.002	99	1161488	175.0	174.2	
56 Carbon tetrachloride	117	6.718	6.720	-0.002	100	504991	175.0	181.2	
55 1,1-Dichloropropene	75	6.724	6.726	-0.002	100	783682	175.0	173.7	
57 Isobutyl alcohol	41	6.943	6.945	-0.002	98	386141	4375.0	5144.3	
58 Benzene	78	6.955	6.957	-0.002	98	2286079	175.0	171.5	
59 1,2-Dichloroethane	62	6.985	6.988	-0.003	99	781760	175.0	179.2	
62 n-Heptane	43	7.277	7.280	-0.003	90	819785	175.0	179.1	
64 Trichloroethene	130	7.667	7.669	-0.002	99	586010	175.0	175.5	
66 Methylcyclohexane	83	7.861	7.864	-0.003	100	1055175	175.0	177.1	
67 1,2-Dichloropropane	63	7.904	7.906	-0.002	98	597514	175.0	181.3	
68 Dibromomethane	93	8.026	8.022	0.004	100	308441	175.0	173.8	
70 1,4-Dioxane	88	8.056	8.058	-0.002	97	132396	3500.0	3814.7	
71 Dichlorobromomethane	83	8.196	8.198	-0.002	100	663337	175.0	183.2	
74 cis-1,3-Dichloropropene	75	8.658	8.661	-0.003	100	681682	175.0	195.1	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.825	-0.002	99	1390980	350.0	347.5	
76 Toluene	91	8.993	8.989	0.004	99	2347437	175.0	154.9	
77 trans-1,3-Dichloropropene	75	9.218	9.220	-0.002	98	502980	175.0	183.7	
78 Ethyl methacrylate	69	9.315	9.318	-0.003	98	654210	175.0	183.2	
79 1,1,2-Trichloroethane	97	9.400	9.403	-0.003	100	465584	175.0	163.8	
80 Tetrachloroethene	164	9.534	9.537	-0.003	99	477004	175.0	160.9	
81 1,3-Dichloropropane	76	9.565	9.561	0.004	99	854593	175.0	161.7	
82 2-Hexanone	43	9.656	9.658	-0.002	100	1103034	350.0	360.6	
84 Chlorodibromomethane	129	9.790	9.792	-0.002	99	406960	175.0	179.4	
85 Ethylene Dibromide	107	9.899	9.902	-0.003	99	461219	175.0	170.0	
86 3-Chlorobenzotrifluoride	180	10.374	10.370	0.004	87	925933	175.0	160.1	
87 Chlorobenzene	112	10.392	10.388	0.004	99	1507544	175.0	157.0	
88 4-Chlorobenzotrifluoride	180	10.429	10.431	-0.002	99	908777	175.0	162.5	
89 1,1,1,2-Tetrachloroethane	131	10.471	10.473	-0.002	95	439701	175.0	177.3	
90 Ethylbenzene	106	10.502	10.504	-0.002	99	889389	175.0	161.4	
91 m-Xylene & p-Xylene	106	10.617	10.619	-0.002	99	1092005	175.0	162.0	
92 o-Xylene	106	11.013	11.009	0.004	98	1059986	175.0	160.8	
93 Styrene	104	11.025	11.027	-0.002	93	1723778	175.0	162.3	
94 Bromoform	173	11.213	11.209	0.004	99	253560	175.0	180.9	
96 2-Chlorobenzotrifluoride	180	11.274	11.276	-0.002	99	922108	175.0	159.7	
97 Isopropylbenzene	105	11.378	11.380	-0.002	98	2580136	175.0	156.9	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.678	-0.002	99	681581	175.0	167.2	
100 Bromobenzene	156	11.682	11.678	0.004	98	637569	175.0	171.0	
101 1,2,3-Trichloropropane	110	11.718	11.721	-0.002	98	214358	175.0	174.9	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.733	-0.003	98	180624	175.0	177.3	
103 N-Propylbenzene	120	11.791	11.787	0.004	99	780243	175.0	169.6	
104 2-Chlorotoluene	126	11.876	11.873	0.003	99	666866	175.0	172.6	
105 3-Chlorotoluene	126	11.937	11.933	0.004	97	757051	175.0	175.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.962	11.964	-0.002	99	2136446	175.0	166.6	
107 4-Chlorotoluene	126	11.986	11.982	0.004	97	711885	175.0	170.2	
108 tert-Butylbenzene	119	12.290	12.286	0.004	100	1828125	175.0	164.5	
110 1,2,4-Trimethylbenzene	105	12.339	12.335	0.004	98	2187785	175.0	166.2	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.402	-0.002	100	719294	175.0	172.9	
112 sec-Butylbenzene	105	12.509	12.511	-0.002	99	2565671	175.0	164.1	
113 1,3-Dichlorobenzene	146	12.619	12.621	-0.002	99	1159025	175.0	168.7	
114 4-Isopropyltoluene	119	12.655	12.651	0.004	98	2157955	175.0	167.2	
115 1,4-Dichlorobenzene	146	12.704	12.706	-0.002	99	1196958	175.0	170.6	
116 2,4-Dichloro-1-(triflourom	214	12.759	12.755	0.004	99	675783	175.0	173.5	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.803	0.004	99	748317	175.0	171.7	
120 n-Butylbenzene	91	13.063	13.065	-0.002	99	1983203	175.0	168.7	
121 1,2-Dichlorobenzene	146	13.081	13.083	-0.002	99	1092014	175.0	171.7	
122 1,2-Dibromo-3-Chloropropan	75	13.860	13.856	0.004	95	97714	175.0	187.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.008	-0.002	99	2487475	525.0	517.3	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.428	-0.003	98	1639357	350.0	350.6	
126 1,2,4-Trichlorobenzene	180	14.693	14.695	-0.002	100	608110	175.0	183.6	
127 Hexachlorobutadiene	225	14.863	14.866	-0.003	98	274932	175.0	173.1	
128 Naphthalene	128	14.943	14.939	0.004	100	1599300	175.0	183.9	
129 1,2,3-Trichlorobenzene	180	15.186	15.188	-0.002	100	504504	175.0	185.8	
131 2,4,5-Trichlorotoluene	159	15.965	15.967	-0.002	99	273662	175.0	187.4	
130 2,3,6-Trichlorotoluene	159	16.062	16.064	-0.002	99	246163	175.0	186.7	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		350.0	322.8	
S 134 1,2-Dichloroethene, Total	96				0		350.0	346.8	
S 135 1,3-Dichloropropene, Total	1				0		350.0	378.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAACRPRI_00003	Amount Added:	9.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	7.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	7.00	Units: uL	
VOA8260SURR_00032	Amount Added:	7.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	7.00	Units: uL	
VOAVAPRI_00005	Amount Added:	7.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

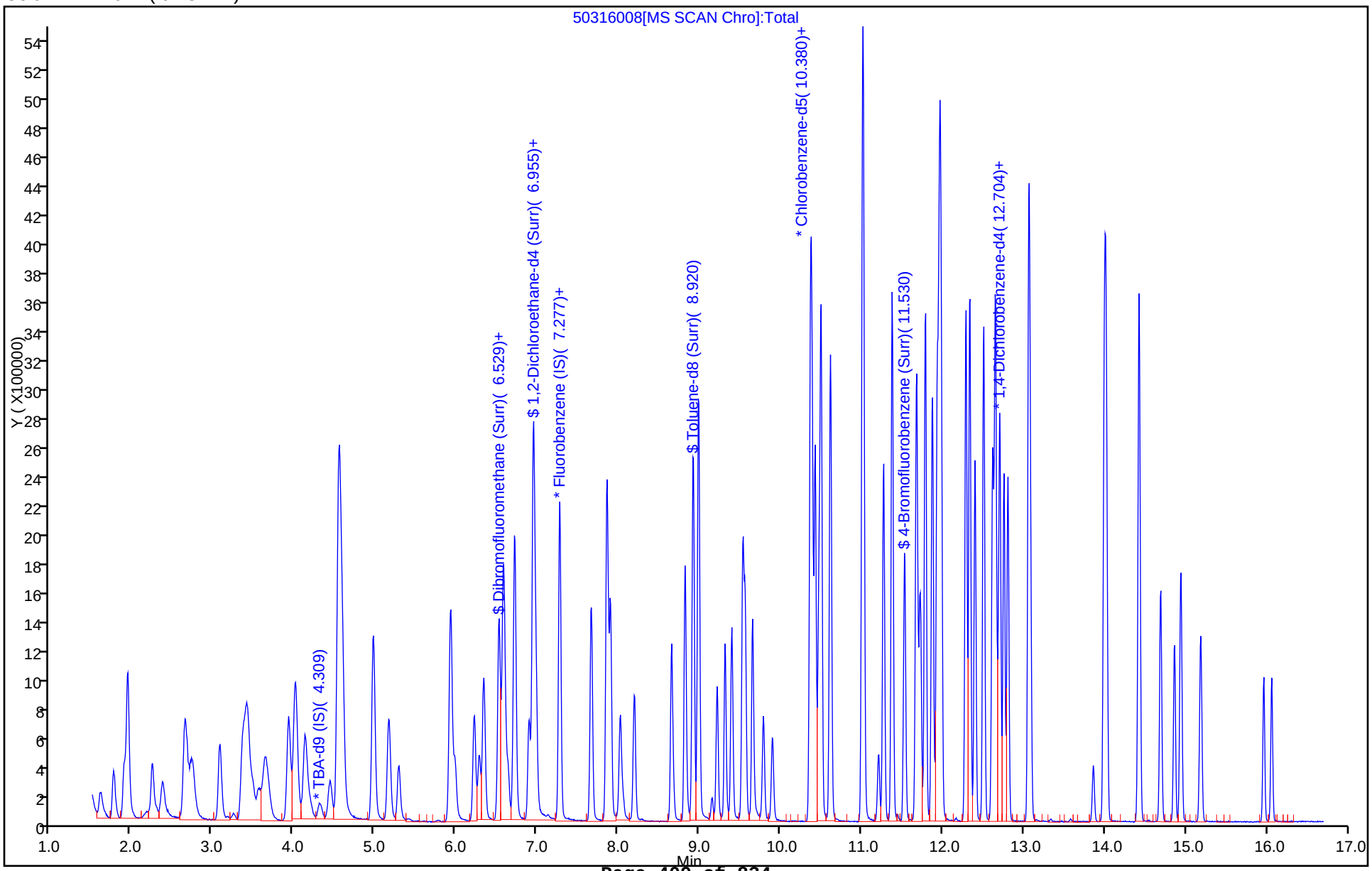
Report Date: 17-Mar-2015 10:59:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316008.D

Injection Date:	16-Mar-2015 14:17:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD35			Worklist Smp#:	8
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316009.D
Lims ID: IC VSTD40
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 16-Mar-2015 14:41:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD40
Misc. Info.: 180-0006031-009
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:31 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 09:50:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.327	4.305	0.022	86	183503	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.273	-0.002	99	592746	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.364	0.004	94	147746	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	94	203483	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.525	0.004	99	526164	200.0	195.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.902	-0.002	98	691002	200.0	194.4	
$ 7 Toluene-d8 (Surr)	98	8.926	8.922	0.004	99	2153477	200.0	182.8	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	98	798953	200.0	188.3	
11 Dichlorodifluoromethane	85	1.619	1.622	-0.003	99	522240	200.0	205.5	
12 Chloromethane	50	1.778	1.768	0.010	100	674845	200.0	192.4	
13 Vinyl chloride	62	1.905	1.896	0.009	100	767804	200.0	195.9	
14 Butadiene	39	1.948	1.944	0.004	98	840803	200.0	187.8	
15 Bromomethane	94	2.252	2.249	0.003	100	366671	200.0	184.6	
16 Chloroethane	64	2.374	2.376	-0.002	99	530813	200.0	195.7	
17 Dichlorofluoromethane	67	2.654	2.644	0.010	99	1188936	200.0	192.0	
18 Trichlorofluoromethane	101	2.733	2.723	0.010	98	946313	200.0	201.3	
20 Ethyl ether	59	3.092	3.082	0.010	100	592652	200.0	191.1	
21 Acrolein	56	3.250	3.258	-0.008	100	95028	250.0	252.3	
22 1,1-Dichloroethene	96	3.378	3.374	0.004	98	662050	200.0	193.7	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.423	0.009	98	684103	200.0	197.9	
24 Acetone	43	3.505	3.496	0.009	100	489133	400.0	402.8	
25 Iodomethane	142	3.597	3.581	0.016	100	945860	200.0	199.2	
26 Carbon disulfide	76	3.664	3.660	0.004	100	1643948	200.0	196.7	
28 3-Chloro-1-propene	76	3.931	3.934	-0.003	99	393345	200.0	217.7	
30 Methyl acetate	43	4.022	4.019	0.003	99	2810332	1000.0	989.3	
31 Methylene Chloride	84	4.144	4.147	-0.003	98	703059	200.0	177.9	
32 2-Methyl-2-propanol	59	4.448	4.439	0.009	99	399281	2000.0	1847.2	
33 Acrylonitrile	53	4.552	4.554	-0.002	99	2868164	2000.0	1962.8	
34 trans-1,2-Dichloroethene	96	4.564	4.560	0.004	96	692220	200.0	195.8	
35 Methyl tert-butyl ether	73	4.600	4.597	0.003	98	1581345	200.0	202.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.978	4.980	-0.002	100	1096478	200.0	194.1	
37 1,1-Dichloroethane	63	5.172	5.175	-0.003	100	1250453	200.0	198.2	
38 Vinyl acetate	43	5.294	5.296	-0.002	100	1001771	200.0	223.8	
44 2,2-Dichloropropane	77	5.927	5.929	-0.002	98	338302	200.0	214.4	
45 cis-1,2-Dichloroethene	96	5.933	5.941	-0.008	98	721075	200.0	193.6	
46 2-Butanone (MEK)	43	5.987	5.990	-0.003	100	809232	400.0	416.8	
49 Chlorobromomethane	128	6.225	6.227	-0.002	98	311076	200.0	193.0	
51 Tetrahydrofuran	42	6.286	6.282	0.004	99	483324	400.0	397.5	
52 Chloroform	83	6.340	6.343	-0.003	100	1109416	200.0	193.5	
53 1,1,1-Trichloroethane	97	6.529	6.531	-0.002	99	768585	200.0	210.0	
54 Cyclohexane	56	6.584	6.586	-0.002	99	1366913	200.0	194.5	
56 Carbon tetrachloride	117	6.717	6.720	-0.003	99	612080	200.0	208.4	
55 1,1-Dichloropropene	75	6.724	6.726	-0.002	99	933326	200.0	196.3	
57 Isobutyl alcohol	41	6.949	6.945	0.004	98	433313	5000.0	5476.7	
58 Benzene	78	6.955	6.957	-0.002	97	2653105	200.0	188.9	
59 1,2-Dichloroethane	62	6.985	6.988	-0.003	99	907622	200.0	197.3	
62 n-Heptane	43	7.277	7.280	-0.003	88	940924	200.0	195.0	
64 Trichloroethene	130	7.666	7.669	-0.003	99	684010	200.0	194.4	
66 Methylcyclohexane	83	7.861	7.864	-0.003	100	1212427	200.0	193.1	
67 1,2-Dichloropropane	63	7.904	7.906	-0.002	98	700921	200.0	201.7	
68 Dibromomethane	93	8.025	8.022	0.003	99	370624	200.0	198.1	
70 1,4-Dioxane	88	8.062	8.058	0.004	98	146272	4000.0	3998.4	
71 Dichlorobromomethane	83	8.196	8.198	-0.002	100	773432	200.0	202.6	
74 cis-1,3-Dichloropropene	75	8.658	8.661	-0.003	99	829306	200.0	225.1	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.825	-0.003	99	1617802	400.0	404.7	
76 Toluene	91	8.993	8.989	0.004	99	2714932	200.0	179.3	
77 trans-1,3-Dichloropropene	75	9.218	9.220	-0.002	98	613747	200.0	224.4	
78 Ethyl methacrylate	69	9.315	9.318	-0.003	98	782394	200.0	219.4	
79 1,1,2-Trichloroethane	97	9.400	9.403	-0.003	99	540864	200.0	190.5	
80 Tetrachloroethene	164	9.540	9.537	0.003	99	545517	200.0	184.2	
81 1,3-Dichloropropane	76	9.564	9.561	0.003	99	1001573	200.0	189.8	
82 2-Hexanone	43	9.656	9.658	-0.002	100	1305223	400.0	427.2	
84 Chlorodibromomethane	129	9.790	9.792	-0.002	99	473922	200.0	209.1	
85 Ethylene Dibromide	107	9.899	9.902	-0.003	100	534328	200.0	197.2	
86 3-Chlorobenzotrifluoride	180	10.374	10.370	0.004	88	1122812	200.0	194.4	
87 Chlorobenzene	112	10.392	10.388	0.004	99	1745676	200.0	182.0	
88 4-Chlorobenzotrifluoride	180	10.428	10.431	-0.003	99	1108797	200.0	198.5	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.473	0.004	95	512980	200.0	207.1	
90 Ethylbenzene	106	10.501	10.504	-0.003	98	1044399	200.0	189.8	
91 m-Xylene & p-Xylene	106	10.617	10.619	-0.002	98	1256840	200.0	186.7	
92 o-Xylene	106	11.012	11.009	0.003	99	1214164	200.0	184.4	
93 Styrene	104	11.025	11.027	-0.002	97	1958961	200.0	184.6	
94 Bromoform	173	11.213	11.209	0.004	98	293938	200.0	210.0	
96 2-Chlorobenzotrifluoride	180	11.274	11.276	-0.002	99	1120386	200.0	194.2	
97 Isopropylbenzene	105	11.377	11.380	-0.003	98	2885608	200.0	175.6	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.678	-0.003	98	772016	200.0	189.6	
100 Bromobenzene	156	11.682	11.678	0.004	99	740842	200.0	196.7	
101 1,2,3-Trichloropropane	110	11.718	11.721	-0.002	96	233938	200.0	189.0	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.733	-0.003	98	211691	200.0	205.7	
103 N-Propylbenzene	120	11.791	11.787	0.004	98	887838	200.0	191.1	
104 2-Chlorotoluene	126	11.870	11.873	-0.003	99	756732	200.0	193.9	
105 3-Chlorotoluene	126	11.937	11.933	0.004	97	890638	200.0	204.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.964	-0.003	99	2387945	200.0	184.4	
107 4-Chlorotoluene	126	11.980	11.982	-0.002	96	795532	200.0	188.3	
108 tert-Butylbenzene	119	12.290	12.286	0.004	99	2060731	200.0	183.6	
110 1,2,4-Trimethylbenzene	105	12.339	12.335	0.004	99	2461131	200.0	185.1	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.402	-0.003	99	832435	200.0	198.1	
112 sec-Butylbenzene	105	12.509	12.511	-0.002	99	2854173	200.0	180.7	
113 1,3-Dichlorobenzene	146	12.618	12.621	-0.003	99	1308081	200.0	188.5	
114 4-Isopropyltoluene	119	12.655	12.651	0.004	98	2408127	200.0	184.7	
115 1,4-Dichlorobenzene	146	12.710	12.706	0.004	99	1348596	200.0	190.3	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.755	0.003	99	786683	200.0	199.9	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.803	0.004	99	877059	200.0	199.2	
120 n-Butylbenzene	91	13.062	13.065	-0.003	98	2209671	200.0	186.1	
121 1,2-Dichlorobenzene	146	13.081	13.083	-0.002	99	1224311	200.0	190.6	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.856	0.003	94	112547	200.0	214.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.008	-0.003	98	2860911	600.0	589.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.428	-0.003	98	1868280	400.0	395.5	
126 1,2,4-Trichlorobenzene	180	14.693	14.695	-0.002	99	679520	200.0	203.2	
127 Hexachlorobutadiene	225	14.863	14.866	-0.003	99	307470	200.0	191.7	
128 Naphthalene	128	14.942	14.939	0.003	100	1786434	200.0	203.4	
129 1,2,3-Trichlorobenzene	180	15.186	15.188	-0.002	99	582911	200.0	212.5	
131 2,4,5-Trichlorotoluene	159	15.964	15.967	-0.003	98	315499	200.0	213.9	
130 2,3,6-Trichlorotoluene	159	16.062	16.064	-0.002	98	285573	200.0	214.4	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		400.0	371.1	
S 134 1,2-Dichloroethene, Total	96				0		400.0	389.4	
S 135 1,3-Dichloropropene, Total	1				0		400.0	449.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAVAPRI_00005	Amount Added:	8.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	8.00	Units: uL	
VOA8260SURR_00032	Amount Added:	8.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	8.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	8.00	Units: uL	
VOAACRPRI_00003	Amount Added:	10.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

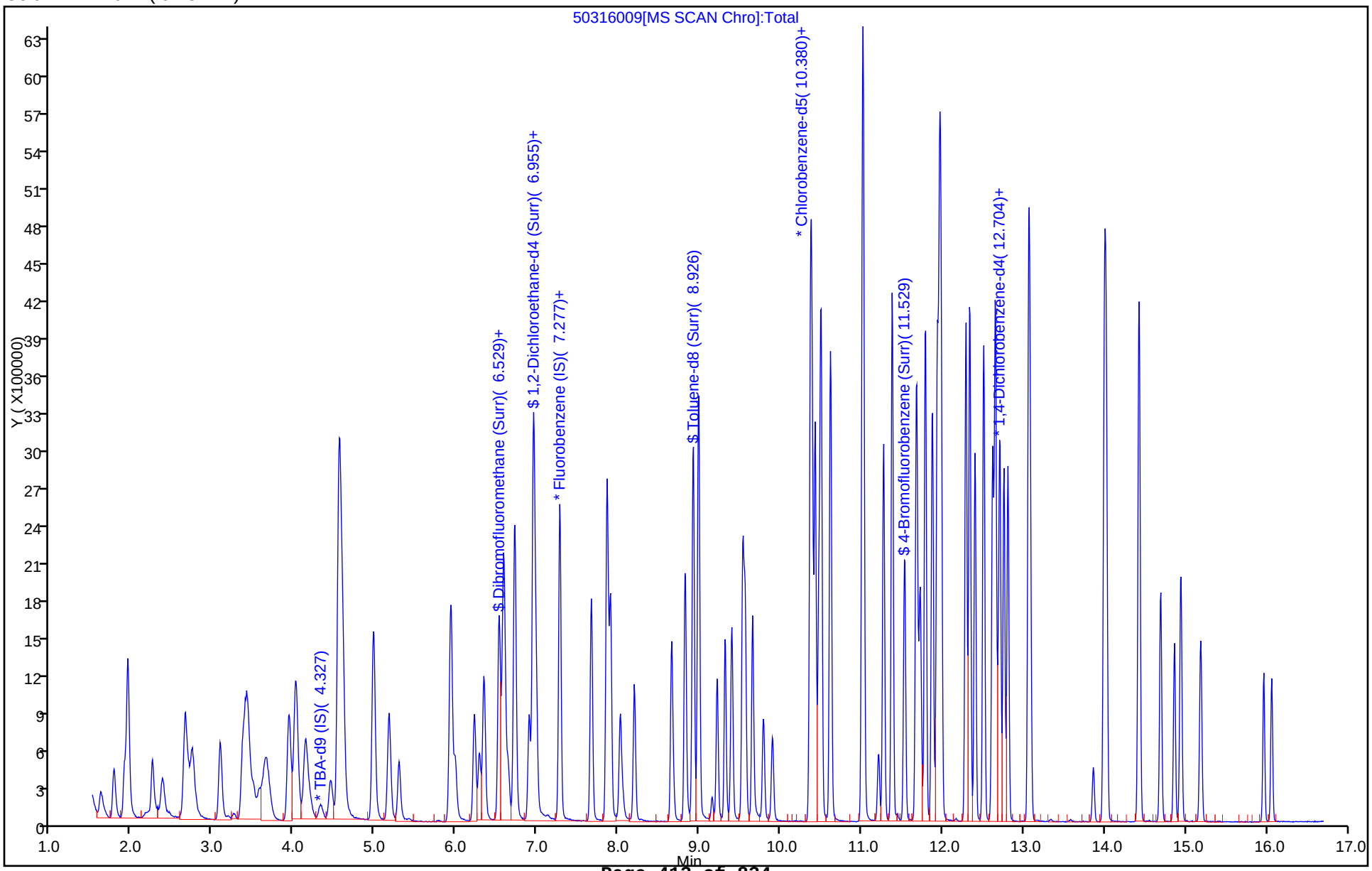
Report Date: 17-Mar-2015 10:59:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316009.D

Injection Date:	16-Mar-2015 14:41:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD40			Worklist Smp#:	9
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 17-Mar-2015 10:59:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316010.D
Lims ID: IC VSTD50
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 16-Mar-2015 15:05:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD50
Misc. Info.: 180-0006031-010
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:32 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 09:55:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.336	4.305	0.031	85	202534	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.275	7.273	0.002	99	620293	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.359	10.364	-0.005	77	161503	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.683	12.682	0.001	92	212327	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.527	6.525	0.001	99	664693	250.0	235.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.898	6.902	-0.004	99	889045	250.0	239.0	
$ 7 Toluene-d8 (Surr)	98	8.923	8.922	0.001	98	2632400	250.0	204.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.532	0.001	98	1045249	250.0	225.4	
11 Dichlorodifluoromethane	85	1.617	1.622	-0.005	99	640090	250.0	240.7	
12 Chloromethane	50	1.775	1.768	0.007	100	855933	250.0	233.2	
13 Vinyl chloride	62	1.909	1.896	0.013	100	924535	250.0	225.4	
14 Butadiene	39	1.946	1.944	0.002	99	1005925	250.0	214.7	
15 Bromomethane	94	2.250	2.249	0.001	100	461680	250.0	223.1	
16 Chloroethane	64	2.371	2.376	-0.005	99	700467	250.0	246.8	
17 Dichlorofluoromethane	67	2.651	2.644	0.007	100	1511714	250.0	233.3	
18 Trichlorofluoromethane	101	2.724	2.723	0.001	98	1178605	250.0	239.5	
20 Ethyl ether	59	3.083	3.082	0.001	99	792637	250.0	244.3	
21 Acrolein	56	3.254	3.258	-0.004	96	109180	275.0	277.0	
22 1,1-Dichloroethene	96	3.375	3.374	0.001	98	827120	250.0	231.2	
23 1,1,2-Trichloro-1,2,2-trif	101	3.424	3.423	0.001	99	834802	250.0	230.7	
24 Acetone	43	3.497	3.496	0.001	99	621064	500.0	488.8	
25 Iodomethane	142	3.594	3.581	0.013	100	1201056	250.0	241.7	
26 Carbon disulfide	76	3.655	3.660	-0.005	100	2031733	250.0	232.3	
28 3-Chloro-1-propene	76	3.935	3.934	0.001	99	482122	250.0	255.0	
30 Methyl acetate	43	4.014	4.019	-0.005	99	3718382	1250.0	1250.8	
31 Methylene Chloride	84	4.142	4.147	-0.005	98	919183	250.0	222.2	
32 2-Methyl-2-propanol	59	4.446	4.439	0.007	98	537174	2500.0	2251.6	
33 Acrylonitrile	53	4.549	4.554	-0.005	99	3721902	2500.0	2433.9	
34 trans-1,2-Dichloroethene	96	4.562	4.560	0.002	97	882651	250.0	238.6	
35 Methyl tert-butyl ether	73	4.598	4.597	0.001	98	2130684	250.0	260.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.975	4.980	-0.005	99	1379168	250.0	233.3	
37 1,1-Dichloroethane	63	5.170	5.175	-0.005	99	1604398	250.0	242.9	
38 Vinyl acetate	43	5.292	5.296	-0.004	100	1337263	250.0	285.5	
44 2,2-Dichloropropane	77	5.924	5.929	-0.005	97	452022	250.0	273.8	
45 cis-1,2-Dichloroethene	96	5.936	5.941	-0.005	97	930230	250.0	238.7	
46 2-Butanone (MEK)	43	5.985	5.990	-0.005	100	1059138	500.0	521.3	
49 Chlorobromomethane	128	6.222	6.227	-0.005	99	404105	250.0	239.6	
51 Tetrahydrofuran	42	6.283	6.282	0.001	99	646482	500.0	508.1	
52 Chloroform	83	6.338	6.343	-0.005	100	1424461	250.0	237.4	
53 1,1,1-Trichloroethane	97	6.527	6.531	-0.005	99	971626	250.0	253.6	
54 Cyclohexane	56	6.581	6.586	-0.005	98	1669676	250.0	227.0	
56 Carbon tetrachloride	117	6.715	6.720	-0.005	99	790495	250.0	257.2	
55 1,1-Dichloropropene	75	6.721	6.726	-0.005	99	1159811	250.0	233.1	
57 Isobutyl alcohol	41	6.946	6.945	0.001	97	644697	6250.0	7786.6	
58 Benzene	78	6.952	6.957	-0.005	97	3351151	250.0	228.0	
59 1,2-Dichloroethane	62	6.983	6.988	-0.005	99	1159879	250.0	241.0	
62 n-Heptane	43	7.275	7.280	-0.005	86	1182643	250.0	234.2	
64 Trichloroethene	130	7.664	7.669	-0.005	99	860273	250.0	233.6	
66 Methylcyclohexane	83	7.859	7.864	-0.005	99	1519674	250.0	231.3	
67 1,2-Dichloropropane	63	7.907	7.906	0.001	99	918714	250.0	252.7	
68 Dibromomethane	93	8.023	8.022	0.001	99	479407	250.0	244.9	
70 1,4-Dioxane	88	8.053	8.058	-0.005	98	185631	5000.0	4848.9	
71 Dichlorobromomethane	83	8.199	8.198	0.001	100	1003399	250.0	251.2	
74 cis-1,3-Dichloropropene	75	8.656	8.661	-0.005	99	1098242	250.0	284.9	
75 4-Methyl-2-pentanone (MIBK	43	8.820	8.825	-0.005	98	2109966	500.0	482.8	
76 Toluene	91	8.990	8.989	0.001	97	3368812	250.0	203.5	
77 trans-1,3-Dichloropropene	75	9.221	9.220	0.001	98	846559	250.0	283.2	
78 Ethyl methacrylate	69	9.319	9.318	0.001	98	1063861	250.0	272.9	
79 1,1,2-Trichloroethane	97	9.398	9.403	-0.005	99	706748	250.0	227.7	
80 Tetrachloroethene	164	9.538	9.537	0.001	99	690601	250.0	213.3	
81 1,3-Dichloropropane	76	9.562	9.561	0.001	100	1327847	250.0	230.2	
82 2-Hexanone	43	9.653	9.658	-0.005	99	1685534	500.0	504.7	
84 Chlorodibromomethane	129	9.787	9.792	-0.005	99	625118	250.0	252.3	
85 Ethylene Dibromide	107	9.903	9.902	0.001	99	713501	250.0	240.9	
86 3-Chlorobenzotrifluoride	180	10.371	10.370	0.001	87	1303041	250.0	206.4	
87 Chlorobenzene	112	10.390	10.388	0.002	98	2249414	250.0	214.5	
88 4-Chlorobenzotrifluoride	180	10.426	10.431	-0.005	99	1250140	250.0	204.8	
89 1,1,1,2-Tetrachloroethane	131	10.475	10.473	0.002	95	680608	250.0	251.4	
90 Ethylbenzene	106	10.499	10.504	-0.005	97	1329470	250.0	221.0	
91 m-Xylene & p-Xylene	106	10.621	10.619	0.002	97	1614511	250.0	219.4	
92 o-Xylene	106	11.010	11.009	0.001	94	1557898	250.0	216.4	
93 Styrene	104	11.022	11.027	-0.005	91	2525667	250.0	217.8	
94 Bromoform	173	11.211	11.209	0.002	99	395201	250.0	258.3	
96 2-Chlorobenzotrifluoride	180	11.272	11.276	-0.004	99	1298335	250.0	205.9	
97 Isopropylbenzene	105	11.381	11.380	0.001	97	3554151	250.0	197.9	
99 1,1,2,2-Tetrachloroethane	83	11.673	11.678	-0.005	98	1003707	250.0	225.5	
100 Bromobenzene	156	11.685	11.678	0.007	99	956763	250.0	243.5	
101 1,2,3-Trichloropropane	110	11.716	11.721	-0.004	97	325768	250.0	252.3	
102 trans-1,4-Dichloro-2-buten	53	11.728	11.733	-0.005	98	286166	250.0	266.5	
103 N-Propylbenzene	120	11.789	11.787	0.002	97	1131297	250.0	233.4	
104 2-Chlorotoluene	126	11.874	11.873	0.001	97	963573	250.0	236.6	
105 3-Chlorotoluene	126	11.935	11.933	0.002	96	1053875	250.0	231.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.965	11.964	0.001	98	2983647	250.0	220.7	
107 4-Chlorotoluene	126	11.983	11.982	0.001	97	1062581	250.0	241.0	
108 tert-Butylbenzene	119	12.288	12.286	0.002	98	2516209	250.0	214.9	
110 1,2,4-Trimethylbenzene	105	12.336	12.335	0.001	97	3068942	250.0	221.2	
111 1,2-dichloro-4-(trifluorom	214	12.403	12.402	0.001	99	991010	250.0	226.1	
112 sec-Butylbenzene	105	12.507	12.511	-0.004	98	3463106	250.0	210.1	
113 1,3-Dichlorobenzene	146	12.616	12.621	-0.005	98	1687649	250.0	233.1	
114 4-Isopropyltoluene	119	12.653	12.651	0.002	97	2970922	250.0	218.3	
115 1,4-Dichlorobenzene	146	12.707	12.706	0.001	98	1736319	250.0	234.8	
116 2,4-Dichloro-1-(triflourom	214	12.756	12.755	0.001	98	909481	250.0	221.5	
118 2,5-Dichlorobenzotrifluori	214	12.811	12.803	0.008	99	1042359	250.0	226.9	
120 n-Butylbenzene	91	13.060	13.065	-0.005	97	2715831	250.0	219.2	
121 1,2-Dichlorobenzene	146	13.078	13.083	-0.005	99	1565775	250.0	233.6	
122 1,2-Dibromo-3-Chloropropan	75	13.863	13.856	0.007	94	147059	250.0	268.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.003	14.008	-0.005	98	3379751	750.0	666.8	
125 2,3- & 3,4- Dichlorotoluen	125	14.423	14.428	-0.005	97	2218229	500.0	450.0	
126 1,2,4-Trichlorobenzene	180	14.691	14.695	-0.004	99	825772	250.0	236.6	
127 Hexachlorobutadiene	225	14.861	14.866	-0.005	99	367792	250.0	219.8	
128 Naphthalene	128	14.940	14.939	0.001	99	2220927	250.0	242.4	
129 1,2,3-Trichlorobenzene	180	15.189	15.188	0.001	99	697862	250.0	243.8	
131 2,4,5-Trichlorotoluene	159	15.962	15.967	-0.005	99	364223	250.0	236.6	
130 2,3,6-Trichlorotoluene	159	16.065	16.064	0.001	98	323920	250.0	233.1	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		500.0	435.9	
S 134 1,2-Dichloroethene, Total	96				0		500.0	477.2	
S 135 1,3-Dichloropropene, Total	1				0		500.0	568.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAACRPRI_00003	Amount Added:	11.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	10.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	10.00	Units: uL	
VOA8260SURR_00032	Amount Added:	10.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	10.00	Units: uL	
VOAVAPRI_00005	Amount Added:	10.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

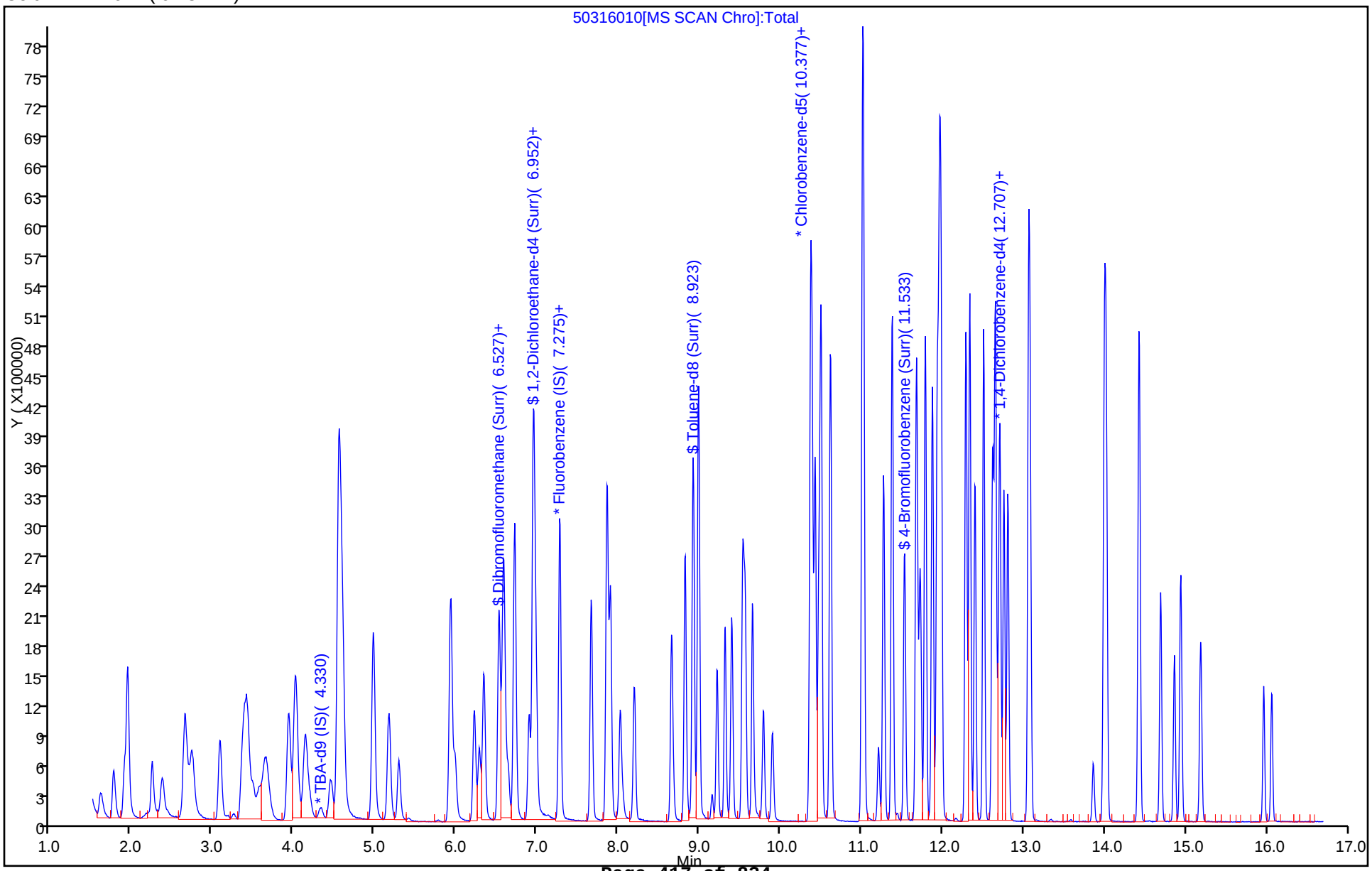
Report Date: 17-Mar-2015 10:59:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316010.D

Injection Date:	16-Mar-2015 15:05:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD50			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 17-Mar-2015 10:59:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D
Lims ID: IC VSTD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 16-Mar-2015 16:17:30 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: IC VSTD1
Misc. Info.: 180-0006031-013
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:33 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 10:01:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.317	4.305	0.012	83	148007	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.273	0.001	99	568509	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.364	0.000	74	121234	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	96	175081	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.526	6.525	0.001	93	14193	5.00	5.49	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.902	0.001	96	17152	5.00	5.03	
$ 7 Toluene-d8 (Surr)	98	8.923	8.922	0.001	98	54935	5.00	5.68	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	92	19061	5.00	5.48	
11 Dichlorodifluoromethane	85	1.616	1.622	-0.006	96	11265	5.00	4.62	
12 Chloromethane	50	1.768	1.768	0.000	97	17972	5.00	5.34	M
13 Vinyl chloride	62	1.908	1.896	0.012	96	18981	5.00	5.05	
14 Butadiene	39	1.951	1.944	0.007	98	24095	5.00	5.61	
15 Bromomethane	94	2.249	2.249	0.000	85	18060	5.00	4.90	
16 Chloroethane	64	2.377	2.376	0.001	53	13187	5.00	5.07	
17 Dichlorofluoromethane	67	2.644	2.644	0.000	99	34297	5.00	5.78	
18 Trichlorofluoromethane	101	2.711	2.723	-0.012	92	20521	5.00	4.55	
20 Ethyl ether	59	3.082	3.082	0.000	94	16416	5.00	5.52	
21 Acrolein	56	3.247	3.258	-0.011	96	35289	100.0	97.7	M
22 1,1-Dichloroethene	96	3.368	3.374	-0.006	97	18234	5.00	5.56	
23 1,1,2-Trichloro-1,2,2-trif	101	3.435	3.423	0.012	90	16567	5.00	5.00	
24 Acetone	43	3.490	3.496	-0.006	93	29674	25.0	25.5	
25 Iodomethane	142	3.581	3.581	0.000	97	22824	5.00	5.01	
26 Carbon disulfide	76	3.648	3.660	-0.012	98	41336	5.00	5.16	
28 3-Chloro-1-propene	76	3.940	3.934	0.006	95	8006	5.00	4.62	
30 Methyl acetate	43	4.031	4.019	0.012	100	71022	25.0	26.1	
31 Methylene Chloride	84	4.135	4.147	-0.012	96	27978	5.00	7.38	
32 2-Methyl-2-propanol	59	4.433	4.439	-0.006	73	10830	50.0	62.1	
33 Acrylonitrile	53	4.555	4.554	0.001	99	71728	50.0	51.2	
34 trans-1,2-Dichloroethene	96	4.555	4.560	-0.005	57	17111	5.00	5.05	
35 Methyl tert-butyl ether	73	4.603	4.597	0.006	94	40058	5.00	5.34	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.974	4.980	-0.006	96	29021	5.00	5.36	
37 1,1-Dichloroethane	63	5.169	5.175	-0.006	99	29622	5.00	4.89	
38 Vinyl acetate	43	5.297	5.296	0.001	79	19067	5.00	4.44	
44 2,2-Dichloropropane	77	5.936	5.929	0.007	87	6267	5.00	4.14	
45 cis-1,2-Dichloroethene	96	5.936	5.941	-0.005	95	18951	5.00	5.30	
46 2-Butanone (MEK)	43	5.996	5.990	0.006	99	42054	25.0	22.6	
49 Chlorobromomethane	128	6.234	6.227	0.007	95	8619	5.00	5.58	
51 Tetrahydrofuran	42	6.288	6.282	0.006	75	11913	10.0	10.2	
52 Chloroform	83	6.343	6.343	0.000	97	29168	5.00	5.30	
53 1,1,1-Trichloroethane	97	6.532	6.531	0.001	93	15663	5.00	4.46	
54 Cyclohexane	56	6.580	6.586	-0.006	94	36280	5.00	5.38	
56 Carbon tetrachloride	117	6.720	6.720	0.000	97	13013	5.00	4.62	
55 1,1-Dichloropropene	75	6.720	6.726	-0.006	97	24060	5.00	5.28	
57 Isobutyl alcohol	41	6.958	6.945	0.013	95	8820	125.0	116.2	
58 Benzene	78	6.958	6.957	0.001	96	73700	5.00	5.47	
59 1,2-Dichloroethane	62	6.976	6.988	-0.012	98	22108	5.00	5.01	
62 n-Heptane	43	7.274	7.280	-0.006	58	23490	5.00	5.08	
64 Trichloroethene	130	7.669	7.669	0.000	96	18397	5.00	5.45	
66 Methylcyclohexane	83	7.858	7.864	-0.006	94	29934	5.00	4.97	
67 1,2-Dichloropropane	63	7.907	7.906	0.001	90	16916	5.00	5.08	
68 Dibromomethane	93	8.022	8.022	0.000	93	9562	5.00	5.33	
70 1,4-Dioxane	88	8.047	8.058	-0.012	33	3746	100.0	106.8	
71 Dichlorobromomethane	83	8.193	8.198	-0.006	98	16863	5.00	4.61	
74 cis-1,3-Dichloropropene	75	8.655	8.661	-0.006	98	15462	5.00	4.38	
75 4-Methyl-2-pentanone (MIBK	43	8.831	8.825	0.006	99	75787	25.0	23.1	
76 Toluene	91	8.989	8.989	0.000	99	72597	5.00	5.84	
77 trans-1,3-Dichloropropene	75	9.208	9.220	-0.012	92	10481	5.00	4.67	
78 Ethyl methacrylate	69	9.318	9.318	0.000	94	13336	5.00	4.56	
79 1,1,2-Trichloroethane	97	9.403	9.403	0.000	95	13086	5.00	5.62	
80 Tetrachloroethene	164	9.531	9.537	-0.006	96	13716	5.00	5.64	
81 1,3-Dichloropropane	76	9.567	9.561	0.006	97	23188	5.00	5.35	
82 2-Hexanone	43	9.659	9.658	0.001	98	53734	25.0	21.4	M
84 Chlorodibromomethane	129	9.786	9.792	-0.006	95	7988	5.00	4.30	
85 Ethylene Dibromide	107	9.902	9.902	0.000	96	11471	5.00	5.16	
86 3-Chlorobenzotrifluoride	180	10.370	10.370	0.000	67	26148	5.00	5.52	
87 Chlorobenzene	112	10.389	10.388	0.001	98	47481	5.00	6.03	
88 4-Chlorobenzotrifluoride	180	10.425	10.431	-0.006	97	25927	5.00	5.66	
89 1,1,1,2-Tetrachloroethane	131	10.474	10.473	0.001	87	9154	5.00	4.50	
90 Ethylbenzene	106	10.504	10.504	0.000	99	24142	5.00	5.35	
91 m-Xylene & p-Xylene	106	10.614	10.619	-0.005	98	30126	5.00	5.45	
92 o-Xylene	106	11.015	11.009	0.006	97	32009	5.00	5.92	
93 Styrene	104	11.027	11.027	0.000	95	47061	5.00	5.41	
94 Bromoform	173	11.216	11.209	0.007	32	5157	5.00	4.49	
96 2-Chlorobenzotrifluoride	180	11.277	11.276	0.001	98	25441	5.00	5.37	
97 Isopropylbenzene	105	11.380	11.380	0.000	99	75470	5.00	5.60	
99 1,1,2,2-Tetrachloroethane	83	11.672	11.678	-0.006	93	19128	5.00	5.73	
100 Bromobenzene	156	11.691	11.678	0.012	97	16809	5.00	5.19	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.001	89	5918	5.00	5.56	
102 trans-1,4-Dichloro-2-buten	53	11.739	11.733	0.006	50	4503	5.00	5.09	M
103 N-Propylbenzene	120	11.788	11.787	0.001	99	21543	5.00	5.39	
104 2-Chlorotoluene	126	11.873	11.873	0.000	99	17942	5.00	5.34	
105 3-Chlorotoluene	126	11.934	11.933	0.001	98	20174	5.00	5.37	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	99	61438	5.00	5.51	
107 4-Chlorotoluene	126	11.983	11.982	0.000	94	19812	5.00	5.45	
108 tert-Butylbenzene	119	12.287	12.286	0.001	97	55729	5.00	5.77	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	97	63098	5.00	5.52	
111 1,2-dichloro-4-(trifluorom	214	12.408	12.402	0.006	98	19333	5.00	5.35	
112 sec-Butylbenzene	105	12.506	12.511	-0.005	100	75379	5.00	5.55	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	98	33497	5.00	5.61	
114 4-Isopropyltoluene	119	12.652	12.651	0.001	98	61054	5.00	5.44	
115 1,4-Dichlorobenzene	146	12.706	12.706	0.000	98	34596	5.00	5.67	
116 2,4-Dichloro-1-(triflourom	214	12.755	12.755	0.000	94	17792	5.00	5.26	
118 2,5-Dichlorobenzotrifluori	214	12.810	12.803	0.007	96	20678	5.00	5.46	
120 n-Butylbenzene	91	13.065	13.065	0.000	99	54758	5.00	5.36	
121 1,2-Dichlorobenzene	146	13.084	13.083	0.001	99	30414	5.00	5.50	
122 1,2-Dibromo-3-Chloropropan	75	13.874	13.856	0.018	18	2299	5.00	5.08	
123 2,4- & 2,5- & 2,6- Dichlor	125	13.996	14.008	-0.012	93	71584	15.0	17.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	97	46257	10.0	11.4	
126 1,2,4-Trichlorobenzene	180	14.690	14.695	-0.005	94	17018	5.00	5.91	
127 Hexachlorobutadiene	225	14.866	14.866	0.000	90	8549	5.00	6.19	
128 Naphthalene	128	14.939	14.939	0.000	99	41842	5.00	5.54	
129 1,2,3-Trichlorobenzene	180	15.189	15.188	0.000	95	13823	5.00	5.86	
131 2,4,5-Trichlorotoluene	159	15.961	15.967	-0.006	94	8592	5.00	6.77	
130 2,3,6-Trichlorotoluene	159	16.058	16.064	-0.006	94	7658	5.00	6.68	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		10.0	11.4	
S 134 1,2-Dichloroethene, Total	96				0		10.0	10.4	
S 135 1,3-Dichloropropene, Total	1				0		10.0	9.05	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260SURR_00032	Amount Added:	0.20	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	0.20	Units: uL	
VOAVAPRI_00005	Amount Added:	0.20	Units: uL	
voaWKetpri Re_00003	Amount Added:	0.80	Units: uL	
VOAACRPRI_00003	Amount Added:	4.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	0.20	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent

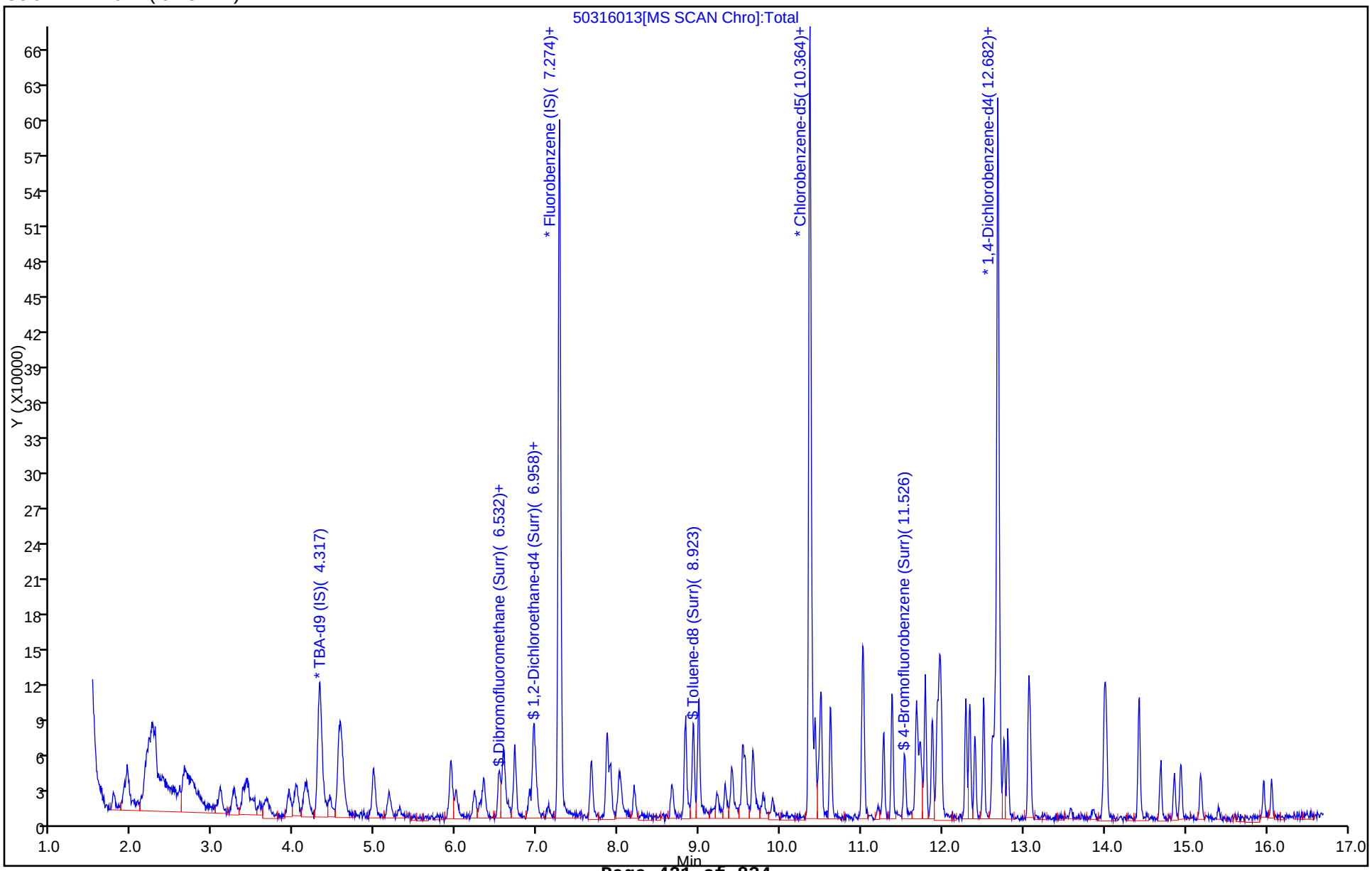
Report Date: 17-Mar-2015 10:59:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Injection Date:	16-Mar-2015 16:17:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	IC VSTD1			Worklist Smp#:	13
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

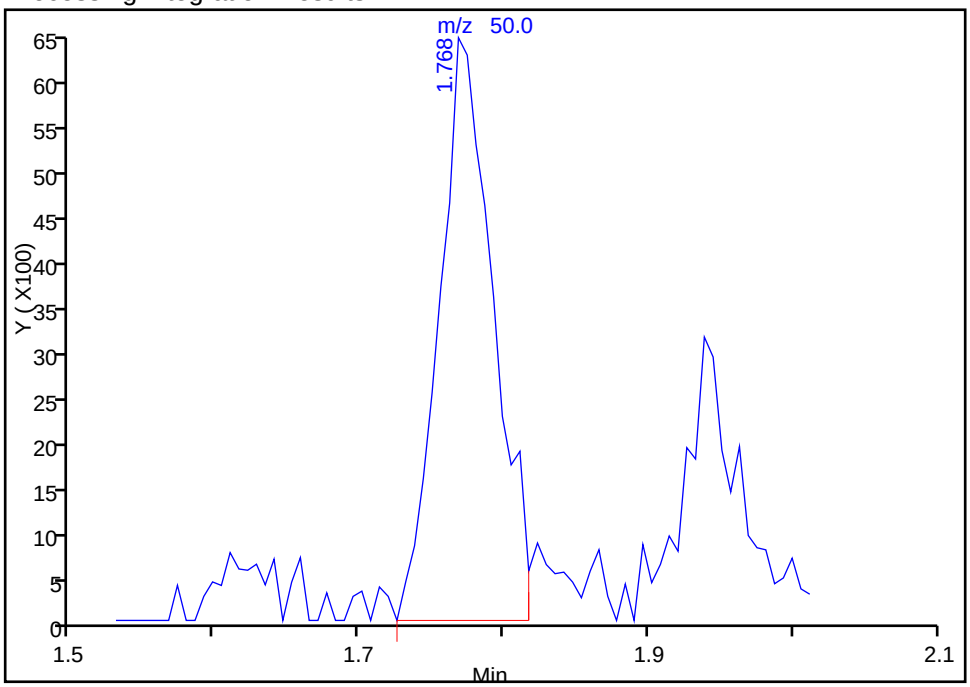
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D
Injection Date: 16-Mar-2015 16:17:30 Instrument ID: CHHP5
Lims ID: IC VSTD1
Client ID:
Operator ID: 001562 ALS Bottle#: 13 Worklist Smp#: 13
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

12 Chloromethane, CAS: 74-87-3

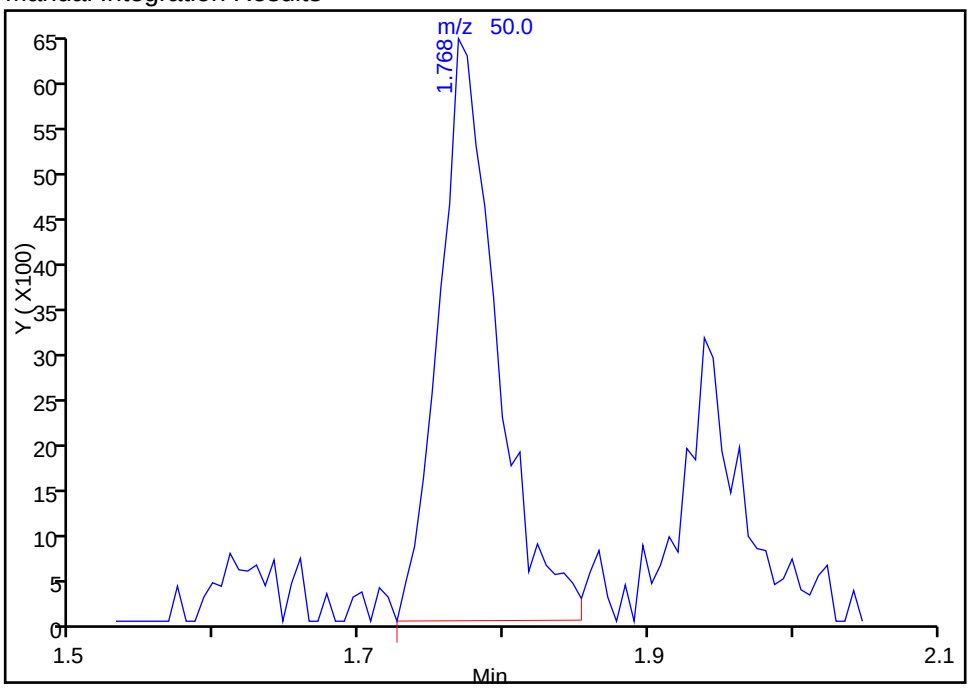
Processing Integration Results

RT: 1.77
Area: 16860
Amount: 4.846171
Amount Units: ng



Manual Integration Results

RT: 1.77
Area: 17972
Amount: 5.343308
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 10:01:36
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

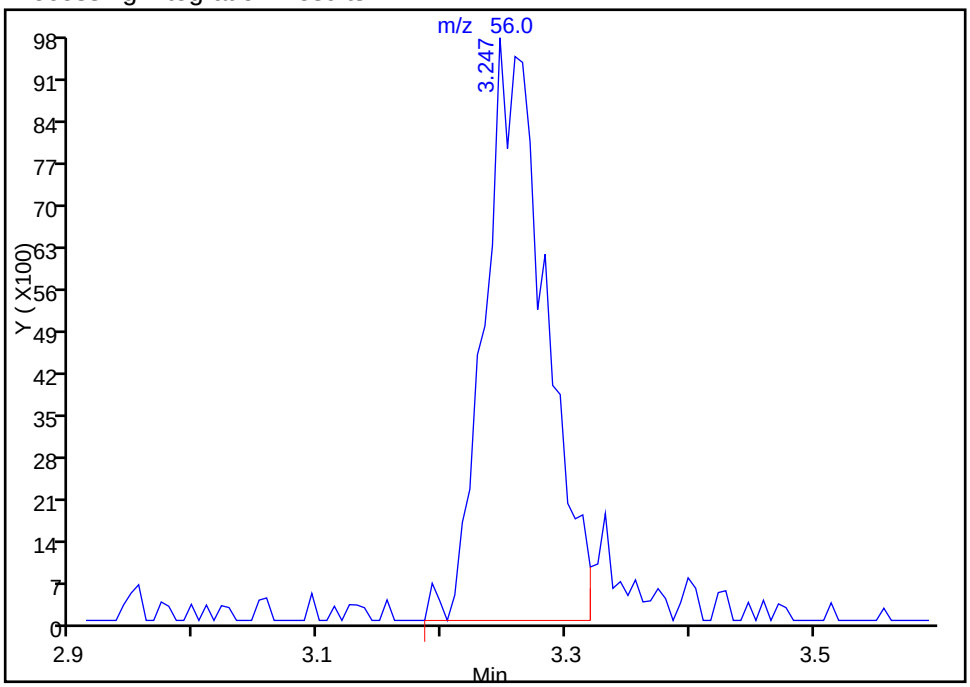
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D				
Injection Date:	16-Mar-2015 16:17:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

21 Acrolein, CAS: 107-02-8

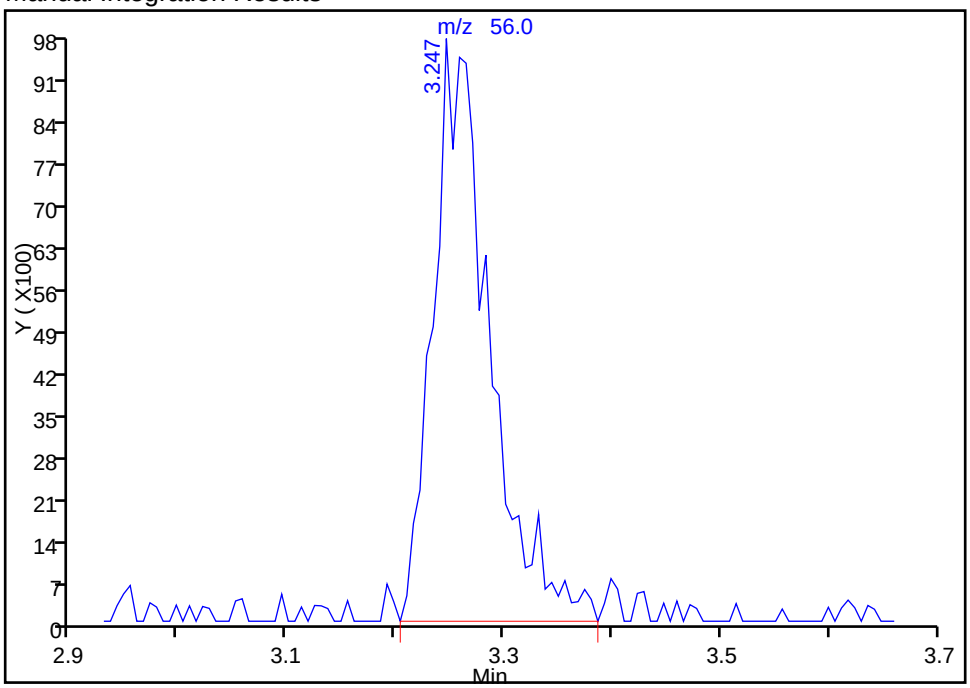
Processing Integration Results

RT: 3.25
Area: 33235
Amount: 92.071591
Amount Units: ng



Manual Integration Results

RT: 3.25
Area: 35289
Amount: 97.689446
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 10:01:36
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

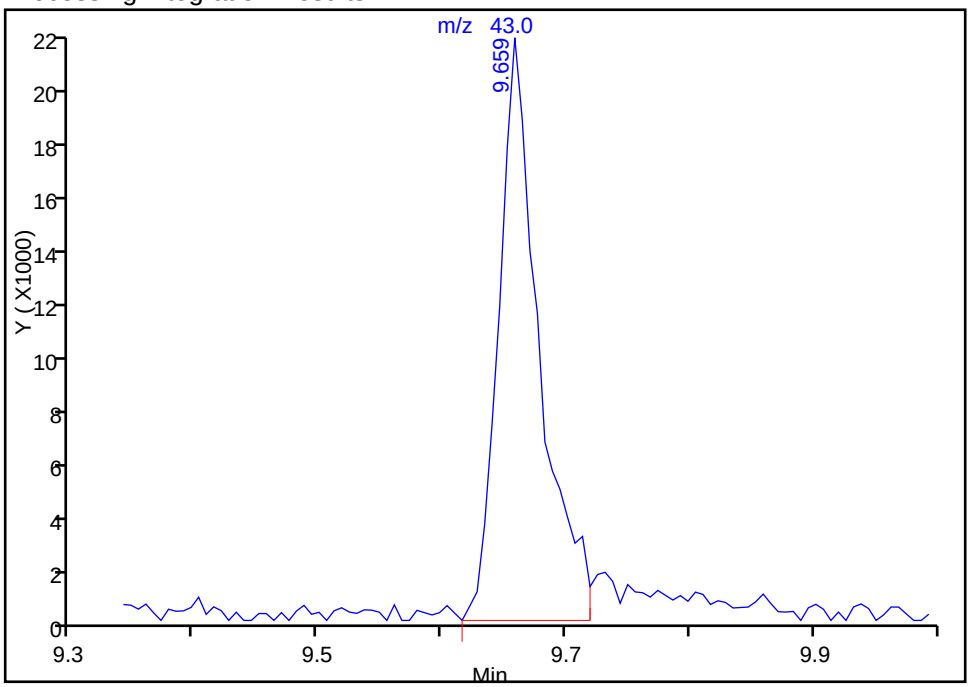
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D				
Injection Date:	16-Mar-2015 16:17:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

82 2-Hexanone, CAS: 591-78-6

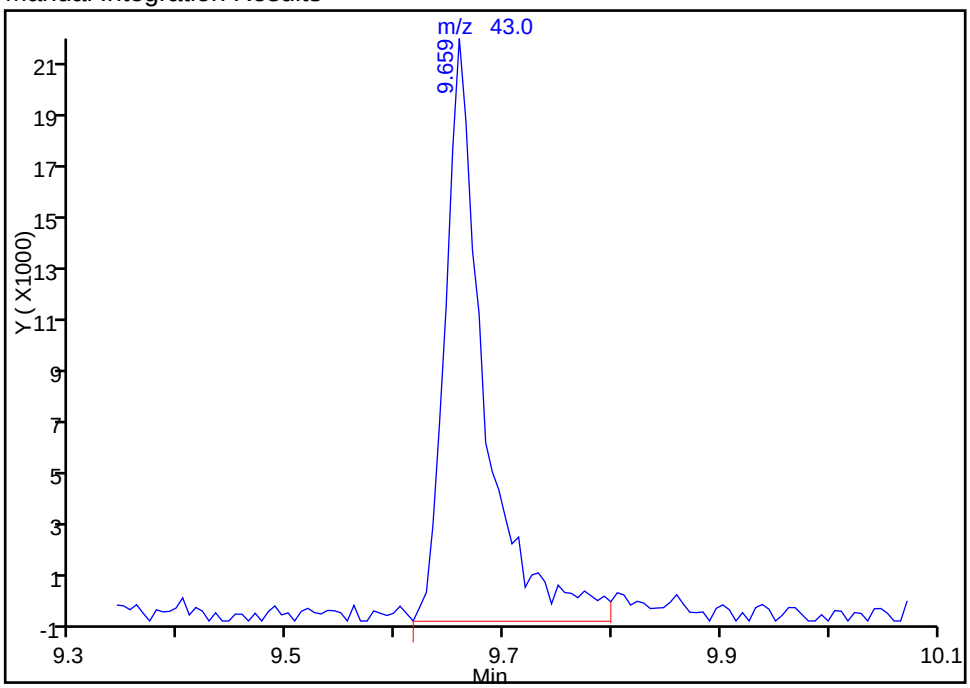
Processing Integration Results

RT: 9.66
Area: 48498
Amount: 19.235523
Amount Units: ng



Manual Integration Results

RT: 9.66
Area: 53734
Amount: 21.434406
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 10:01:36
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

Manual Integration/User Assign Peak Report

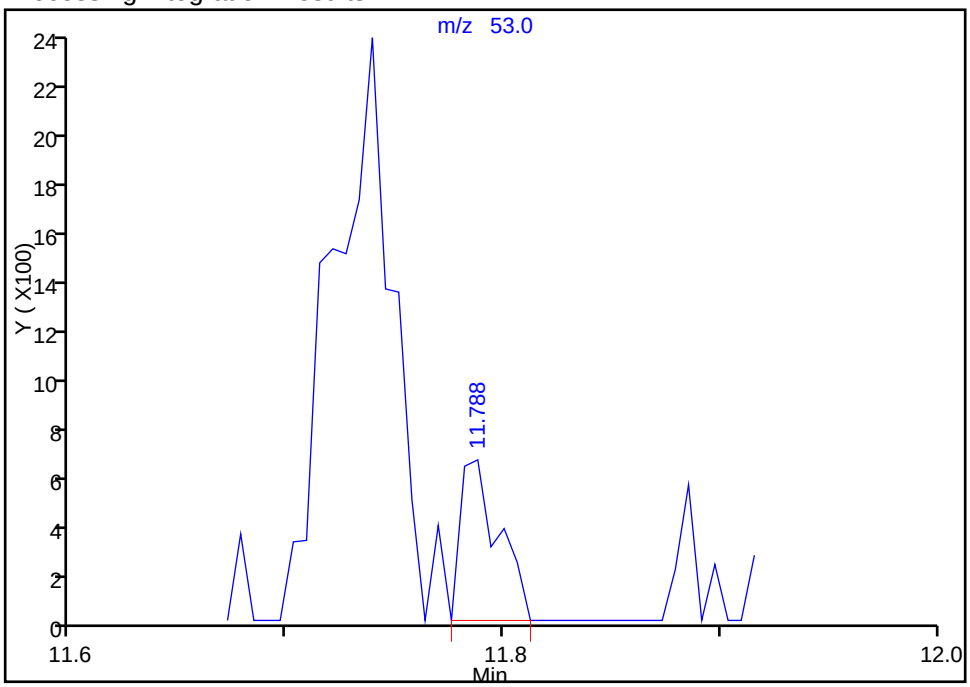
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D				
Injection Date:	16-Mar-2015 16:17:30	Instrument ID:	CHHP5		
Lims ID:	IC VSTD1				
Client ID:					
Operator ID:	001562	ALS Bottle#:	13	Worklist Smp#:	13
Purge Vol:	5.000 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Column:	DB-624 (0.18 mm)	Detector	MS SCAN		

102 trans-1,4-Dichloro-2-butene, CAS: 110-57-6

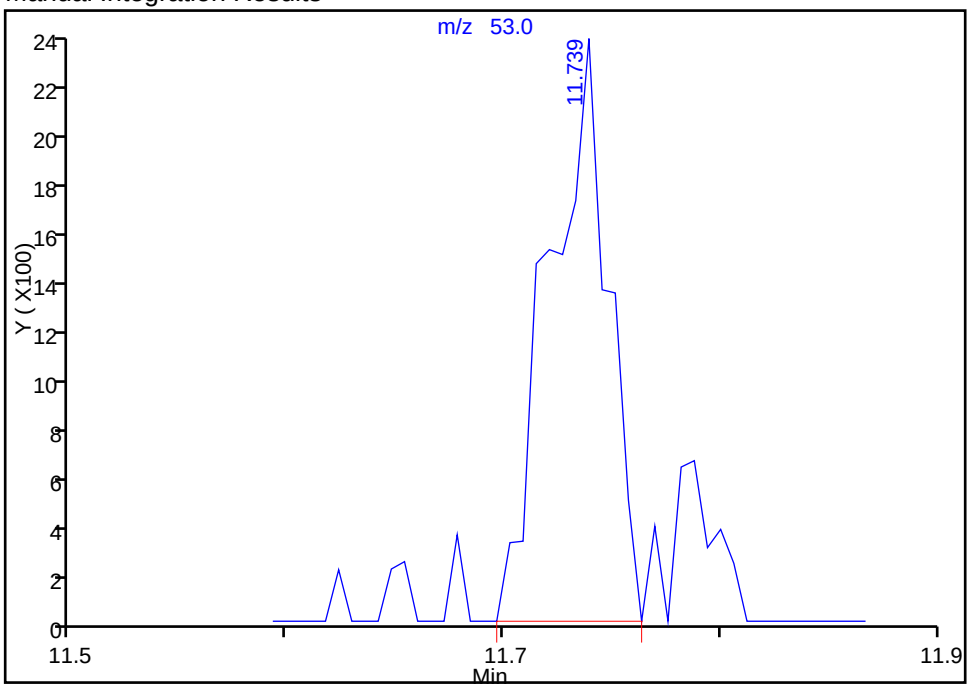
Processing Integration Results

RT: 11.79
Area: 798
Amount: 0.892929
Amount Units: ng



Manual Integration Results

RT: 11.74
Area: 4503
Amount: 5.086353
Amount Units: ng



Reviewer: fergusond, 17-Mar-2015 10:01:36
Audit Action: Manually Integrated
Audit Reason: Poor chromatography

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135719/2 Calibration Date: 03/17/2015 12:59

Instrument ID: CHHP5 Calib Start Date: 03/16/2015 12:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/16/2015 16:17

Lab File ID: 50317002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2143	0.2240	0.1000	10.4	10.0	4.5	20.0
Chloromethane	Ave	0.2958	0.2923	0.1000	9.88	10.0	-1.2	20.0
Vinyl chloride	Ave	0.3306	0.3430	0.1000	10.4	10.0	3.7	20.0
Bromomethane	Lin2		0.1818	0.0500	10.2	10.0	1.7	20.0
Chloroethane	Ave	0.2287	0.2272	0.0500	9.93	10.0	-0.7	20.0
Dichlorofluoromethane	Ave	0.5222	0.5353	0.0100	10.3	10.0	2.5	20.0
Trichlorofluoromethane	Ave	0.3966	0.4069	0.1000	10.3	10.0	2.6	20.0
Ethyl ether	Ave	0.2615	0.2585	0.0100	9.88	10.0	-1.2	20.0
Acrolein	Ave	0.0318	0.0288	0.0100	27.1	30.0	-9.5	20.0
1,1-Dichloroethene	Ave	0.2883	0.2935	0.1000	10.2	10.0	1.8	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2916	0.3045	0.1000	10.4	10.0	4.4	20.0
Acetone	Ave	0.1024	0.0928	0.0500	18.1	20.0	-9.4	20.0
Iodomethane	Ave	0.4005	0.4092	0.0100	10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.7051	0.7348	0.1000	10.4	10.0	4.2	20.0
Allyl chloride	Ave	0.1524	0.1632	0.0100	10.7	10.0	7.1	20.0
Methyl acetate	Ave	0.2396	0.2430	0.1000	50.7	50.0	1.4	20.0
Methylene Chloride	Ave	0.3335	0.3358	0.1000	10.1	10.0	0.7	20.0
tert-Butyl alcohol	Ave	1.178	1.176	0.0100	99.8	100	-0.2	20.0
Acrylonitrile	Ave	0.1233	0.1230	0.0100	99.8	100	-0.2	20.0
trans-1,2-Dichloroethene	Ave	0.2982	0.3074	0.1000	10.3	10.0	3.1	20.0
Methyl tert-butyl ether	Ave	0.6593	0.6653	0.1000	10.1	10.0	0.9	20.0
Hexane	Ave	0.4764	0.4916	0.0100	10.3	10.0	3.2	20.0
1,1-Dichloroethane	Ave	0.5323	0.5360	0.2000	10.1	10.0	0.7	20.0
Vinyl acetate	Ave	0.3776	0.3266	0.0100	8.65	10.0	-13.5	20.0
2,2-Dichloropropane	Ave	0.1331	0.1484	0.0100	11.2	10.0	11.5	20.0
cis-1,2-Dichloroethene	Ave	0.3142	0.3045	0.1000	9.69	10.0	-3.1	20.0
2-Butanone (MEK)	Ave	0.1638	0.1530	0.0500	18.7	20.0	-6.6	20.0
Bromochloromethane	Ave	0.1360	0.1342	0.0100	9.87	10.0	-1.3	20.0
Tetrahydrofuran	Ave	0.1026	0.1013	0.0100	19.7	20.0	-1.3	20.0
Chloroform	Ave	0.4836	0.4927	0.2000	10.2	10.0	1.9	20.0
1,1,1-Trichloroethane	Ave	0.3088	0.3357	0.1000	10.9	10.0	8.7	20.0
Cyclohexane	Ave	0.5929	0.6081	0.1000	10.3	10.0	2.6	20.0
Carbon tetrachloride	Ave	0.2478	0.2787	0.1000	11.2	10.0	12.5	20.0
1,1-Dichloropropene	Ave	0.4011	0.4026	0.0100	10.0	10.0	0.4	20.0
Isobutyl alcohol	Ave	0.0067	0.0057*	0.0100	214	250	-14.3	20.0
Benzene	Ave	1.185	1.230	0.5000	10.4	10.0	3.8	20.0
1,2-Dichloroethane	Ave	0.3880	0.3835	0.1000	9.89	10.0	-1.1	20.0
n-Heptane	Ave	0.4071	0.4237	0.0100	10.4	10.0	4.1	20.0
Trichloroethene	Ave	0.2969	0.2985	0.2000	10.1	10.0	0.5	20.0
Methylcyclohexane	Ave	0.5297	0.5500	0.1000	10.4	10.0	3.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135719/2 Calibration Date: 03/17/2015 12:59

Instrument ID: CHHP5 Calib Start Date: 03/16/2015 12:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/16/2015 16:17

Lab File ID: 50317002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2931	0.2914	0.1000	9.94	10.0	-0.6	20.0
Dibromomethane	Ave	0.1578	0.1480	0.0100	9.38	10.0	-6.2	20.0
1,4-Dioxane	Ave	0.0031	0.0033*	0.0100	213	200	6.4	20.0
Bromodichloromethane	Ave	0.3220	0.3252	0.2000	10.1	10.0	1.0	20.0
cis-1,3-Dichloropropene	Ave	0.3107	0.3226	0.2000	10.4	10.0	3.8	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.353	1.341	0.1000	19.8	20.0	-0.8	20.0
Toluene	Ave	5.124	5.361	0.4000	10.5	10.0	4.6	20.0
trans-1,3-Dichloropropene	Ave	0.9254	0.9472	0.1000	10.2	10.0	2.4	20.0
Ethyl methacrylate	Ave	1.207	1.148	0.0100	9.51	10.0	-4.9	20.0
1,1,2-Trichloroethane	Ave	0.9609	0.9604	0.1000	9.99	10.0	-0.0	20.0
Tetrachloroethene	Ave	1.002	1.033	0.2000	10.3	10.0	3.1	20.0
1,3-Dichloropropane	Ave	1.786	1.756	0.0100	9.83	10.0	-1.7	20.0
2-Hexanone	Ave	1.034	1.030	0.1000	19.9	20.0	-0.4	20.0
Dibromochloromethane	Ave	0.7670	0.8259	0.1000	10.8	10.0	7.7	20.0
1,2-Dibromoethane (EDB)	Ave	0.9169	0.9350	0.1000	10.2	10.0	2.0	20.0
3-Chlorobenzotrifluoride	Ave	1.955	2.024	0.0100	10.4	10.0	3.6	20.0
Chlorobenzene	Ave	3.246	3.268	0.5000	10.1	10.0	0.6	20.0
4-Chlorobenzotrifluoride	Ave	1.890	1.926	0.0100	10.2	10.0	1.9	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8382	0.8835	0.0100	10.5	10.0	5.4	20.0
Ethylbenzene	Ave	1.863	1.934	0.1000	10.4	10.0	3.9	20.0
m-Xylene & p-Xylene	Ave	2.278	2.371	0.1000	10.4	10.0	4.1	20.0
o-Xylene	Ave	2.228	2.275	0.3000	10.2	10.0	2.1	20.0
Styrene	Ave	3.591	3.693	0.3000	10.3	10.0	2.9	20.0
Bromoform	Ave	0.4737	0.5174	0.1000	10.9	10.0	9.2	20.0
2-Chlorobenzotrifluoride	Ave	1.952	2.014	0.0100	10.3	10.0	3.2	20.0
Isopropylbenzene	Ave	5.560	5.947	0.1000	10.7	10.0	7.0	20.0
1,1,2,2-Tetrachloroethane	Ave	1.378	1.375	0.3000	9.98	10.0	-0.2	20.0
Bromobenzene	Ave	0.9254	0.9078	0.0100	9.81	10.0	-1.9	20.0
1,2,3-Trichloropropane	Ave	0.3041	0.2773	0.0100	9.12	10.0	-8.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2528	0.2395	0.0100	9.47	10.0	-5.3	20.0
N-Propylbenzene	Ave	1.142	1.123	0.0100	9.84	10.0	-1.6	20.0
2-Chlorotoluene	Ave	0.9591	0.9412	0.0100	9.81	10.0	-1.9	20.0
3-Chlorotoluene	Ave	1.072	1.070	0.0100	9.98	10.0	-0.2	20.0
1,3,5-Trimethylbenzene	Ave	3.183	3.256	0.0100	10.2	10.0	2.3	20.0
4-Chlorotoluene	Ave	1.038	1.044	0.0100	10.1	10.0	0.5	20.0
tert-Butylbenzene	Ave	2.758	2.842	0.0100	10.3	10.0	3.1	20.0
1,2,4-Trimethylbenzene	Ave	3.267	3.369	0.0100	10.3	10.0	3.1	20.0
3,4-Dichlorobenzotrifluoride	Ave	1.032	1.109	0.0100	10.7	10.0	7.5	20.0
sec-Butylbenzene	Ave	3.881	4.064	0.0100	10.5	10.0	4.7	20.0
1,3-Dichlorobenzene	Ave	1.705	1.698	0.6000	9.96	10.0	-0.4	20.0
4-Isopropyltoluene	Ave	3.204	3.407	0.0100	10.6	10.0	6.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135719/2 Calibration Date: 03/17/2015 12:59

Instrument ID: CHHP5 Calib Start Date: 03/16/2015 12:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/16/2015 16:17

Lab File ID: 50317002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.741	1.777	0.5000	10.2	10.0	2.0	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.9669	0.9672	0.0100	10.0	10.0	0.0	20.0
2,5-Dichlorobenzotrifluoride	Ave	1.082	1.179	0.0100	10.9	10.0	9.0	20.0
n-Butylbenzene	Ave	2.918	3.118	0.0100	10.7	10.0	6.8	20.0
1,2-Dichlorobenzene	Ave	1.579	1.590	0.4000	10.1	10.0	0.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1292	0.1286	0.0500	9.95	10.0	-0.5	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.194	1.281	0.0100	32.2	30.0	7.4	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.161	1.211	0.0100	20.9	20.0	4.4	20.0
1,2,4-Trichlorobenzene	Ave	0.8219	0.8411	0.2000	10.2	10.0	2.3	20.0
Hexachlorobutadiene	Ave	0.3941	0.4430	0.0100	11.2	10.0	12.4	20.0
Naphthalene	Ave	2.158	2.224	0.0100	10.3	10.0	3.0	20.0
1,2,3-Trichlorobenzene	Ave	0.6740	0.7065	0.0100	10.5	10.0	4.8	20.0
2,4,5-Trichlorotoluene	Ave	0.3624	0.3798	0.0100	10.5	10.0	4.8	20.0
2,3,6-Trichlorotoluene	Ave	0.3273	0.3482	0.0100	10.6	10.0	6.4	20.0
Dibromofluoromethane (Surr)	Ave	0.2274	0.2234		9.82	10.0	-1.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2998	0.2966		9.89	10.0	-1.1	20.0
Toluene-d8 (Surr)	Ave	3.986	4.243		10.6	10.0	6.4	20.0
4-Bromofluorobenzene (Surr)	Ave	1.436	1.470		10.2	10.0	2.4	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 17-Mar-2015 12:59:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0006051-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub4

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 14:53:29 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 13:29:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.311	4.311	0.000	88	164780	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	100	557085	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.358	10.358	0.000	99	128325	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	99	186222	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.526	6.526	0.000	99	124425	50.0	49.1	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.897	6.897	0.000	96	165252	50.0	49.5	
$ 7 Toluene-d8 (Surr)	98	8.923	8.923	0.000	100	544518	50.0	53.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	98	188691	50.0	51.2	
11 Dichlorodifluoromethane	85	1.616	1.616	0.000	98	124757	50.0	52.2	
12 Chloromethane	50	1.781	1.781	0.000	99	162837	50.0	49.4	
13 Vinyl chloride	62	1.908	1.908	0.000	100	191069	50.0	51.9	
14 Butadiene	39	1.951	1.951	0.000	98	211957	50.0	50.4	
15 Bromomethane	94	2.249	2.249	0.000	99	101298	50.0	50.9	
16 Chloroethane	64	2.377	2.377	0.000	98	126564	50.0	49.7	
17 Dichlorofluoromethane	67	2.657	2.657	0.000	99	298212	50.0	51.3	
18 Trichlorofluoromethane	101	2.705	2.705	0.000	98	226680	50.0	51.3	
20 Ethyl ether	59	3.089	3.089	0.000	99	143987	50.0	49.4	
21 Acrolein	56	3.265	3.265	0.000	98	48043	150.0	135.7	
22 1,1-Dichloroethene	96	3.381	3.381	0.000	99	163481	50.0	50.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.435	3.435	0.000	98	169604	50.0	52.2	
24 Acetone	43	3.496	3.496	0.000	99	103355	100.0	90.6	
25 Iodomethane	142	3.587	3.587	0.000	98	227929	50.0	51.1	
26 Carbon disulfide	76	3.654	3.654	0.000	100	409348	50.0	52.1	
28 3-Chloro-1-propene	76	3.934	3.934	0.000	99	90939	50.0	53.6	
30 Methyl acetate	43	4.019	4.019	0.000	100	676722	250.0	253.5	
31 Methylene Chloride	84	4.147	4.147	0.000	95	187057	50.0	50.3	
32 2-Methyl-2-propanol	59	4.445	4.445	0.000	96	96866	500.0	499.1	
33 Acrylonitrile	53	4.549	4.549	0.000	100	685197	500.0	498.9	
34 trans-1,2-Dichloroethene	96	4.561	4.561	0.000	63	171261	50.0	51.5	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	98	370653	50.0	50.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.981	4.981	0.000	99	273877	50.0	51.6	
37 1,1-Dichloroethane	63	5.163	5.163	0.000	99	298574	50.0	50.3	
38 Vinyl acetate	43	5.291	5.291	0.000	100	181963	50.0	43.3	
44 2,2-Dichloropropane	77	5.923	5.923	0.000	98	82682	50.0	55.8	
45 cis-1,2-Dichloroethene	96	5.936	5.936	0.000	98	169624	50.0	48.5	
46 2-Butanone (MEK)	43	5.984	5.984	0.000	99	170483	100.0	93.4	
49 Chlorobromomethane	128	6.222	6.222	0.000	99	74756	50.0	49.4	
51 Tetrahydrofuran	42	6.282	6.282	0.000	98	112820	100.0	98.7	
52 Chloroform	83	6.343	6.343	0.000	99	274460	50.0	50.9	
53 1,1,1-Trichloroethane	97	6.526	6.526	0.000	99	187017	50.0	54.4	
54 Cyclohexane	56	6.580	6.580	0.000	99	338753	50.0	51.3	
56 Carbon tetrachloride	117	6.720	6.720	0.000	99	155254	50.0	56.2	
55 1,1-Dichloropropene	75	6.726	6.726	0.000	99	224288	50.0	50.2	
57 Isobutyl alcohol	41	6.939	6.939	0.000	98	79695	1250.0	1071.8	
58 Benzene	78	6.952	6.952	0.000	98	685075	50.0	51.9	
59 1,2-Dichloroethane	62	6.982	6.982	0.000	100	213654	50.0	49.4	
62 n-Heptane	43	7.274	7.274	0.000	83	236056	50.0	52.0	
64 Trichloroethene	130	7.669	7.669	0.000	99	166280	50.0	50.3	
66 Methylcyclohexane	83	7.864	7.864	0.000	100	306420	50.0	51.9	
67 1,2-Dichloropropane	63	7.901	7.901	0.000	99	162323	50.0	49.7	
68 Dibromomethane	93	8.022	8.022	0.000	99	82439	50.0	46.9	
70 1,4-Dioxane	88	8.065	8.065	0.000	98	36598	1000.0	1064.5	
71 Dichlorobromomethane	83	8.199	8.199	0.000	99	181188	50.0	50.5	
74 cis-1,3-Dichloropropene	75	8.655	8.655	0.000	99	179734	50.0	51.9	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	99	344281	100.0	99.2	
76 Toluene	91	8.990	8.990	0.000	100	687989	50.0	52.3	
77 trans-1,3-Dichloropropene	75	9.221	9.221	0.000	98	121553	50.0	51.2	
78 Ethyl methacrylate	69	9.318	9.318	0.000	96	147295	50.0	47.5	
79 1,1,2-Trichloroethane	97	9.403	9.403	0.000	99	123240	50.0	50.0	
80 Tetrachloroethene	164	9.537	9.537	0.000	99	132546	50.0	51.5	
81 1,3-Dichloropropane	76	9.567	9.567	0.000	98	225358	50.0	49.2	
82 2-Hexanone	43	9.659	9.659	0.000	100	264229	100.0	99.6	
84 Chlorodibromomethane	129	9.786	9.786	0.000	98	105985	50.0	53.8	
85 Ethylene Dibromide	107	9.902	9.902	0.000	100	119983	50.0	51.0	
86 3-Chlorobenzotrifluoride	180	10.370	10.370	0.000	98	259774	50.0	51.8	
87 Chlorobenzene	112	10.395	10.395	0.000	100	419307	50.0	50.3	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	99	247191	50.0	51.0	
89 1,1,1,2-Tetrachloroethane	131	10.474	10.474	0.000	97	113379	50.0	52.7	
90 Ethylbenzene	106	10.504	10.504	0.000	100	248232	50.0	51.9	
91 m-Xylene & p-Xylene	106	10.620	10.620	0.000	99	304228	50.0	52.0	
92 o-Xylene	106	11.015	11.015	0.000	99	291962	50.0	51.1	
93 Styrene	104	11.021	11.021	0.000	99	473909	50.0	51.4	
94 Bromoform	173	11.210	11.210	0.000	99	66396	50.0	54.6	
96 2-Chlorobenzotrifluoride	180	11.277	11.277	0.000	99	258471	50.0	51.6	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	763120	50.0	53.5	
99 1,1,2,2-Tetrachloroethane	83	11.672	11.672	0.000	97	176482	50.0	49.9	
100 Bromobenzene	156	11.684	11.684	0.000	99	169056	50.0	49.0	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	99	51644	50.0	45.6	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	97	44601	50.0	47.4	
103 N-Propylbenzene	120	11.788	11.788	0.000	100	209168	50.0	49.2	
104 2-Chlorotoluene	126	11.873	11.873	0.000	100	175272	50.0	49.1	
105 3-Chlorotoluene	126	11.934	11.934	0.000	99	199186	50.0	49.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	100	606298	50.0	51.1	
107 4-Chlorotoluene	126	11.983	11.983	0.000	99	194348	50.0	50.3	
108 tert-Butylbenzene	119	12.287	12.287	0.000	100	529300	50.0	51.5	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	99	627367	50.0	51.6	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	99	206598	50.0	53.7	
112 sec-Butylbenzene	105	12.506	12.506	0.000	100	756888	50.0	52.4	
113 1,3-Dichlorobenzene	146	12.621	12.621	0.000	99	316135	50.0	49.8	
114 4-Isopropyltoluene	119	12.652	12.652	0.000	100	634377	50.0	53.2	
115 1,4-Dichlorobenzene	146	12.707	12.707	0.000	99	330883	50.0	51.0	
116 2,4-Dichloro-1-(triflourom	214	12.755	12.755	0.000	99	180113	50.0	50.0	
118 2,5-Dichlorobenzotrifluori	214	12.804	12.804	0.000	99	219636	50.0	54.5	
120 n-Butylbenzene	91	13.059	13.059	0.000	100	580563	50.0	53.4	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	100	296179	50.0	50.4	
122 1,2-Dibromo-3-Chloropropan	75	13.862	13.862	0.000	95	23947	50.0	49.8	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.008	14.008	0.000	100	715862	150.0	161.0	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	100	451174	100.0	104.4	
126 1,2,4-Trichlorobenzene	180	14.696	14.696	0.000	99	156627	50.0	51.2	
127 Hexachlorobutadiene	225	14.860	14.860	0.000	97	82494	50.0	56.2	
128 Naphthalene	128	14.939	14.939	0.000	100	414117	50.0	51.5	
129 1,2,3-Trichlorobenzene	180	15.189	15.189	0.000	99	131558	50.0	52.4	
131 2,4,5-Trichlorotoluene	159	15.967	15.967	0.000	98	70723	50.0	52.4	
130 2,3,6-Trichlorotoluene	159	16.065	16.065	0.000	96	64835	50.0	53.2	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	103.1	
S 134 1,2-Dichloroethene, Total	96				0		100.0	100.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	103.1	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAVAPRI_00005	Amount Added:	2.00	Units: uL	
VOA8260VOAPRI_00105	Amount Added:	2.00	Units: uL	
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL	
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL	
VOAACRPRI_00003	Amount Added:	6.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

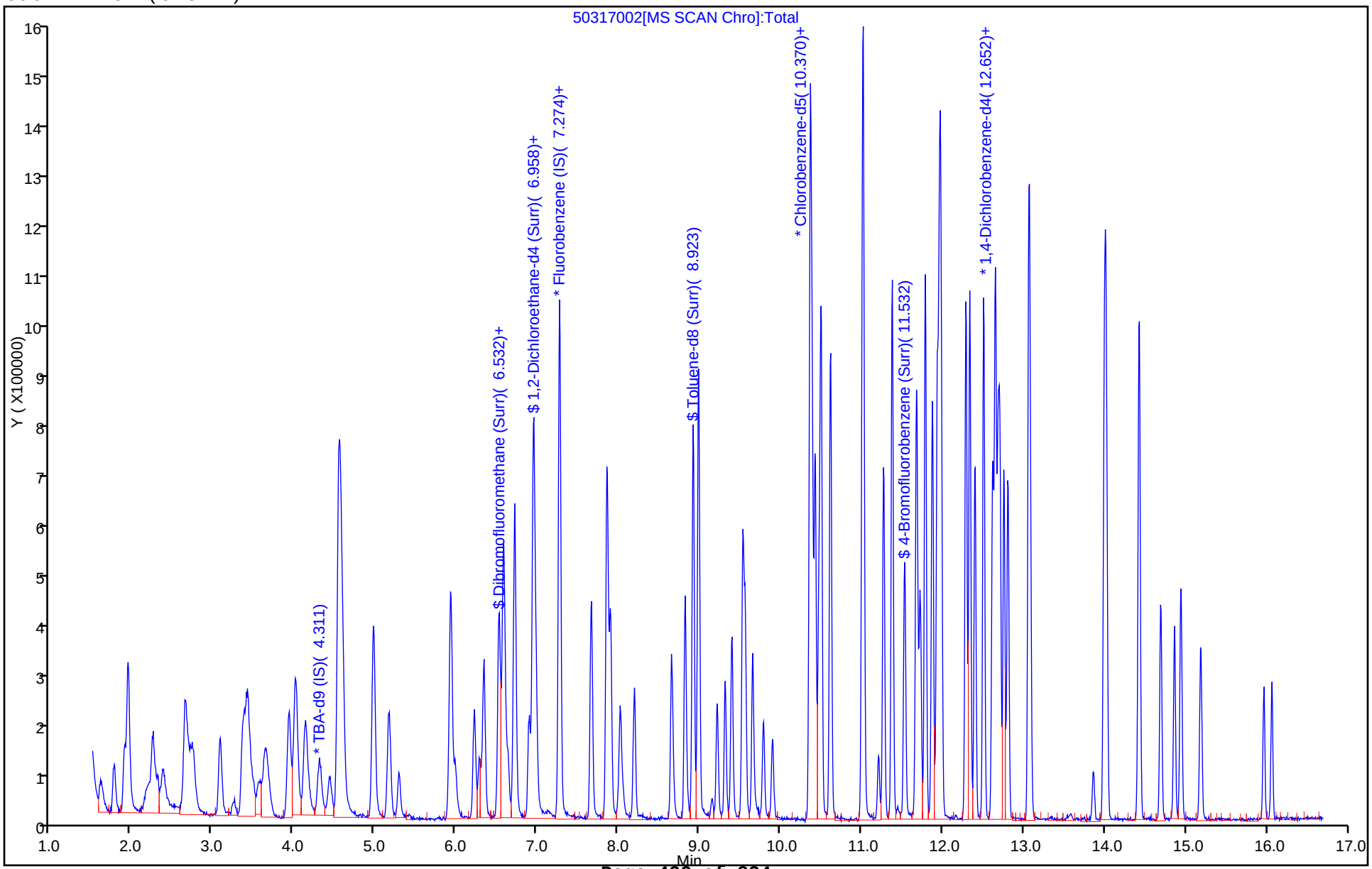
Report Date: 17-Mar-2015 14:53:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317002.D

Injection Date:	17-Mar-2015 12:59:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135984/2 Calibration Date: 03/19/2015 12:15

Instrument ID: CHHP5 Calib Start Date: 03/16/2015 12:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/16/2015 16:17

Lab File ID: 50319002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2143	0.2194	0.1000	10.2	10.0	2.4	20.0
Chloromethane	Ave	0.2958	0.2707	0.1000	9.15	10.0	-8.5	20.0
Vinyl chloride	Ave	0.3306	0.3322	0.1000	10.0	10.0	0.5	20.0
Bromomethane	Lin2		0.1786	0.0500	9.97	10.0	-0.3	20.0
Chloroethane	Ave	0.2287	0.2395	0.0500	10.5	10.0	4.7	20.0
Dichlorofluoromethane	Ave	0.5222	0.5446	0.0100	10.4	10.0	4.3	20.0
Trichlorofluoromethane	Ave	0.3966	0.4067	0.1000	10.3	10.0	2.5	20.0
Ethyl ether	Ave	0.2615	0.2529	0.0100	9.67	10.0	-3.3	20.0
Acrolein	Ave	0.0318	0.0283	0.0100	26.7	30.0	-11.0	20.0
1,1-Dichloroethene	Ave	0.2883	0.2803	0.1000	9.72	10.0	-2.8	20.0
1,1,2-Trichloro-1,2,2-triflu oroethane	Ave	0.2916	0.2956	0.1000	10.1	10.0	1.3	20.0
Acetone	Ave	0.1024	0.0936	0.0500	18.3	20.0	-8.6	20.0
Iodomethane	Ave	0.4005	0.3989	0.0100	9.96	10.0	-0.4	20.0
Carbon disulfide	Ave	0.7051	0.7335	0.1000	10.4	10.0	4.0	20.0
Allyl chloride	Ave	0.1524	0.1605	0.0100	10.5	10.0	5.3	20.0
Methyl acetate	Ave	0.2396	0.2314	0.1000	48.3	50.0	-3.4	20.0
Methylene Chloride	Ave	0.3335	0.3144	0.1000	9.43	10.0	-5.7	20.0
tert-Butyl alcohol	Ave	1.178	1.112	0.0100	94.4	100	-5.6	20.0
Acrylonitrile	Ave	0.1233	0.1195	0.0100	96.9	100	-3.1	20.0
trans-1,2-Dichloroethene	Ave	0.2982	0.2941	0.1000	9.86	10.0	-1.4	20.0
Methyl tert-butyl ether	Ave	0.6593	0.6117	0.1000	9.28	10.0	-7.2	20.0
Hexane	Ave	0.4764	0.4529	0.0100	9.51	10.0	-4.9	20.0
1,1-Dichloroethane	Ave	0.5323	0.5259	0.2000	9.88	10.0	-1.2	20.0
Vinyl acetate	Ave	0.3776	0.3102	0.0100	8.22	10.0	-17.8	20.0
2,2-Dichloropropane	Ave	0.1331	0.1434	0.0100	10.8	10.0	7.8	20.0
cis-1,2-Dichloroethene	Ave	0.3142	0.3076	0.1000	9.79	10.0	-2.1	20.0
2-Butanone (MEK)	Ave	0.1638	0.1472	0.0500	18.0	20.0	-10.1	20.0
Bromochloromethane	Ave	0.1360	0.1278	0.0100	9.40	10.0	-6.0	20.0
Tetrahydrofuran	Ave	0.1026	0.0968	0.0100	18.9	20.0	-5.6	20.0
Chloroform	Ave	0.4836	0.4905	0.2000	10.1	10.0	1.4	20.0
1,1,1-Trichloroethane	Ave	0.3088	0.3241	0.1000	10.5	10.0	5.0	20.0
Cyclohexane	Ave	0.5929	0.5708	0.1000	9.63	10.0	-3.7	20.0
Carbon tetrachloride	Ave	0.2478	0.2808	0.1000	11.3	10.0	13.3	20.0
1,1-Dichloropropene	Ave	0.4011	0.3928	0.0100	9.79	10.0	-2.1	20.0
Isobutyl alcohol	Ave	0.0067	0.0058*	0.0100	219	250	-12.5	20.0
Benzene	Ave	1.185	1.189	0.5000	10.0	10.0	0.3	20.0
1,2-Dichloroethane	Ave	0.3880	0.3865	0.1000	9.96	10.0	-0.4	20.0
n-Heptane	Ave	0.4071	0.4055	0.0100	9.96	10.0	-0.4	20.0
Trichloroethene	Ave	0.2969	0.2957	0.2000	9.96	10.0	-0.4	20.0
Methylcyclohexane	Ave	0.5297	0.5308	0.1000	10.0	10.0	0.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135984/2 Calibration Date: 03/19/2015 12:15

Instrument ID: CHHP5 Calib Start Date: 03/16/2015 12:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/16/2015 16:17

Lab File ID: 50319002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2-Dichloropropane	Ave	0.2931	0.2791	0.1000	9.52	10.0	-4.8	20.0
Dibromomethane	Ave	0.1578	0.1525	0.0100	9.66	10.0	-3.4	20.0
1,4-Dioxane	Ave	0.0031	0.0029*	0.0100	190	200	-5.1	20.0
Bromodichloromethane	Ave	0.3220	0.3353	0.2000	10.4	10.0	4.1	20.0
cis-1,3-Dichloropropene	Ave	0.3107	0.3218	0.2000	10.4	10.0	3.6	20.0
4-Methyl-2-pentanone (MIBK)	Ave	1.353	1.317	0.1000	19.5	20.0	-2.6	20.0
Toluene	Ave	5.124	5.585	0.4000	10.9	10.0	9.0	20.0
trans-1,3-Dichloropropene	Ave	0.9254	0.9594	0.1000	10.4	10.0	3.7	20.0
Ethyl methacrylate	Ave	1.207	1.141	0.0100	9.46	10.0	-5.4	20.0
1,1,2-Trichloroethane	Ave	0.9609	1.006	0.1000	10.5	10.0	4.7	20.0
Tetrachloroethene	Ave	1.002	1.044	0.2000	10.4	10.0	4.2	20.0
1,3-Dichloropropane	Ave	1.786	1.872	0.0100	10.5	10.0	4.8	20.0
2-Hexanone	Ave	1.034	1.136	0.1000	22.0	20.0	9.9	20.0
Dibromochloromethane	Ave	0.7670	0.8779	0.1000	11.4	10.0	14.5	20.0
1,2-Dibromoethane (EDB)	Ave	0.9169	0.9515	0.1000	10.4	10.0	3.8	20.0
3-Chlorobenzotrifluoride	Ave	1.955	1.956	0.0100	10.0	10.0	0.0	20.0
Chlorobenzene	Ave	3.246	3.462	0.5000	10.7	10.0	6.6	20.0
4-Chlorobenzotrifluoride	Ave	1.890	1.803	0.0100	9.54	10.0	-4.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.8382	0.9596	0.0100	11.4	10.0	14.5	20.0
Ethylbenzene	Ave	1.863	1.976	0.1000	10.6	10.0	6.1	20.0
m-Xylene & p-Xylene	Ave	2.278	2.457	0.1000	10.8	10.0	7.9	20.0
o-Xylene	Ave	2.228	2.391	0.3000	10.7	10.0	7.3	20.0
Styrene	Ave	3.591	3.852	0.3000	10.7	10.0	7.3	20.0
Bromoform	Ave	0.4737	0.5556	0.1000	11.7	10.0	17.3	20.0
2-Chlorobenzotrifluoride	Ave	1.952	1.914	0.0100	9.80	10.0	-2.0	20.0
Isopropylbenzene	Ave	5.560	6.157	0.1000	11.1	10.0	10.7	20.0
1,1,2,2-Tetrachloroethane	Ave	1.378	1.424	0.3000	10.3	10.0	3.4	20.0
Bromobenzene	Ave	0.9254	0.9277	0.0100	10.0	10.0	0.2	20.0
1,2,3-Trichloropropane	Ave	0.3041	0.2930	0.0100	9.63	10.0	-3.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2528	0.2585	0.0100	10.2	10.0	2.2	20.0
N-Propylbenzene	Ave	1.142	1.141	0.0100	10.0	10.0	-0.0	20.0
2-Chlorotoluene	Ave	0.9591	0.9351	0.0100	9.75	10.0	-2.5	20.0
3-Chlorotoluene	Ave	1.072	0.9589	0.0100	8.95	10.0	-10.5	20.0
1,3,5-Trimethylbenzene	Ave	3.183	3.291	0.0100	10.3	10.0	3.4	20.0
4-Chlorotoluene	Ave	1.038	1.076	0.0100	10.4	10.0	3.7	20.0
tert-Butylbenzene	Ave	2.758	2.851	0.0100	10.3	10.0	3.4	20.0
1,2,4-Trimethylbenzene	Ave	3.267	3.399	0.0100	10.4	10.0	4.0	20.0
3,4-Dichlorobenzotrifluoride	Ave	1.032	0.9562	0.0100	9.26	10.0	-7.4	20.0
sec-Butylbenzene	Ave	3.881	4.087	0.0100	10.5	10.0	5.3	20.0
1,3-Dichlorobenzene	Ave	1.705	1.672	0.6000	9.81	10.0	-1.9	20.0
4-Isopropyltoluene	Ave	3.204	3.335	0.0100	10.4	10.0	4.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135984/2 Calibration Date: 03/19/2015 12:15

Instrument ID: CHHP5 Calib Start Date: 03/16/2015 12:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/16/2015 16:17

Lab File ID: 50319002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dichlorobenzene	Ave	1.741	1.729	0.5000	9.93	10.0	-0.7	20.0
2,4-Dichlorobenzotrifluoride	Ave	0.9669	0.9514	0.0100	9.84	10.0	-1.6	20.0
2,5-Dichlorobenzotrifluoride	Ave	1.082	1.014	0.0100	9.37	10.0	-6.3	20.0
n-Butylbenzene	Ave	2.918	2.998	0.0100	10.3	10.0	2.7	20.0
1,2-Dichlorobenzene	Ave	1.579	1.588	0.4000	10.1	10.0	0.6	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.1292	0.1294	0.0500	10.0	10.0	0.2	20.0
2,4- & 2,5- & 2,6-Dichlorotoluene	Ave	1.194	1.105	0.0100	27.8	30.0	-7.4	20.0
2,3- & 3,4- Dichlorotoluene	Ave	1.161	1.056	0.0100	18.2	20.0	-9.0	20.0
1,2,4-Trichlorobenzene	Ave	0.8219	0.7383	0.2000	8.98	10.0	-10.2	20.0
Hexachlorobutadiene	Ave	0.3941	0.3928	0.0100	9.97	10.0	-0.3	20.0
Naphthalene	Ave	2.158	1.934	0.0100	8.96	10.0	-10.4	20.0
1,2,3-Trichlorobenzene	Ave	0.6740	0.5991	0.0100	8.89	10.0	-11.1	20.0
2,4,5-Trichlorotoluene	Ave	0.3624	0.2819	0.0100	7.78	10.0	-22.2*	20.0
2,3,6-Trichlorotoluene	Ave	0.3273	0.2619	0.0100	8.00	10.0	-20.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2274	0.2118		9.31	10.0	-6.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2998	0.2823		9.41	10.0	-5.9	20.0
Toluene-d8 (Surr)	Ave	3.986	3.975		9.97	10.0	-0.3	20.0
4-Bromofluorobenzene (Surr)	Ave	1.436	1.401		9.76	10.0	-2.4	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Mar-2015 12:15:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0006092-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub11

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Mar-2015 15:23:20 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: fergusond Date: 19-Mar-2015 15:23:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.310	4.310	0.000	99	130696	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.267	7.267	0.000	100	465631	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.363	0.000	98	102605	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.687	0.000	94	153599	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.531	0.000	98	98605	50.0	46.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.896	6.896	0.000	99	131425	50.0	47.1	
$ 7 Toluene-d8 (Surr)	98	8.922	8.922	0.000	100	407845	50.0	49.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.531	0.000	97	143712	50.0	48.8	
11 Dichlorodifluoromethane	85	1.615	1.615	0.000	97	102166	50.0	51.2	
12 Chloromethane	50	1.780	1.780	0.000	100	126066	50.0	45.8	
13 Vinyl chloride	62	1.907	1.907	0.000	100	154660	50.0	50.2	
14 Butadiene	39	1.950	1.950	0.000	99	176359	50.0	50.1	
15 Bromomethane	94	2.254	2.254	0.000	96	83146	50.0	49.9	
16 Chloroethane	64	2.394	2.394	0.000	98	111523	50.0	52.4	
17 Dichlorofluoromethane	67	2.662	2.662	0.000	100	253583	50.0	52.1	
18 Trichlorofluoromethane	101	2.716	2.716	0.000	98	189356	50.0	51.3	
20 Ethyl ether	59	3.087	3.087	0.000	98	117740	50.0	48.3	
21 Acrolein	56	3.258	3.258	0.000	96	39489	150.0	133.5	
22 1,1-Dichloroethene	96	3.386	3.386	0.000	97	130516	50.0	48.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.434	3.434	0.000	98	137629	50.0	50.7	
24 Acetone	43	3.501	3.501	0.000	100	87176	100.0	91.4	
25 Iodomethane	142	3.574	3.574	0.000	100	185724	50.0	49.8	
26 Carbon disulfide	76	3.647	3.647	0.000	100	341529	50.0	52.0	
28 3-Chloro-1-propene	76	3.933	3.933	0.000	99	74741	50.0	52.7	
30 Methyl acetate	43	4.018	4.018	0.000	100	538745	250.0	241.4	
31 Methylene Chloride	84	4.146	4.146	0.000	97	146374	50.0	47.1	
32 2-Methyl-2-propanol	59	4.438	4.438	0.000	97	72695	500.0	472.2	
33 Acrylonitrile	53	4.554	4.554	0.000	99	556330	500.0	484.6	
34 trans-1,2-Dichloroethene	96	4.560	4.560	0.000	90	136944	50.0	49.3	
35 Methyl tert-butyl ether	73	4.590	4.590	0.000	99	284837	50.0	46.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.979	4.979	0.000	99	210877	50.0	47.5	
37 1,1-Dichloroethane	63	5.174	5.174	0.000	100	244853	50.0	49.4	
38 Vinyl acetate	43	5.290	5.290	0.000	100	144445	50.0	41.1	
44 2,2-Dichloropropane	77	5.928	5.928	0.000	99	66791	50.0	53.9	
45 cis-1,2-Dichloroethene	96	5.935	5.935	0.000	99	143219	50.0	48.9	
46 2-Butanone (MEK)	43	5.983	5.983	0.000	100	137095	100.0	89.9	
49 Chlorobromomethane	128	6.220	6.220	0.000	99	59526	50.0	47.0	
51 Tetrahydrofuran	42	6.287	6.287	0.000	100	90144	100.0	94.4	
52 Chloroform	83	6.342	6.342	0.000	100	228396	50.0	50.7	
53 1,1,1-Trichloroethane	97	6.525	6.525	0.000	98	150924	50.0	52.5	
54 Cyclohexane	56	6.585	6.585	0.000	99	265774	50.0	48.1	
56 Carbon tetrachloride	117	6.713	6.713	0.000	99	130734	50.0	56.7	
55 1,1-Dichloropropene	75	6.725	6.725	0.000	99	182883	50.0	49.0	
57 Isobutyl alcohol	41	6.938	6.938	0.000	98	68001	1250.0	1094.1	
58 Benzene	78	6.950	6.950	0.000	98	553625	50.0	50.2	
59 1,2-Dichloroethane	62	6.981	6.981	0.000	98	179960	50.0	49.8	
62 n-Heptane	43	7.279	7.279	0.000	82	188806	50.0	49.8	
64 Trichloroethene	130	7.662	7.662	0.000	99	137687	50.0	49.8	
66 Methylcyclohexane	83	7.863	7.863	0.000	99	247159	50.0	50.1	
67 1,2-Dichloropropane	63	7.900	7.900	0.000	98	129937	50.0	47.6	
68 Dibromomethane	93	8.021	8.021	0.000	97	70990	50.0	48.3	
70 1,4-Dioxane	88	8.052	8.052	0.000	96	27265	1000.0	948.8	
71 Dichlorobromomethane	83	8.198	8.198	0.000	99	156138	50.0	52.1	
73 2-Chloroethyl vinyl ether	63	8.520	8.520	0.000	99	151506	100.0	98.5	
74 cis-1,3-Dichloropropene	75	8.654	8.654	0.000	99	149820	50.0	51.8	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.824	0.000	100	270319	100.0	97.4	
76 Toluene	91	8.988	8.988	0.000	99	573022	50.0	54.5	
77 trans-1,3-Dichloropropene	75	9.214	9.214	0.000	99	98436	50.0	51.8	
78 Ethyl methacrylate	69	9.317	9.317	0.000	98	117120	50.0	47.3	
79 1,1,2-Trichloroethane	97	9.402	9.402	0.000	99	103253	50.0	52.4	
80 Tetrachloroethene	164	9.536	9.536	0.000	99	107144	50.0	52.1	
81 1,3-Dichloropropane	76	9.566	9.566	0.000	99	192086	50.0	52.4	
82 2-Hexanone	43	9.658	9.658	0.000	98	233097	100.0	109.9	
84 Chlorodibromomethane	129	9.785	9.785	0.000	99	90073	50.0	57.2	
85 Ethylene Dibromide	107	9.901	9.901	0.000	99	97627	50.0	51.9	
86 3-Chlorobenzotrifluoride	180	10.369	10.369	0.000	97	200732	50.0	50.0	
87 Chlorobenzene	112	10.388	10.388	0.000	100	355242	50.0	53.3	
88 4-Chlorobenzotrifluoride	180	10.424	10.424	0.000	99	185036	50.0	47.7	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.473	0.000	95	98463	50.0	57.2	
90 Ethylbenzene	106	10.497	10.497	0.000	100	202728	50.0	53.0	
91 m-Xylene & p-Xylene	106	10.619	10.619	0.000	100	252140	50.0	53.9	
92 o-Xylene	106	11.008	11.008	0.000	100	245320	50.0	53.6	
93 Styrene	104	11.026	11.026	0.000	99	395284	50.0	53.6	
94 Bromoform	173	11.215	11.215	0.000	98	57011	50.0	58.7	
96 2-Chlorobenzotrifluoride	180	11.276	11.276	0.000	100	196389	50.0	49.0	
97 Isopropylbenzene	105	11.379	11.379	0.000	100	631755	50.0	55.4	
99 1,1,2,2-Tetrachloroethane	83	11.677	11.677	0.000	98	146117	50.0	51.7	
100 Bromobenzene	156	11.683	11.683	0.000	98	142489	50.0	50.1	
101 1,2,3-Trichloropropane	110	11.720	11.720	0.000	97	44999	50.0	48.2	
102 trans-1,4-Dichloro-2-buten	53	11.732	11.732	0.000	97	39706	50.0	51.1	
103 N-Propylbenzene	120	11.793	11.793	0.000	100	175318	50.0	50.0	
104 2-Chlorotoluene	126	11.872	11.872	0.000	100	143629	50.0	48.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.933	11.933	0.000	99	147285	50.0	44.7	
106 1,3,5-Trimethylbenzene	105	11.963	11.963	0.000	100	505442	50.0	51.7	
107 4-Chlorotoluene	126	11.982	11.982	0.000	100	165338	50.0	51.8	
108 tert-Butylbenzene	119	12.286	12.286	0.000	99	437933	50.0	51.7	
110 1,2,4-Trimethylbenzene	105	12.334	12.334	0.000	100	522096	50.0	52.0	
111 1,2-dichloro-4-(trifluorom	214	12.401	12.401	0.000	98	146875	50.0	46.3	
112 sec-Butylbenzene	105	12.505	12.505	0.000	100	627832	50.0	52.7	
113 1,3-Dichlorobenzene	146	12.620	12.620	0.000	99	256755	50.0	49.0	
114 4-Isopropyltoluene	119	12.651	12.651	0.000	100	512261	50.0	52.0	
115 1,4-Dichlorobenzene	146	12.705	12.705	0.000	99	265621	50.0	49.7	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.760	0.000	98	146133	50.0	49.2	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.809	0.000	99	155736	50.0	46.9	
120 n-Butylbenzene	91	13.064	13.064	0.000	100	460478	50.0	51.4	
121 1,2-Dichlorobenzene	146	13.083	13.083	0.000	99	243840	50.0	50.3	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.861	0.000	95	19879	50.0	50.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.007	0.000	100	509278	150.0	138.9	
124 1,3,5-Trichlorobenzene	180	14.074	14.074	0.000	98	140784	50.0	47.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.427	0.000	99	324309	100.0	91.0	
126 1,2,4-Trichlorobenzene	180	14.695	14.695	0.000	98	113400	50.0	44.9	
127 Hexachlorobutadiene	225	14.865	14.865	0.000	97	60326	50.0	49.8	
128 Naphthalene	128	14.944	14.944	0.000	100	297005	50.0	44.8	
129 1,2,3-Trichlorobenzene	180	15.181	15.181	0.000	99	92027	50.0	44.4	
131 2,4,5-Trichlorotoluene	159	15.966	15.966	0.000	97	43303	50.0	38.9	
130 2,3,6-Trichlorotoluene	159	16.064	16.064	0.000	97	40232	50.0	40.0	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	107.6	
S 134 1,2-Dichloroethene, Total	96				0		100.0	98.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	103.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaW2CLEpRest_00001	Amount Added:	2.00	Units: uL		
VOA8260VOAPRI_00105	Amount Added:	2.00	Units: uL		
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL		
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL		
VOAVAPRI_00005	Amount Added:	2.00	Units: uL		
VOAACRPRI_00003	Amount Added:	6.00	Units: uL		
voaW1,3,5TCab_00001	Amount Added:	2.00	Units: uL		
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent	

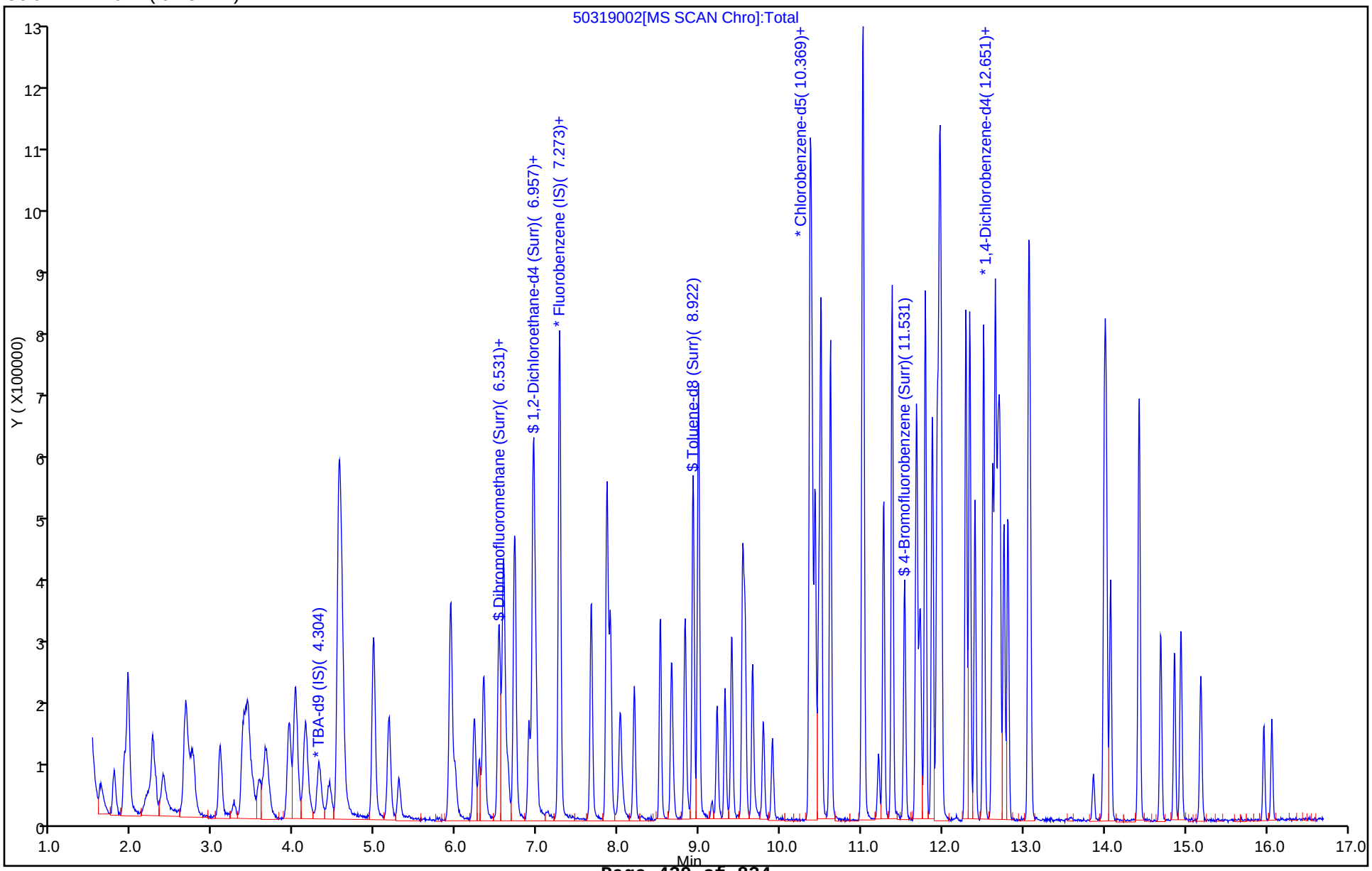
Report Date: 19-Mar-2015 15:23:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319002.D

Injection Date:	19-Mar-2015 12:15:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCVIS 180-135984/2 Calibration Date: 03/19/2015 12:15

Instrument ID: CHHP5 Calib Start Date: 03/18/2015 13:31

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 03/18/2015 16:19

Lab File ID: 50319002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1652	0.1627	0.0100	19.7	20.0	-1.5	20.0
1,3,5-Trichlorobenzene	Ave	0.9577	0.9166	0.0100	9.57	10.0	-4.3	20.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319002.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Mar-2015 12:15:30 ALS Bottle#: 2 Worklist Smp#: 2
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: CCVIS
Misc. Info.: 180-0006092-002
Operator ID: 001562 Instrument ID: CHHP5
Sublist: chrom-MSVOA_LL_CHHP5*sub11

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Mar-2015 15:23:20 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: fergusond Date: 19-Mar-2015 15:23:20

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.310	4.310	0.000	99	130696	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.267	7.267	0.000	100	465631	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.363	10.363	0.000	98	102605	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.687	12.687	0.000	94	153599	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.531	6.531	0.000	98	98605	50.0	46.6	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.896	6.896	0.000	99	131425	50.0	47.1	
$ 7 Toluene-d8 (Surr)	98	8.922	8.922	0.000	100	407845	50.0	49.9	
$ 8 4-Bromofluorobenzene (Surr	95	11.531	11.531	0.000	97	143712	50.0	48.8	
11 Dichlorodifluoromethane	85	1.615	1.615	0.000	97	102166	50.0	51.2	
12 Chloromethane	50	1.780	1.780	0.000	100	126066	50.0	45.8	
13 Vinyl chloride	62	1.907	1.907	0.000	100	154660	50.0	50.2	
14 Butadiene	39	1.950	1.950	0.000	99	176359	50.0	50.1	
15 Bromomethane	94	2.254	2.254	0.000	96	83146	50.0	49.9	
16 Chloroethane	64	2.394	2.394	0.000	98	111523	50.0	52.4	
17 Dichlorofluoromethane	67	2.662	2.662	0.000	100	253583	50.0	52.1	
18 Trichlorofluoromethane	101	2.716	2.716	0.000	98	189356	50.0	51.3	
20 Ethyl ether	59	3.087	3.087	0.000	98	117740	50.0	48.3	
21 Acrolein	56	3.258	3.258	0.000	96	39489	150.0	133.5	
22 1,1-Dichloroethene	96	3.386	3.386	0.000	97	130516	50.0	48.6	
23 1,1,2-Trichloro-1,2,2-trif	101	3.434	3.434	0.000	98	137629	50.0	50.7	
24 Acetone	43	3.501	3.501	0.000	100	87176	100.0	91.4	
25 Iodomethane	142	3.574	3.574	0.000	100	185724	50.0	49.8	
26 Carbon disulfide	76	3.647	3.647	0.000	100	341529	50.0	52.0	
28 3-Chloro-1-propene	76	3.933	3.933	0.000	99	74741	50.0	52.7	
30 Methyl acetate	43	4.018	4.018	0.000	100	538745	250.0	241.4	
31 Methylene Chloride	84	4.146	4.146	0.000	97	146374	50.0	47.1	
32 2-Methyl-2-propanol	59	4.438	4.438	0.000	97	72695	500.0	472.2	
33 Acrylonitrile	53	4.554	4.554	0.000	99	556330	500.0	484.6	
34 trans-1,2-Dichloroethene	96	4.560	4.560	0.000	90	136944	50.0	49.3	
35 Methyl tert-butyl ether	73	4.590	4.590	0.000	99	284837	50.0	46.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
36 Hexane	57	4.979	4.979	0.000	99	210877	50.0	47.5	
37 1,1-Dichloroethane	63	5.174	5.174	0.000	100	244853	50.0	49.4	
38 Vinyl acetate	43	5.290	5.290	0.000	100	144445	50.0	41.1	
44 2,2-Dichloropropane	77	5.928	5.928	0.000	99	66791	50.0	53.9	
45 cis-1,2-Dichloroethene	96	5.935	5.935	0.000	99	143219	50.0	48.9	
46 2-Butanone (MEK)	43	5.983	5.983	0.000	100	137095	100.0	89.9	
49 Chlorobromomethane	128	6.220	6.220	0.000	99	59526	50.0	47.0	
51 Tetrahydrofuran	42	6.287	6.287	0.000	100	90144	100.0	94.4	
52 Chloroform	83	6.342	6.342	0.000	100	228396	50.0	50.7	
53 1,1,1-Trichloroethane	97	6.525	6.525	0.000	98	150924	50.0	52.5	
54 Cyclohexane	56	6.585	6.585	0.000	99	265774	50.0	48.1	
56 Carbon tetrachloride	117	6.713	6.713	0.000	99	130734	50.0	56.7	
55 1,1-Dichloropropene	75	6.725	6.725	0.000	99	182883	50.0	49.0	
57 Isobutyl alcohol	41	6.938	6.938	0.000	98	68001	1250.0	1094.1	
58 Benzene	78	6.950	6.950	0.000	98	553625	50.0	50.2	
59 1,2-Dichloroethane	62	6.981	6.981	0.000	98	179960	50.0	49.8	
62 n-Heptane	43	7.279	7.279	0.000	82	188806	50.0	49.8	
64 Trichloroethene	130	7.662	7.662	0.000	99	137687	50.0	49.8	
66 Methylcyclohexane	83	7.863	7.863	0.000	99	247159	50.0	50.1	
67 1,2-Dichloropropane	63	7.900	7.900	0.000	98	129937	50.0	47.6	
68 Dibromomethane	93	8.021	8.021	0.000	97	70990	50.0	48.3	
70 1,4-Dioxane	88	8.052	8.052	0.000	96	27265	1000.0	948.8	
71 Dichlorobromomethane	83	8.198	8.198	0.000	99	156138	50.0	52.1	
73 2-Chloroethyl vinyl ether	63	8.520	8.520	0.000	99	151506	100.0	98.5	
74 cis-1,3-Dichloropropene	75	8.654	8.654	0.000	99	149820	50.0	51.8	
75 4-Methyl-2-pentanone (MIBK	43	8.824	8.824	0.000	100	270319	100.0	97.4	
76 Toluene	91	8.988	8.988	0.000	99	573022	50.0	54.5	
77 trans-1,3-Dichloropropene	75	9.214	9.214	0.000	99	98436	50.0	51.8	
78 Ethyl methacrylate	69	9.317	9.317	0.000	98	117120	50.0	47.3	
79 1,1,2-Trichloroethane	97	9.402	9.402	0.000	99	103253	50.0	52.4	
80 Tetrachloroethene	164	9.536	9.536	0.000	99	107144	50.0	52.1	
81 1,3-Dichloropropane	76	9.566	9.566	0.000	99	192086	50.0	52.4	
82 2-Hexanone	43	9.658	9.658	0.000	98	233097	100.0	109.9	
84 Chlorodibromomethane	129	9.785	9.785	0.000	99	90073	50.0	57.2	
85 Ethylene Dibromide	107	9.901	9.901	0.000	99	97627	50.0	51.9	
86 3-Chlorobenzotrifluoride	180	10.369	10.369	0.000	97	200732	50.0	50.0	
87 Chlorobenzene	112	10.388	10.388	0.000	100	355242	50.0	53.3	
88 4-Chlorobenzotrifluoride	180	10.424	10.424	0.000	99	185036	50.0	47.7	
89 1,1,1,2-Tetrachloroethane	131	10.473	10.473	0.000	95	98463	50.0	57.2	
90 Ethylbenzene	106	10.497	10.497	0.000	100	202728	50.0	53.0	
91 m-Xylene & p-Xylene	106	10.619	10.619	0.000	100	252140	50.0	53.9	
92 o-Xylene	106	11.008	11.008	0.000	100	245320	50.0	53.6	
93 Styrene	104	11.026	11.026	0.000	99	395284	50.0	53.6	
94 Bromoform	173	11.215	11.215	0.000	98	57011	50.0	58.7	
96 2-Chlorobenzotrifluoride	180	11.276	11.276	0.000	100	196389	50.0	49.0	
97 Isopropylbenzene	105	11.379	11.379	0.000	100	631755	50.0	55.4	
99 1,1,2,2-Tetrachloroethane	83	11.677	11.677	0.000	98	146117	50.0	51.7	
100 Bromobenzene	156	11.683	11.683	0.000	98	142489	50.0	50.1	
101 1,2,3-Trichloropropane	110	11.720	11.720	0.000	97	44999	50.0	48.2	
102 trans-1,4-Dichloro-2-buten	53	11.732	11.732	0.000	97	39706	50.0	51.1	
103 N-Propylbenzene	120	11.793	11.793	0.000	100	175318	50.0	50.0	
104 2-Chlorotoluene	126	11.872	11.872	0.000	100	143629	50.0	48.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
105 3-Chlorotoluene	126	11.933	11.933	0.000	99	147285	50.0	44.7	
106 1,3,5-Trimethylbenzene	105	11.963	11.963	0.000	100	505442	50.0	51.7	
107 4-Chlorotoluene	126	11.982	11.982	0.000	100	165338	50.0	51.8	
108 tert-Butylbenzene	119	12.286	12.286	0.000	99	437933	50.0	51.7	
110 1,2,4-Trimethylbenzene	105	12.334	12.334	0.000	100	522096	50.0	52.0	
111 1,2-dichloro-4-(trifluorom	214	12.401	12.401	0.000	98	146875	50.0	46.3	
112 sec-Butylbenzene	105	12.505	12.505	0.000	100	627832	50.0	52.7	
113 1,3-Dichlorobenzene	146	12.620	12.620	0.000	99	256755	50.0	49.0	
114 4-Isopropyltoluene	119	12.651	12.651	0.000	100	512261	50.0	52.0	
115 1,4-Dichlorobenzene	146	12.705	12.705	0.000	99	265621	50.0	49.7	
116 2,4-Dichloro-1-(triflourom	214	12.760	12.760	0.000	98	146133	50.0	49.2	
118 2,5-Dichlorobenzotrifluori	214	12.809	12.809	0.000	99	155736	50.0	46.9	
120 n-Butylbenzene	91	13.064	13.064	0.000	100	460478	50.0	51.4	
121 1,2-Dichlorobenzene	146	13.083	13.083	0.000	99	243840	50.0	50.3	
122 1,2-Dibromo-3-Chloropropan	75	13.861	13.861	0.000	95	19879	50.0	50.1	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.007	14.007	0.000	100	509278	150.0	138.9	
124 1,3,5-Trichlorobenzene	180	14.074	14.074	0.000	98	140784	50.0	47.9	
125 2,3- & 3,4- Dichlorotoluen	125	14.427	14.427	0.000	99	324309	100.0	91.0	
126 1,2,4-Trichlorobenzene	180	14.695	14.695	0.000	98	113400	50.0	44.9	
127 Hexachlorobutadiene	225	14.865	14.865	0.000	97	60326	50.0	49.8	
128 Naphthalene	128	14.944	14.944	0.000	100	297005	50.0	44.8	
129 1,2,3-Trichlorobenzene	180	15.181	15.181	0.000	99	92027	50.0	44.4	
131 2,4,5-Trichlorotoluene	159	15.966	15.966	0.000	97	43303	50.0	38.9	
130 2,3,6-Trichlorotoluene	159	16.064	16.064	0.000	97	40232	50.0	40.0	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	107.6	
S 134 1,2-Dichloroethene, Total	96				0		100.0	98.3	
S 135 1,3-Dichloropropene, Total	1				0		100.0	103.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

voaW2CLEpRest_00001	Amount Added:	2.00	Units: uL		
VOA8260VOAPRI_00105	Amount Added:	2.00	Units: uL		
voaWKetpri Re_00003	Amount Added:	2.00	Units: uL		
voaWEEpri Res_00003	Amount Added:	2.00	Units: uL		
VOAVAPRI_00005	Amount Added:	2.00	Units: uL		
VOAACRPRI_00003	Amount Added:	6.00	Units: uL		
voaW1,3,5TCab_00001	Amount Added:	2.00	Units: uL		
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent	
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent	

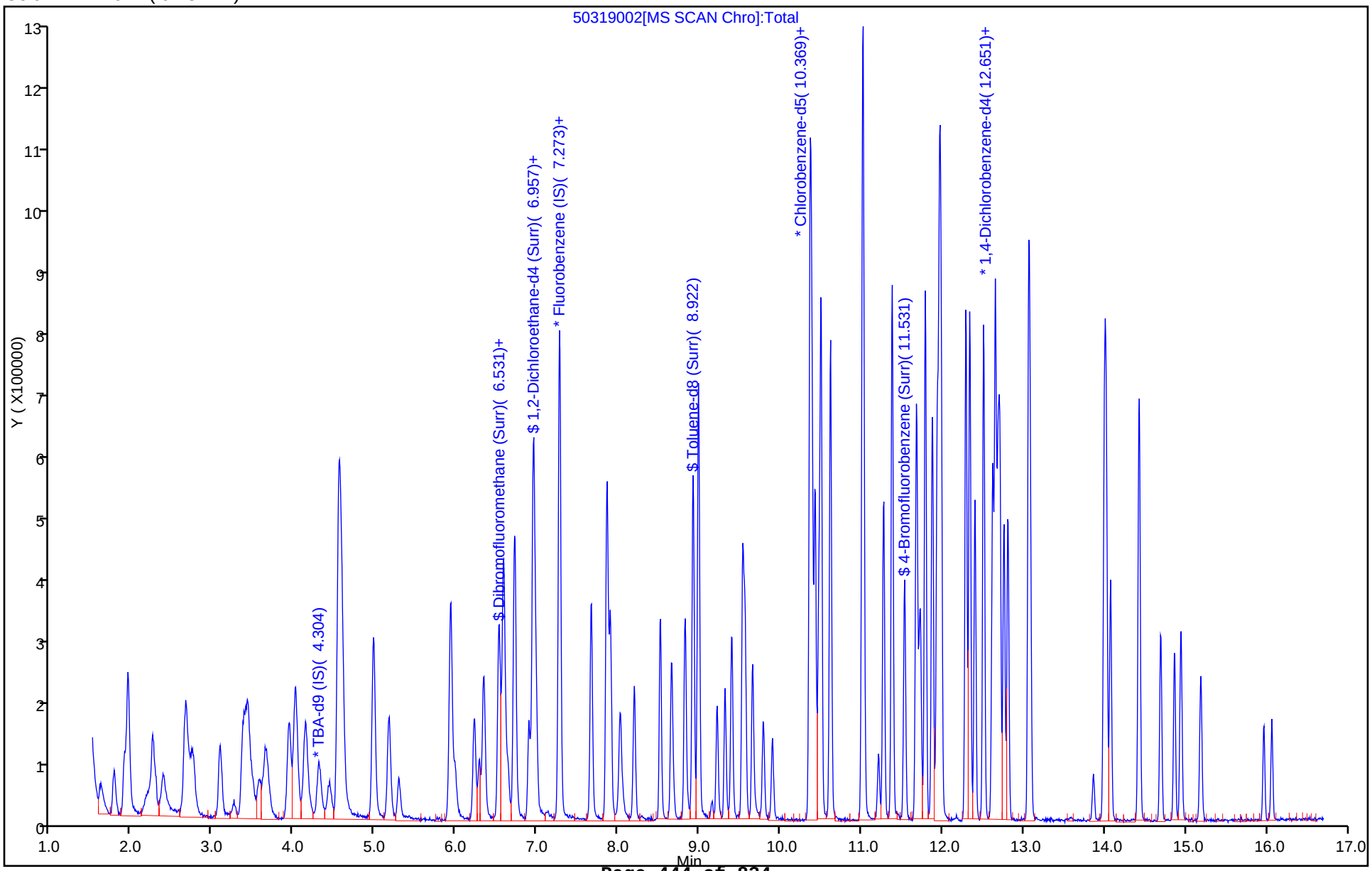
Report Date: 19-Mar-2015 15:23:21 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319002.D

Injection Date:	19-Mar-2015 12:15:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 16-Mar-2015 10:49:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0006031-001
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 10:59:24 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 16-Mar-2015 11:15:59

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.341	8.341	0.000	0	133980	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

VOA BFB 25_00001 Amount Added: 1.00 Units: uL

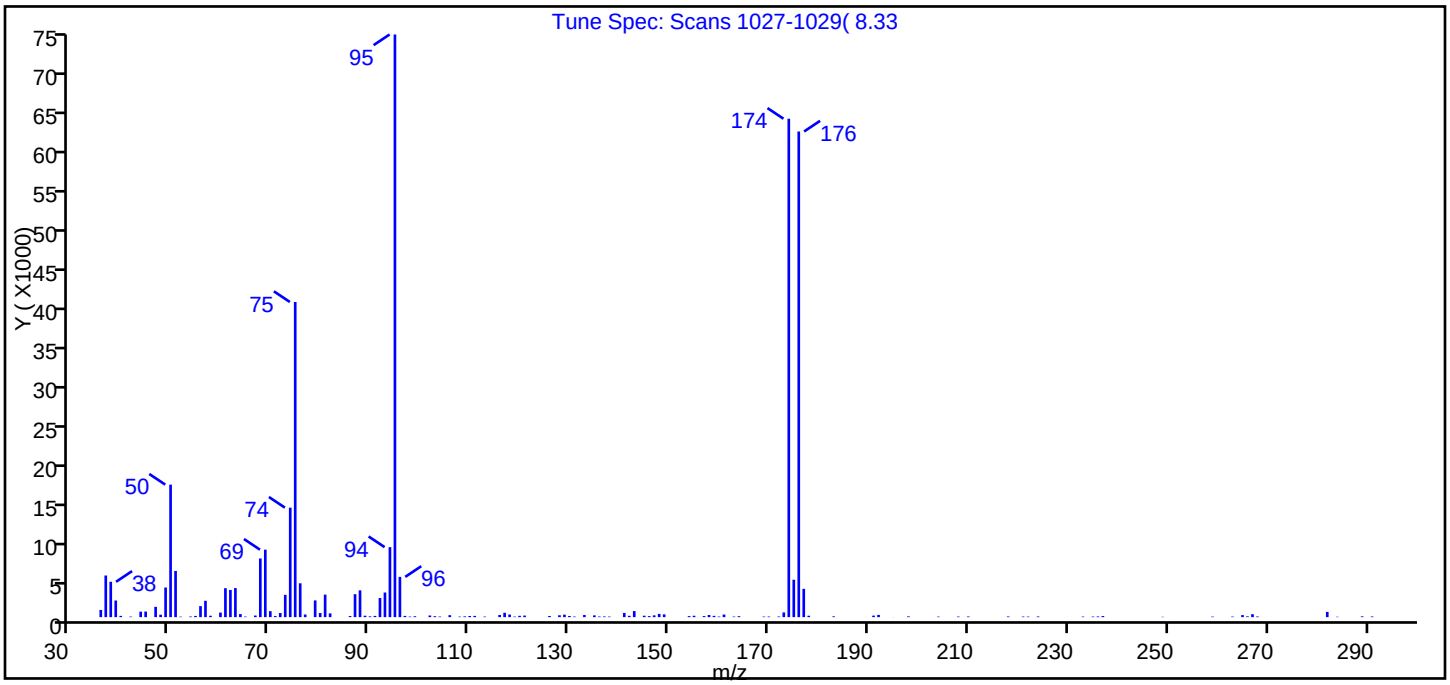
Report Date: 17-Mar-2015 10:59:25 Chrom Revision: 2.2 15-Jan-2015 13:05:58

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316001.D				
Injection Date:	16-Mar-2015 10:49:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	001562	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Tune Method:	BFB Method 8260				

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.7
75	30 to 60% of m/z 95	54.1
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.8 (0.9)
174	50 to 120% of m/z 95	85.5
175	5 to 9% of m/z 174	6.4 (7.5)
176	Greater than 95% but less than 101% of m/z 174	83.4 (97.4)
177	5 to 9% of m/z 176	4.9 (5.8)

Data File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 16-Mar-2015 10:49:30
Spectrum: Tune Spec: Scans 1027-1029(8.33
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 132

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	922	75.00	40336	119.00	71	173.00	604
37.00	5329	76.00	4335	120.00	170	174.00	63792
38.00	4528	77.00	339	121.00	203	175.00	4791
39.00	2130	79.00	2142	126.00	145	176.00	62160
40.00	163	80.00	527	128.00	241	177.00	3622
42.00	71	81.00	2886	129.00	320	178.00	182
44.00	700	82.00	482	130.00	150	183.00	99
45.00	713	86.00	138	131.00	72	191.00	196
47.00	1323	87.00	2939	133.00	273	192.00	286
48.00	310	88.00	3429	135.00	226	195.00	9
49.00	3792	89.00	182	136.00	81	198.00	98
50.00	16960	90.00	101	137.00	87	204.00	68
51.00	5912	91.00	160	138.00	71	208.00	75
52.00	63	92.00	2448	141.00	541	210.00	85
54.00	83	93.00	3152	142.00	172	218.00	87
55.00	155	94.00	8961	143.00	779	221.00	76
56.00	1409	95.00	74576	145.00	182	222.00	70
57.00	2093	96.00	5155	146.00	133	224.00	88
58.00	180	97.00	159	147.00	227	233.00	73
60.00	582	98.00	71	148.00	412	235.00	76
61.00	3707	99.00	112	149.00	352	236.00	88
62.00	3479	102.00	212	154.00	135	237.00	141
63.00	3721	103.00	120	155.00	179	249.00	43
64.00	392	104.00	75	157.00	135	259.00	70
65.00	71	106.00	253	158.00	274	263.00	71
67.00	207	108.00	68	159.00	163	265.00	262
68.00	7510	109.00	97	160.00	73	266.00	100
69.00	8635	110.00	146	161.00	334	267.00	377
70.00	764	111.00	161	163.00	71	268.00	85
71.00	139	113.00	71	164.00	125	282.00	672
72.00	524	116.00	278	169.00	70	284.00	50
73.00	2854	117.00	558	170.00	78	289.00	99
74.00	14015	118.00	332	172.00	82	291.00	87

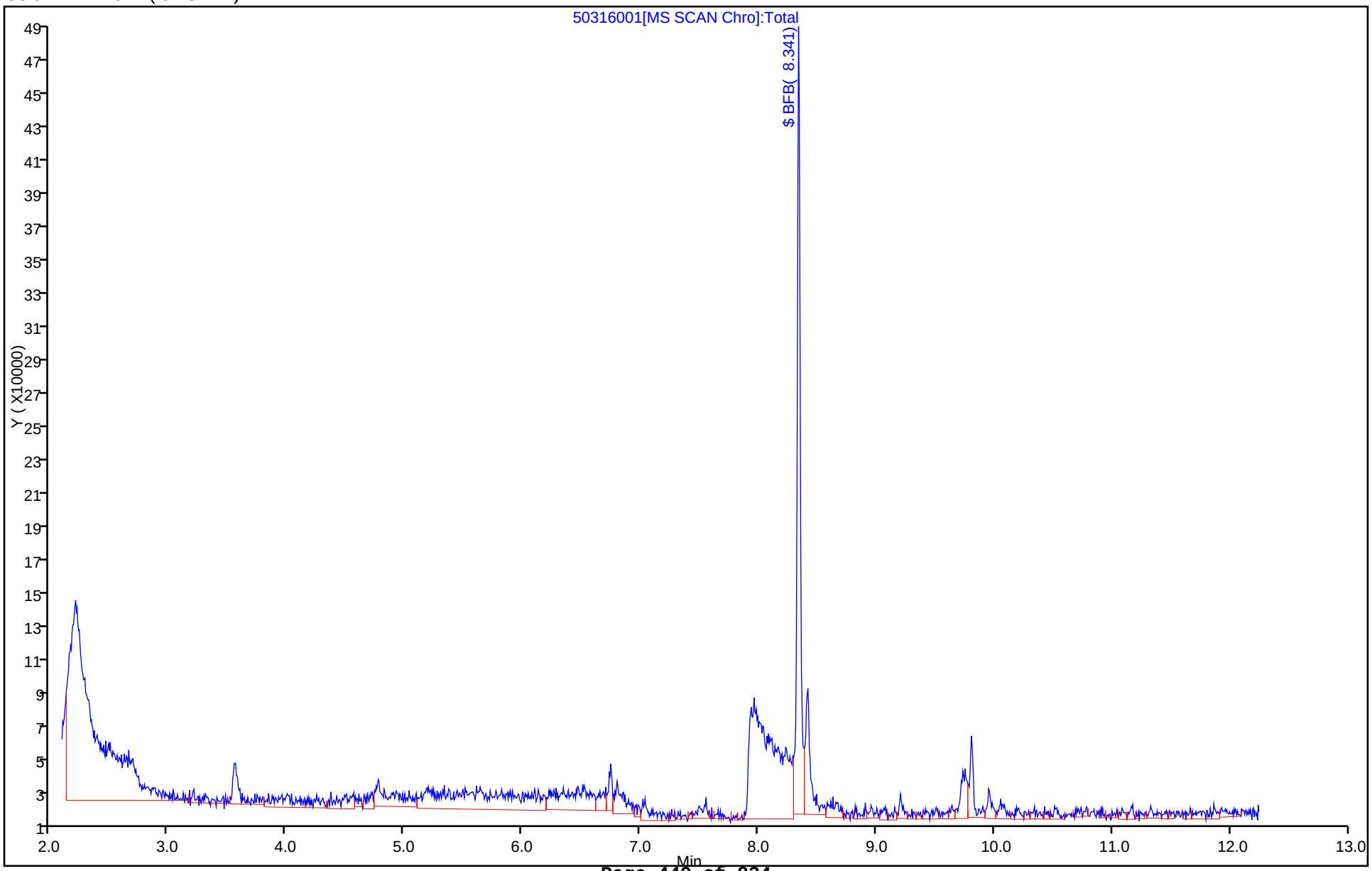
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	922	75.00	40336	119.00	71	173.00	604
37.00	5329	76.00	4335	120.00	170	174.00	63792
38.00	4528	77.00	339	121.00	203	175.00	4791
39.00	2130	79.00	2142	126.00	145	176.00	62160
40.00	163	80.00	527	128.00	241	177.00	3622
42.00	71	81.00	2886	129.00	320	178.00	182
44.00	700	82.00	482	130.00	150	183.00	99
45.00	713	86.00	138	131.00	72	191.00	196
47.00	1323	87.00	2939	133.00	273	192.00	286
48.00	310	88.00	3429	135.00	226	195.00	9
49.00	3792	89.00	182	136.00	81	198.00	98
50.00	16960	90.00	101	137.00	87	204.00	68
51.00	5912	91.00	160	138.00	71	208.00	75
52.00	63	92.00	2448	141.00	541	210.00	85
54.00	83	93.00	3152	142.00	172	218.00	87
55.00	155	94.00	8961	143.00	779	221.00	76
56.00	1409	95.00	74576	145.00	182	222.00	70
57.00	2093	96.00	5155	146.00	133	224.00	88
58.00	180	97.00	159	147.00	227	233.00	73
60.00	582	98.00	71	148.00	412	235.00	76
61.00	3707	99.00	112	149.00	352	236.00	88
62.00	3479	102.00	212	154.00	135	237.00	141
63.00	3721	103.00	120	155.00	179	249.00	43
64.00	392	104.00	75	157.00	135	259.00	70
65.00	71	106.00	253	158.00	274	263.00	71
67.00	207	108.00	68	159.00	163	265.00	262
68.00	7510	109.00	97	160.00	73	266.00	100
69.00	8635	110.00	146	161.00	334	267.00	377
70.00	764	111.00	161	163.00	71	268.00	85
71.00	139	113.00	71	164.00	125	282.00	672
72.00	524	116.00	278	169.00	70	284.00	50
73.00	2854	117.00	558	170.00	78	289.00	99
74.00	14015	118.00	332	172.00	82	291.00	87

Report Date: 17-Mar-2015 10:59:25 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316001.D				
Injection Date:	16-Mar-2015 10:49:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 17-Mar-2015 12:22:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0006051-001
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 14:53:27 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 12:37:31

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.344	8.344	0.000	0	130945	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

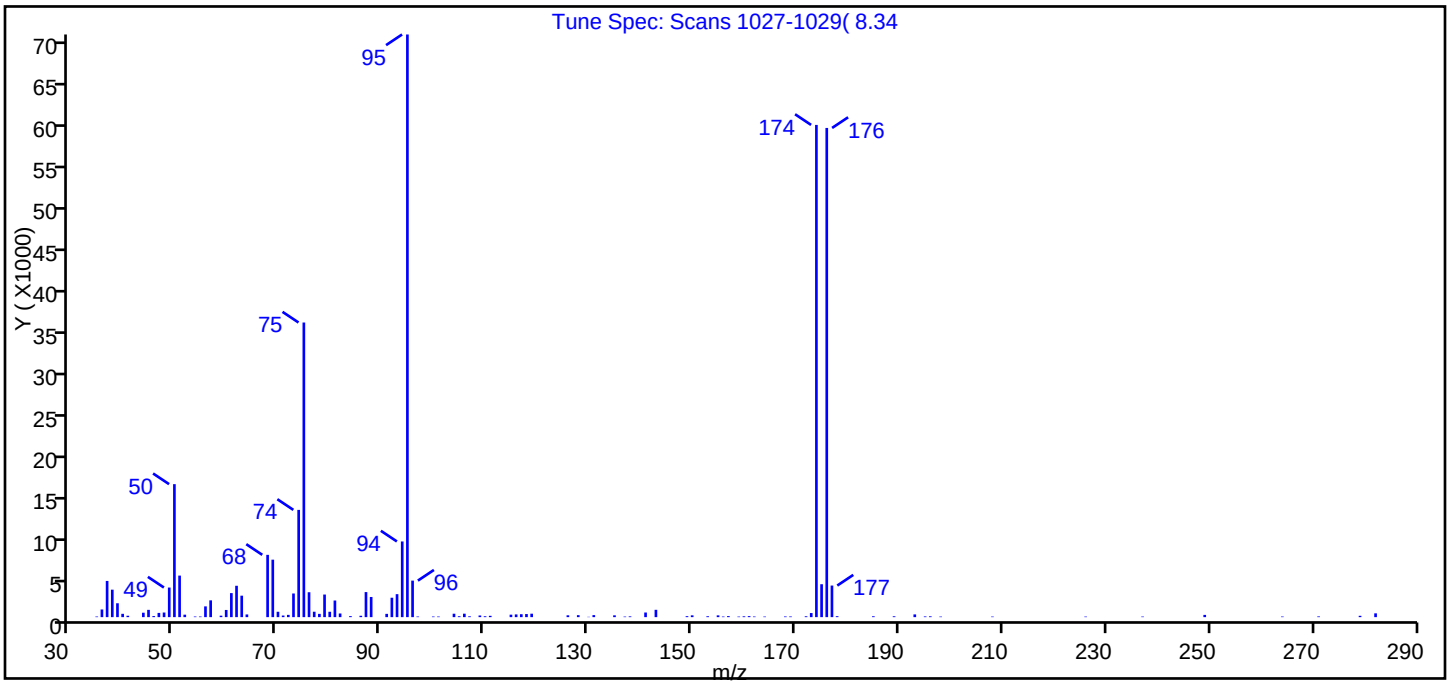
VOA BFB 25_00001 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317001.D				
Injection Date:	17-Mar-2015 12:22:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	001562	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Tune Method:	BFB Method 8260				

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.8
75	30 to 60% of m/z 95	50.6
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.7 (0.8)
174	50 to 120% of m/z 95	84.5
175	5 to 9% of m/z 174	5.7 (6.7)
176	Greater than 95% but less than 101% of m/z 174	84.0 (99.4)
177	5 to 9% of m/z 176	5.4 (6.5)

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 17-Mar-2015 12:22:30
Spectrum: Tune Spec: Scans 1027-1029(8.34
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 109

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	75	70.00	653	106.00	420	162.00	75
36.00	932	71.00	195	107.00	100	164.00	69
37.00	4396	72.00	277	109.00	200	168.00	82
38.00	3337	73.00	2874	110.00	108	169.00	80
39.00	1687	74.00	13028	111.00	162	172.00	105
40.00	404	75.00	35784	115.00	301	173.00	498
41.00	170	76.00	3025	116.00	332	174.00	59784
44.00	538	77.00	658	117.00	356	175.00	3999
45.00	885	78.00	398	118.00	376	176.00	59416
46.00	131	79.00	2746	119.00	419	177.00	3837
47.00	514	80.00	653	126.00	224	178.00	116
48.00	561	81.00	2020	128.00	240	185.00	104
49.00	3596	82.00	444	130.00	38	189.00	103
50.00	16153	84.00	121	131.00	247	193.00	333
51.00	5046	86.00	167	135.00	220	195.00	86
52.00	299	87.00	3044	137.00	68	196.00	99
54.00	75	88.00	2449	138.00	92	198.00	67
55.00	75	91.00	399	141.00	563	208.00	68
56.00	1308	92.00	2358	143.00	890	226.00	67
57.00	2040	93.00	2792	149.00	118	237.00	70
59.00	178	94.00	9192	150.00	219	249.00	273
60.00	873	95.00	70768	153.00	107	264.00	72
61.00	2920	96.00	4437	155.00	216	271.00	87
62.00	3810	97.00	75	156.00	72	279.00	163
63.00	2607	100.00	74	157.00	125	282.00	462
64.00	328	101.00	72	159.00	67		
68.00	7566	104.00	416	160.00	99		
69.00	6980	105.00	108	161.00	123		

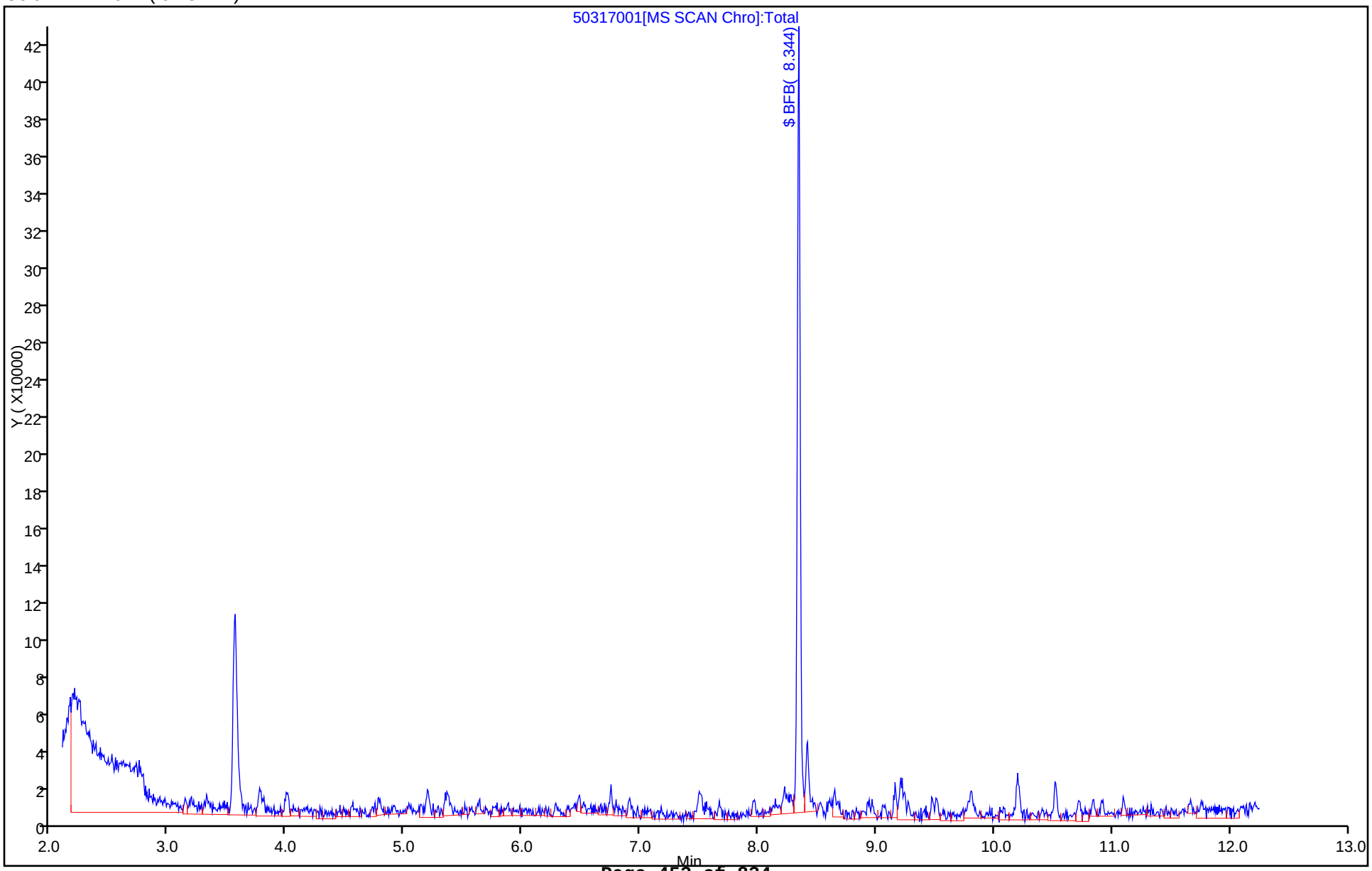
Report Date: 17-Mar-2015 14:53:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317001.D

Injection Date:	17-Mar-2015 12:22:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319001.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 19-Mar-2015 11:31:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 mL Dil. Factor: 1.0000
Sample Info: BFB
Misc. Info.: 180-0006092-001
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Mar-2015 15:23:06 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: fergusond Date: 19-Mar-2015 11:45:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
$ 10 BFB	95	8.340	8.340	0.000	0	99978	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

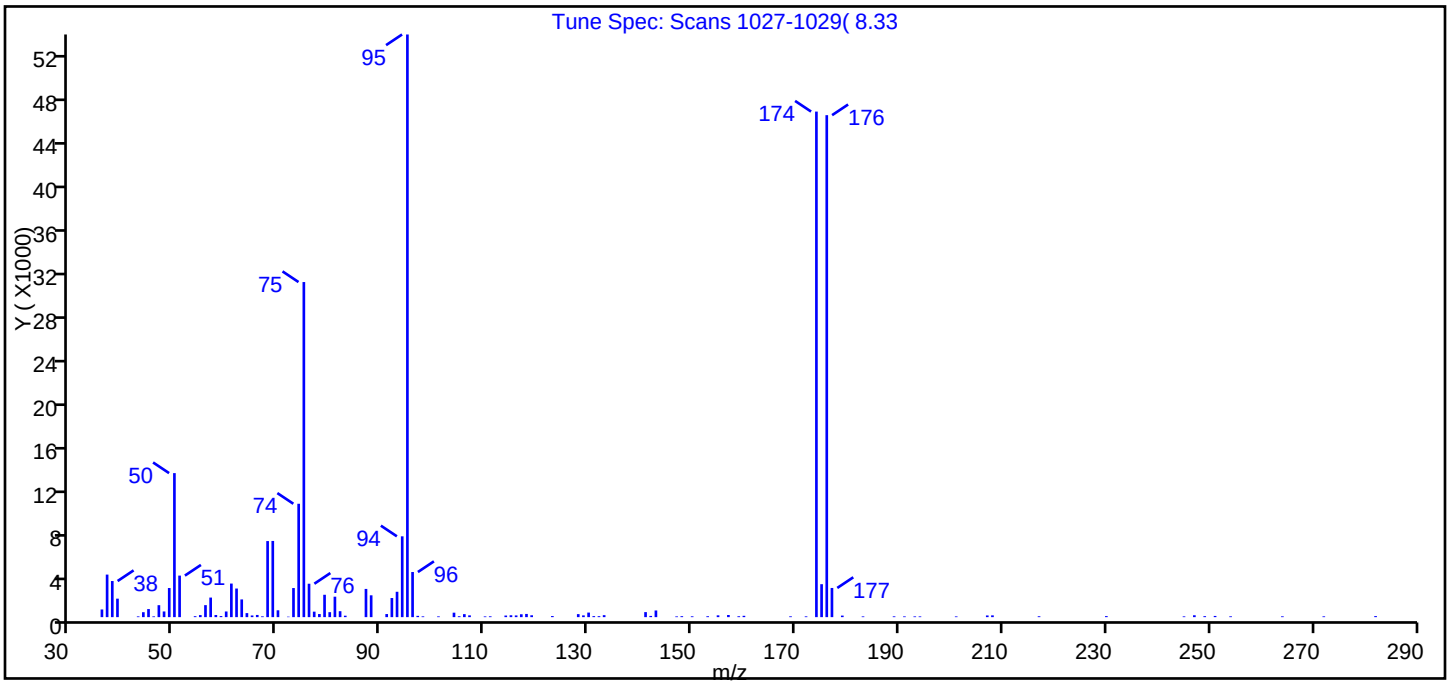
VOABFB25_00059 Amount Added: 1.00 Units: uL

MS Tune Report

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319001.D				
Injection Date:	19-Mar-2015 11:31:30	Instrument ID:	CHHP5		
Lims ID:	BFB				
Client ID:					
Operator ID:	001562	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 mL	Dil. Factor:	1.0000		
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		
Tune Method:	BFB Method 8260				

$ 10 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.7
75	30 to 60% of m/z 95	57.5
96	5 to 9% of m/z 95	7.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	86.8
175	5 to 9% of m/z 174	5.7 (6.5)
176	Greater than 95% but less than 101% of m/z 174	86.2 (99.3)
177	5 to 9% of m/z 176	5.0 (5.8)

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319001.D\MSVOA_LL_CHHP5.rslt\spectra.d
Injection Date: 19-Mar-2015 11:31:30
Spectrum: Tune Spec: Scans 1027-1029(8.33
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 108

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	702	68.00	6954	105.00	82	159.00	80
37.00	3890	69.00	6965	106.00	275	160.00	122
38.00	3301	70.00	627	107.00	163	169.00	74
39.00	1690	72.00	43	110.00	66	172.00	71
43.00	68	73.00	2660	111.00	75	174.00	46216
44.00	452	74.00	10365	114.00	146	175.00	3013
45.00	738	75.00	30632	115.00	172	176.00	45888
46.00	70	76.00	3055	116.00	157	177.00	2668
47.00	1093	77.00	502	117.00	263	179.00	142
48.00	520	78.00	285	118.00	293	183.00	67
49.00	2661	79.00	2045	119.00	171	189.00	72
50.00	13166	80.00	455	123.00	99	191.00	68
51.00	3798	81.00	1870	128.00	276	193.00	68
54.00	86	82.00	543	129.00	160	194.00	67
55.00	187	83.00	132	130.00	417	201.00	67
56.00	1097	87.00	2580	131.00	93	207.00	154
57.00	1789	88.00	1996	132.00	88	208.00	163
58.00	194	91.00	283	133.00	181	217.00	80
59.00	99	92.00	1747	141.00	460	230.00	95
60.00	518	93.00	2319	142.00	112	245.00	69
61.00	3070	94.00	7388	143.00	609	247.00	172
62.00	2615	95.00	53264	147.00	68	249.00	89
63.00	1620	96.00	4125	148.00	86	251.00	110
64.00	368	97.00	118	150.00	75	254.00	75
65.00	153	98.00	70	153.00	82	264.00	74
66.00	201	101.00	68	155.00	165	272.00	72
67.00	73	104.00	408	157.00	196	282.00	96

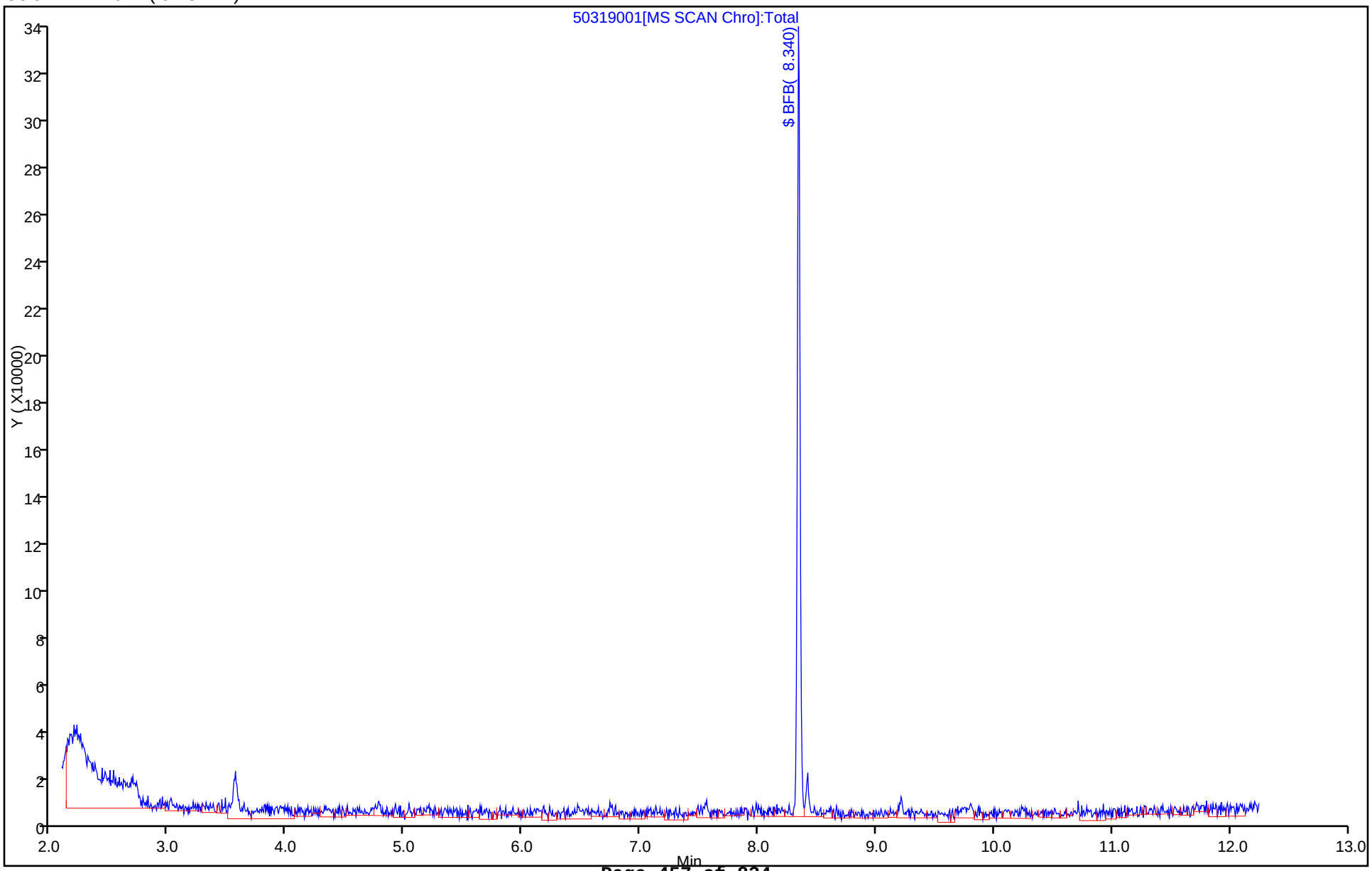
Report Date: 19-Mar-2015 15:23:07 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319001.D

Injection Date:	19-Mar-2015 11:31:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	5.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-135719/4

Matrix: Water Lab File ID: 50317004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 14:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	0.225	J	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-135719/4

Matrix: Water Lab File ID: 50317004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 14:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		64-135
2037-26-5	Toluene-d8 (Surr)	102		71-118
460-00-4	4-Bromofluorobenzene (Surr)	109		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317004.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 17-Mar-2015 14:17:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0006051-004
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 14:53:12 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 14:53:12

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.296	4.311	-0.015	88	162094	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	99	545802	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	72	125168	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	95	207630	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.535	6.526	0.009	55	116497	50.0	46.9	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	96	154613	50.0	47.2	
$ 7 Toluene-d8 (Surr)	98	8.926	8.923	0.003	100	509415	50.0	51.0	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	99	196172	50.0	54.6	
11 Dichlorodifluoromethane	85		1.616					ND	
12 Chloromethane	50		1.781					ND	
13 Vinyl chloride	62		1.908					ND	
14 Butadiene	39		1.951					ND	
15 Bromomethane	94		2.249					ND	
16 Chloroethane	64		2.377					ND	
17 Dichlorofluoromethane	67		2.657					ND	
18 Trichlorofluoromethane	101		2.705					ND	
19 Ethanol	45	3.098	3.012	0.086	1	2591		NC	
20 Ethyl ether	59		3.089					ND	
21 Acrolein	56		3.265					ND	
22 1,1-Dichloroethene	96		3.381					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.435					ND	
24 Acetone	43	3.530	3.496	0.034	33	1733		1.55	
25 Iodomethane	142		3.587					ND	
26 Carbon disulfide	76		3.654					ND	
27 Isopropyl alcohol	45	3.773	3.736	0.037	5	1080		NC	
28 3-Chloro-1-propene	76		3.934					ND	
29 Acetonitrile	40	3.949	3.943	0.006	28	849		NC	
30 Methyl acetate	43		4.019					ND	
31 Methylene Chloride	84	4.156	4.147	0.009	61	4097		1.13	
32 2-Methyl-2-propanol	59		4.445					ND	
33 Acrylonitrile	53		4.549					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.561					ND	
35 Methyl tert-butyl ether	73		4.597					ND	
36 Hexane	57		4.981					ND	
37 1,1-Dichloroethane	63		5.163					ND	
38 Vinyl acetate	43		5.291					ND	
41 Isopropyl ether	45		5.300					ND	
39 2-Chloro-1,3-butadiene	53		5.300					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59	5.805	5.799	0.006	1	78			NC
44 2,2-Dichloropropane	77		5.923					ND	
45 cis-1,2-Dichloroethene	96		5.936					ND	
43 Tert-butyl ethyl ether (TI	59	5.963	5.961	0.002	0	210		0.0192	
46 2-Butanone (MEK)	43		5.984					ND	
48 Ethyl acetate	43	6.024	5.993	0.031	4	403			NC
47 Propionitrile	54	6.097	6.024	0.073	1	97			NC
49 Chlorobromomethane	128		6.222					ND	
51 Tetrahydrofuran	42		6.282					ND	
52 Chloroform	83		6.343					ND	
50 Methacrylonitrile	41	6.292	6.389	-0.097	1	254			NC
53 1,1,1-Trichloroethane	97		6.526					ND	
54 Cyclohexane	56		6.580					ND	
56 Carbon tetrachloride	117		6.720					ND	
55 1,1-Dichloropropene	75		6.726					ND	
57 Isobutyl alcohol	41		6.939					ND	
58 Benzene	78		6.952					ND	
59 1,2-Dichloroethane	62		6.982					ND	
61 Tert-amyl methyl ether	73	7.271	7.143	0.128	37	8323			NC
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.274					ND	
63 n-Butanol	56	7.709	7.654	0.055	0	289			NC
64 Trichloroethene	130		7.669					ND	
66 Methylcyclohexane	83		7.864					ND	
65 Ethyl acrylate	55		7.867					ND	
69 Methyl methacrylate	69		7.867					ND	
67 1,2-Dichloropropane	63		7.901					ND	
68 Dibromomethane	93		8.022					ND	
70 1,4-Dioxane	88		8.065					ND	
71 Dichlorobromomethane	83		8.199					ND	
72 2-Nitropropane	41		8.427					ND	
73 2-Chloroethyl vinyl ether	63	8.658	8.506	0.152	1	265			NC
74 cis-1,3-Dichloropropene	75		8.655					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.825					ND	
76 Toluene	91		8.990					ND	
77 trans-1,3-Dichloropropene	75		9.221					ND	
78 Ethyl methacrylate	69		9.318					ND	
79 1,1,2-Trichloroethane	97		9.403					ND	
80 Tetrachloroethene	164		9.537					ND	
81 1,3-Dichloropropane	76		9.567					ND	
82 2-Hexanone	43		9.659					ND	
83 n-Butyl acetate	43	9.765	9.662	0.103	15	158			NC
84 Chlorodibromomethane	129		9.786					ND	
85 Ethylene Dibromide	107		9.902					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.370					ND	
87 Chlorobenzene	112		10.395					ND	
88 4-Chlorobenzotrifluoride	180		10.431					ND	
89 1,1,1,2-Tetrachloroethane	131		10.474					ND	
90 Ethylbenzene	106		10.504					ND	
91 m-Xylene & p-Xylene	106		10.620					ND	
92 o-Xylene	106		11.015					ND	
93 Styrene	104		11.021					ND	
94 Bromoform	173		11.210					ND	
96 2-Chlorobenzotrifluoride	180		11.277					ND	
95 Cyclohexanol	57	11.250	11.280	-0.030	1	77			NC
97 Isopropylbenzene	105		11.380					ND	
98 Cyclohexanone	55	11.286	11.450	-0.164	1	79			NC
99 1,1,2,2-Tetrachloroethane	83		11.672					ND	
100 Bromobenzene	156		11.684					ND	
101 1,2,3-Trichloropropane	110		11.721					ND	
102 trans-1,4-Dichloro-2-buten	53		11.733					ND	
103 N-Propylbenzene	120		11.788					ND	
104 2-Chlorotoluene	126		11.873					ND	
105 3-Chlorotoluene	126		11.934					ND	
106 1,3,5-Trimethylbenzene	105		11.964					ND	
107 4-Chlorotoluene	126		11.983					ND	
108 tert-Butylbenzene	119		12.287					ND	
109 Pentachloroethane	167		12.314					ND	
110 1,2,4-Trimethylbenzene	105		12.335					ND	
111 1,2-dichloro-4-(trifluorom	214		12.402					ND	
112 sec-Butylbenzene	105		12.506					ND	
113 1,3-Dichlorobenzene	146		12.621					ND	
114 4-Isopropyltoluene	119		12.652					ND	
119 Benzyl chloride	91		12.655					ND	
115 1,4-Dichlorobenzene	146		12.707					ND	
116 2,4-Dichloro-1-(triflourom	214		12.755					ND	
117 1,2,3-Trimethylbenzene	105		12.758					ND	
118 2,5-Dichlorobenzotrifluori	214		12.804					ND	
120 n-Butylbenzene	91		13.059					ND	
121 1,2-Dichlorobenzene	146		13.084					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.862					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.008					ND	
124 1,3,5-Trichlorobenzene	180		14.078					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.428					ND	
126 1,2,4-Trichlorobenzene	180		14.696					ND	
127 Hexachlorobutadiene	225		14.860					ND	
128 Naphthalene	128		14.939					ND	
129 1,2,3-Trichlorobenzene	180		15.189					ND	
131 2,4,5-Trichlorotoluene	159		15.967					ND	
130 2,3,6-Trichlorotoluene	159		16.065					ND	
132 2-Methylnaphthalene	142		16.080					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
151 Isooctane	57		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
147 2,4-Dichlorotoluene	1		0.000					ND	
148 2,3-Dichlorotoluene	1		0.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

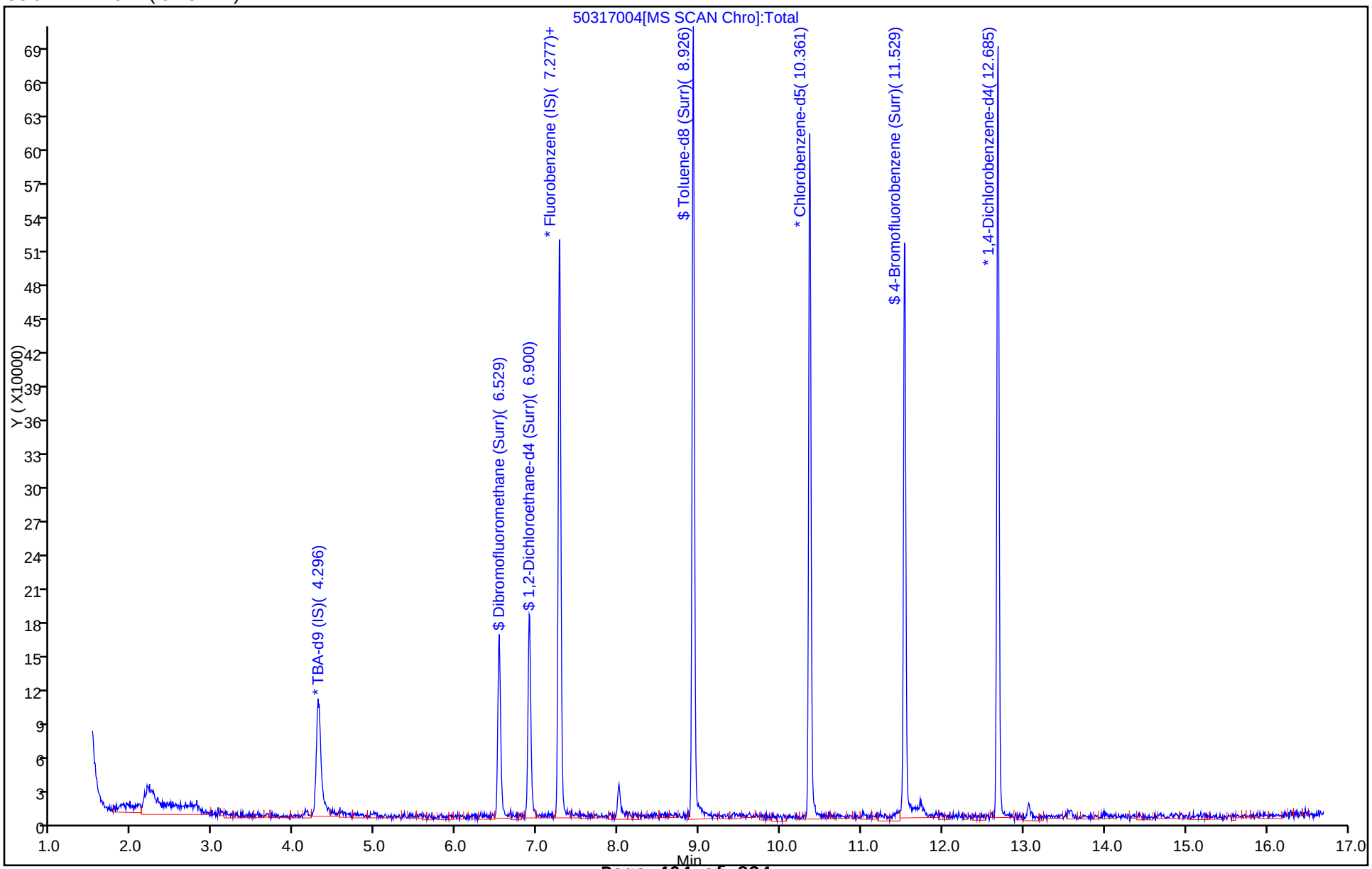
Report Date: 17-Mar-2015 14:53:14 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317004.D

Injection Date:	17-Mar-2015 14:17:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 17-Mar-2015 14:53:15 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317004.D

Injection Date: 17-Mar-2015 14:17:30 Instrument ID: CHHP5

Lims ID: MB

Client ID:

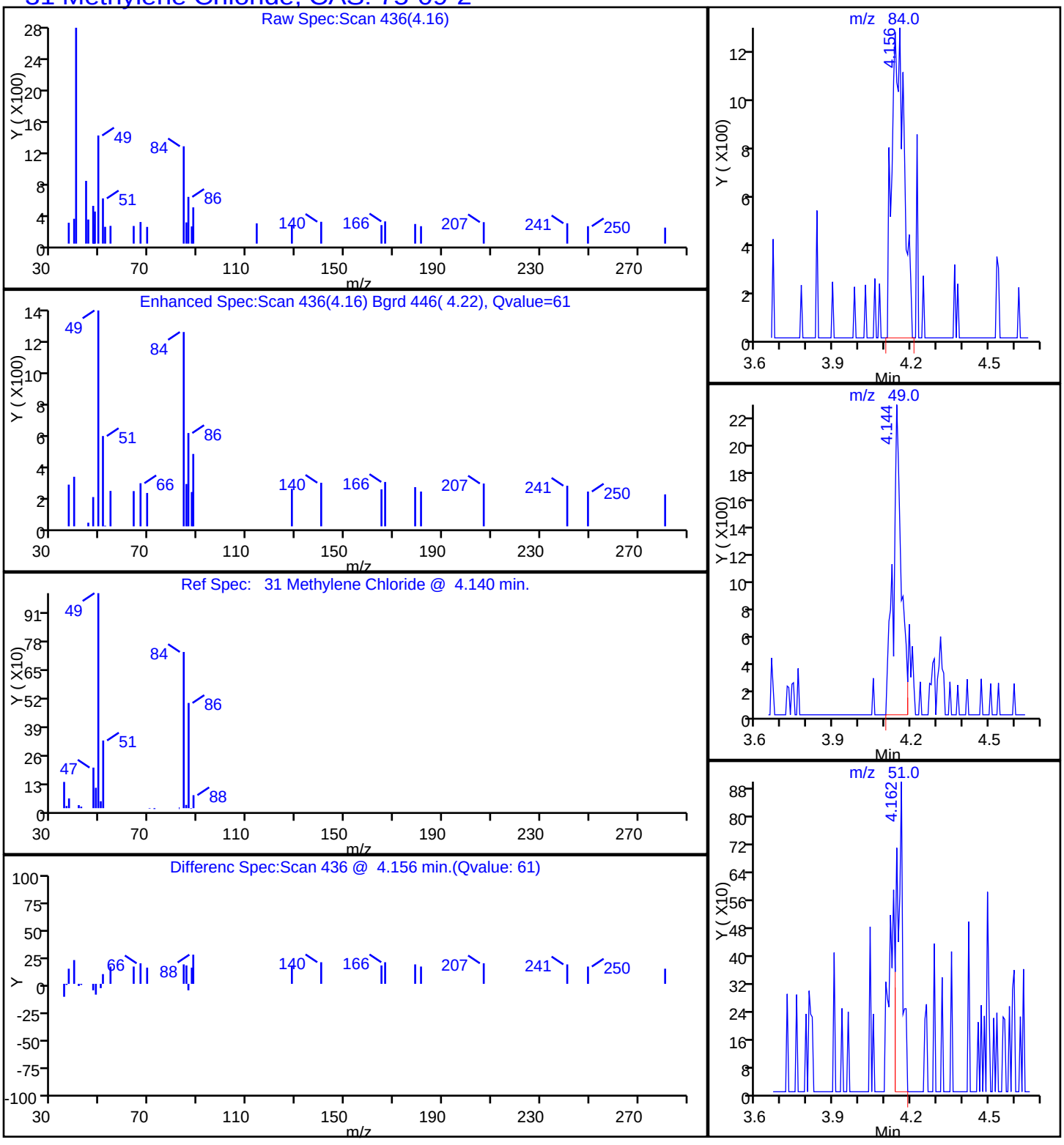
Operator ID: 001562 ALS Bottle#: 4 Worklist Smp#: 4

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 180-135984/4

Matrix: Water | Lab File ID: 50319004.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/19/2015 13:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135984 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	1.0	U	1.0	0.28
75-01-4	Vinyl chloride	1.0	U	1.0	0.23
74-83-9	Bromomethane	1.0	U	1.0	0.31
75-00-3	Chloroethane	1.0	U	1.0	0.21
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.30
67-64-1	Acetone	5.0	U	5.0	2.5
75-15-0	Carbon disulfide	1.0	U	1.0	0.21
75-09-2	Methylene Chloride	0.406	J	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.17
1634-04-4	Methyl tert-butyl ether	1.0	U	1.0	0.18
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.12
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.24
74-97-5	Bromochloromethane	1.0	U	1.0	0.18
78-93-3	2-Butanone (MEK)	5.0	U	5.0	0.55
67-66-3	Chloroform	1.0	U	1.0	0.17
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.29
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.14
71-43-2	Benzene	1.0	U	1.0	0.11
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.21
79-01-6	Trichloroethene	1.0	U	1.0	0.14
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.095
75-27-4	Bromodichloromethane	1.0	U	1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	U	5.0	0.53
108-88-3	Toluene	1.0	U	1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.15
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.20
127-18-4	Tetrachloroethene	1.0	U	1.0	0.15
591-78-6	2-Hexanone	5.0	U	5.0	0.16
124-48-1	Dibromochloromethane	1.0	U	1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	1.0	U	1.0	0.18
108-90-7	Chlorobenzene	1.0	U	1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.28
100-41-4	Ethylbenzene	1.0	U	1.0	0.23
1330-20-7	Xylenes, Total	3.0	U	3.0	0.49
100-42-5	Styrene	1.0	U	1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-135984/4

Matrix: Water Lab File ID: 50319004.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/19/2015 13:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135984 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	1.0	U	1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.20
107-13-1	Acrylonitrile	20	U	20	0.55
123-91-1	1,4-Dioxane	200	U	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-135
2037-26-5	Toluene-d8 (Surr)	101		71-118
460-00-4	4-Bromofluorobenzene (Surr)	108		70-118
1868-53-7	Dibromofluoromethane (Surr)	106		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319004.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 19-Mar-2015 13:17:30 ALS Bottle#: 4 Worklist Smp#: 4
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: MB
Misc. Info.: 180-0006092-004
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Mar-2015 15:23:31 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: fergusond Date: 19-Mar-2015 15:23:44

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.293	4.298	-0.005	97	134699	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.273	0.001	100	444732	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.365	10.363	0.002	99	103010	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.689	12.687	0.002	92	161259	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.532	6.531	0.001	54	106839	50.0	52.8	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.896	0.007	97	139323	50.0	52.2	
$ 7 Toluene-d8 (Surr)	98	8.923	8.922	0.001	99	413765	50.0	50.4	
$ 8 4-Bromofluorobenzene (Surr	95	11.533	11.531	0.002	98	159712	50.0	54.0	
11 Dichlorodifluoromethane	85		1.615					ND	
12 Chloromethane	50		1.780					ND	
13 Vinyl chloride	62		1.907					ND	
14 Butadiene	39		1.950					ND	
15 Bromomethane	94		2.254					ND	
16 Chloroethane	64		2.394					ND	
17 Dichlorofluoromethane	67		2.662					ND	
18 Trichlorofluoromethane	101		2.716					ND	
19 Ethanol	45		3.002					ND	
20 Ethyl ether	59		3.087					ND	
21 Acrolein	56		3.258					ND	
22 1,1-Dichloroethene	96		3.386					ND	
23 1,1,2-Trichloro-1,2,2-trif	101		3.434					ND	
24 Acetone	43		3.501					ND	
25 Iodomethane	142		3.574					ND	
26 Carbon disulfide	76		3.647					ND	
27 Isopropyl alcohol	45		3.763					ND	
28 3-Chloro-1-propene	76		3.933					ND	
29 Acetonitrile	40		3.933					ND	
30 Methyl acetate	43		4.018					ND	
31 Methylene Chloride	84	4.172	4.146	0.026	59	6019		2.03	
32 2-Methyl-2-propanol	59		4.438					ND	
33 Acrylonitrile	53		4.554					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
34 trans-1,2-Dichloroethene	96		4.560					ND	
35 Methyl tert-butyl ether	73		4.590					ND	
36 Hexane	57		4.979					ND	
37 1,1-Dichloroethane	63		5.174					ND	
38 Vinyl acetate	43		5.290					ND	
39 2-Chloro-1,3-butadiene	53		5.302					ND	
41 Isopropyl ether	45		5.326					ND	
40 Isopropyl ether TIC	45		5.409					ND	
42 Tert-butyl ethyl ether	59		5.795					ND	
44 2,2-Dichloropropane	77		5.928					ND	
45 cis-1,2-Dichloroethene	96		5.935					ND	
43 Tert-butyl ethyl ether (TI	59		5.961					ND	
46 2-Butanone (MEK)	43		5.983					ND	
47 Propionitrile	54		6.056					ND	
48 Ethyl acetate	43		6.087					ND	
49 Chlorobromomethane	128		6.220					ND	
50 Methacrylonitrile	41		6.239					ND	
51 Tetrahydrofuran	42		6.287					ND	
52 Chloroform	83		6.342					ND	
53 1,1,1-Trichloroethane	97		6.525					ND	
54 Cyclohexane	56		6.585					ND	
56 Carbon tetrachloride	117		6.713					ND	
55 1,1-Dichloropropene	75		6.725					ND	
57 Isobutyl alcohol	41		6.938					ND	
58 Benzene	78		6.950					ND	
59 1,2-Dichloroethane	62		6.981					ND	
61 Tert-amyl methyl ether	73		7.109					ND	
60 Tert-amyl methyl ether (TI	73		7.262					ND	
62 n-Heptane	43		7.279					ND	
64 Trichloroethene	130		7.662					ND	
63 n-Butanol	56		7.662					ND	
65 Ethyl acrylate	55		7.814					ND	
66 Methylcyclohexane	83		7.863					ND	
67 1,2-Dichloropropane	63		7.900					ND	
68 Dibromomethane	93		8.021					ND	
70 1,4-Dioxane	88		8.052					ND	
69 Methyl methacrylate	69		8.052					ND	
71 Dichlorobromomethane	83		8.198					ND	
72 2-Nitropropane	41		8.435					ND	
73 2-Chloroethyl vinyl ether	63		8.520					ND	
74 cis-1,3-Dichloropropene	75		8.654					ND	
75 4-Methyl-2-pentanone (MIBK	43		8.824					ND	
76 Toluene	91		8.988					ND	
77 trans-1,3-Dichloropropene	75		9.214					ND	
78 Ethyl methacrylate	69		9.317					ND	
79 1,1,2-Trichloroethane	97		9.402					ND	
80 Tetrachloroethene	164		9.536					ND	
81 1,3-Dichloropropane	76		9.566					ND	
82 2-Hexanone	43		9.658					ND	
84 Chlorodibromomethane	129		9.785					ND	
83 n-Butyl acetate	43		9.792					ND	
85 Ethylene Dibromide	107		9.901					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
86 3-Chlorobenzotrifluoride	180		10.369					ND	
87 Chlorobenzene	112		10.388					ND	
88 4-Chlorobenzotrifluoride	180		10.424					ND	
89 1,1,1,2-Tetrachloroethane	131		10.473					ND	
90 Ethylbenzene	106		10.497					ND	
91 m-Xylene & p-Xylene	106		10.619					ND	
92 o-Xylene	106		11.008					ND	
93 Styrene	104		11.026					ND	
94 Bromoform	173		11.215					ND	
96 2-Chlorobenzotrifluoride	180		11.276					ND	
95 Cyclohexanol	57	11.350	11.280	0.070	1	167			NC
97 Isopropylbenzene	105		11.379					ND	
98 Cyclohexanone	55		11.483					ND	
99 1,1,2,2-Tetrachloroethane	83		11.677					ND	
100 Bromobenzene	156		11.683					ND	
101 1,2,3-Trichloropropane	110		11.720					ND	
102 trans-1,4-Dichloro-2-buten	53		11.732					ND	
103 N-Propylbenzene	120		11.793					ND	
104 2-Chlorotoluene	126		11.872					ND	
105 3-Chlorotoluene	126		11.933					ND	
106 1,3,5-Trimethylbenzene	105		11.963					ND	
107 4-Chlorotoluene	126		11.982					ND	
108 tert-Butylbenzene	119		12.286					ND	
109 Pentachloroethane	167		12.310					ND	
110 1,2,4-Trimethylbenzene	105		12.334					ND	
111 1,2-dichloro-4-(trifluorom	214		12.401					ND	
112 sec-Butylbenzene	105		12.505					ND	
113 1,3-Dichlorobenzene	146		12.620					ND	
114 4-Isopropyltoluene	119		12.651					ND	
115 1,4-Dichlorobenzene	146		12.705					ND	
116 2,4-Dichloro-1-(triflourom	214		12.760					ND	
117 1,2,3-Trimethylbenzene	105		12.760					ND	
118 2,5-Dichlorobenzotrifluori	214		12.809					ND	
119 Benzyl chloride	91		12.845					ND	
120 n-Butylbenzene	91		13.064					ND	
121 1,2-Dichlorobenzene	146		13.083					ND	
122 1,2-Dibromo-3-Chloropropan	75		13.861					ND	
123 2,4- & 2,5- & 2,6- Dichlor	125		14.007					ND	
124 1,3,5-Trichlorobenzene	180		14.068					ND	
125 2,3- & 3,4- Dichlorotoluen	125		14.427					ND	
126 1,2,4-Trichlorobenzene	180		14.695					ND	
127 Hexachlorobutadiene	225		14.865					ND	
128 Naphthalene	128		14.944					ND	
129 1,2,3-Trichlorobenzene	180		15.181					ND	
131 2,4,5-Trichlorotoluene	159		15.966					ND	
130 2,3,6-Trichlorotoluene	159		16.064					ND	
132 2-Methylnaphthalene	142	16.077	16.076	0.001	95	3271			1.82
148 2,3-Dichlorotoluene	1		0.000					ND	
147 2,4-Dichlorotoluene	1		0.000					ND	
146 2,5-Dichlorotoluene	1		0.000					ND	
150 2,6-Dichlorotoluene	1		0.000					ND	
152 Formaldehyde TIC	1		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
151 Isooctane	57		0.000					ND	
149 3,4-Dichlorotoluene	1		0.000					ND	
S 133 Xylenes, Total	106		1.000					ND	
S 134 1,2-Dichloroethene, Total	96		1.000					ND	
S 135 1,3-Dichloropropene, Total	1		0.000					ND	
T 153 1,2 Epoxybutane TIC	42		0.000					ND	
T 136 Mesityl oxide TIC	83		0.000					ND	
T 137 Tetrahydrofuran TIC	42		0.000					ND	
T 138 Methyl n-amyl ketone TIC	43		0.000					ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

Reagents:

VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

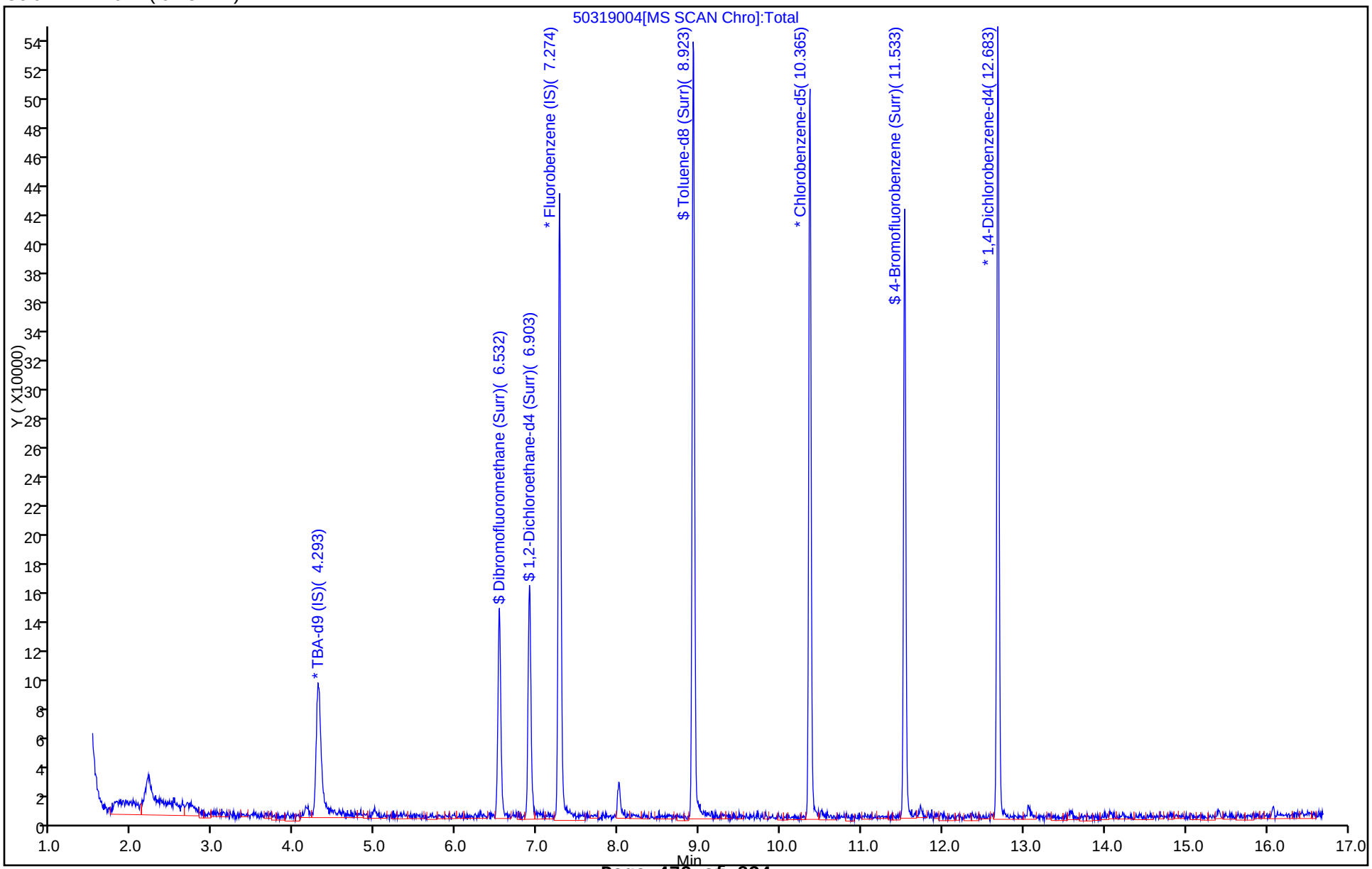
Report Date: 19-Mar-2015 15:23:46 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319004.D

Injection Date:	19-Mar-2015 13:17:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Report Date: 19-Mar-2015 15:23:46 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319004.D

Injection Date: 19-Mar-2015 13:17:30 Instrument ID: CHHP5

Lims ID: MB

Client ID:

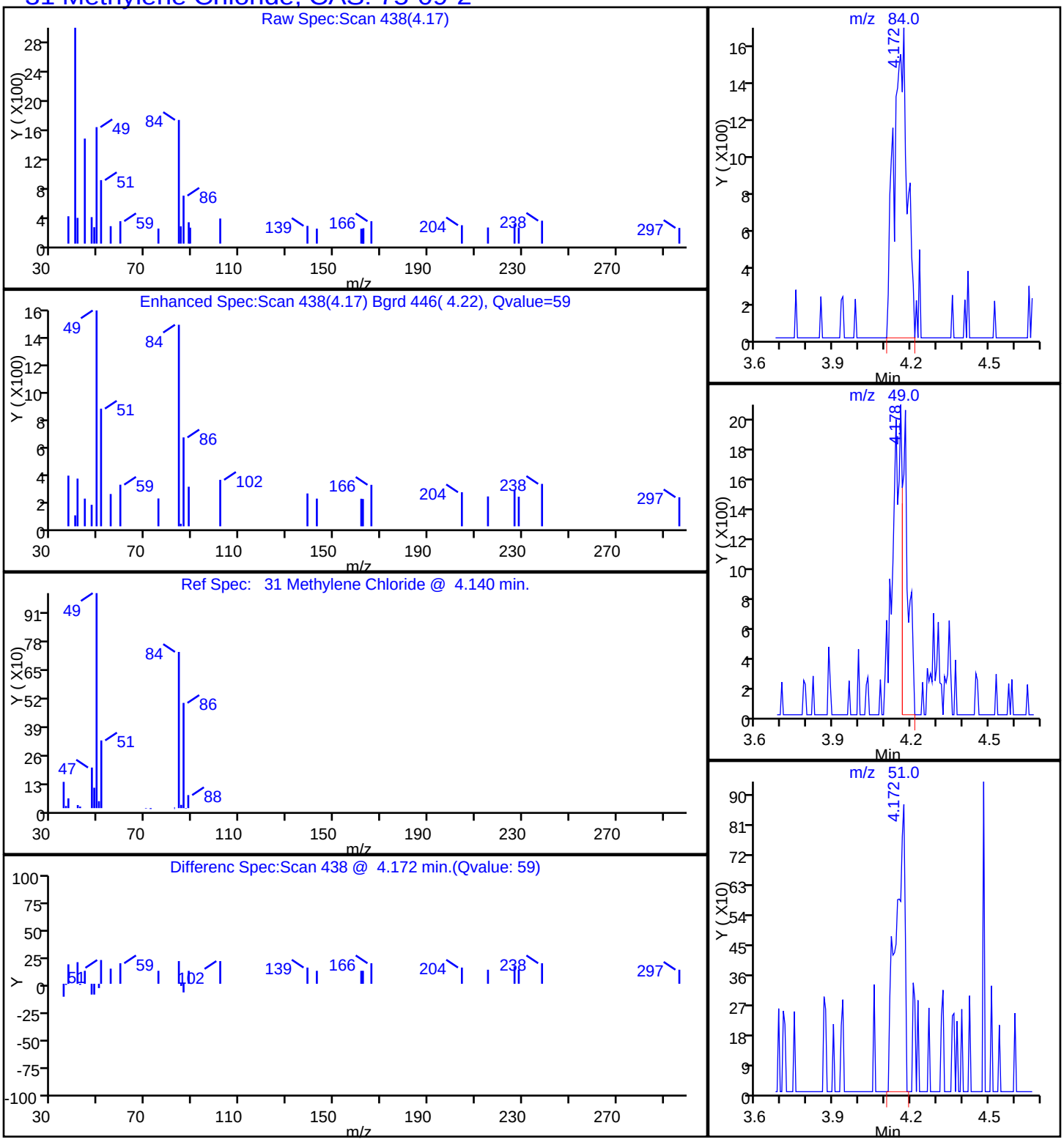
Operator ID: 001562 ALS Bottle#: 4 Worklist Smp#: 4

Purge Vol: 5.000 mL Dil. Factor: 1.0000

Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL

Column: DB-624 (0.18 mm) Detector MS SCAN

31 Methylene Chloride, CAS: 75-09-2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-135719/7

Matrix: Water | Lab File ID: 50317008.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 15:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	11.3		1.0	0.28
75-01-4	Vinyl chloride	10.9		1.0	0.23
74-83-9	Bromomethane	11.5		1.0	0.31
75-00-3	Chloroethane	10.4		1.0	0.21
75-35-4	1,1-Dichloroethene	10.0		1.0	0.30
67-64-1	Acetone	21.5		5.0	2.5
75-15-0	Carbon disulfide	9.58		1.0	0.21
75-09-2	Methylene Chloride	9.66		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	10.2		1.0	0.17
1634-04-4	Methyl tert-butyl ether	10.2		1.0	0.18
75-34-3	1,1-Dichloroethane	10.5		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	10.2		1.0	0.24
74-97-5	Bromochloromethane	10.3		1.0	0.18
78-93-3	2-Butanone (MEK)	19.0		5.0	0.55
67-66-3	Chloroform	10.3		1.0	0.17
71-55-6	1,1,1-Trichloroethane	10.3		1.0	0.29
56-23-5	Carbon tetrachloride	9.87		1.0	0.14
71-43-2	Benzene	10.6		1.0	0.11
107-06-2	1,2-Dichloroethane	10.7		1.0	0.21
79-01-6	Trichloroethene	10.4		1.0	0.14
78-87-5	1,2-Dichloropropane	10.5		1.0	0.095
75-27-4	Bromodichloromethane	10.4		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	10.1		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	18.1		5.0	0.53
108-88-3	Toluene	10.7		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.78		1.0	0.15
79-00-5	1,1,2-Trichloroethane	10.5		1.0	0.20
127-18-4	Tetrachloroethene	10.1		1.0	0.15
591-78-6	2-Hexanone	15.6		5.0	0.16
124-48-1	Dibromochloromethane	10.6		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	10.1		1.0	0.18
108-90-7	Chlorobenzene	10.3		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	10.4		1.0	0.28
100-41-4	Ethylbenzene	10.5		1.0	0.23
1330-20-7	Xylenes, Total	21.0		3.0	0.49
100-42-5	Styrene	10.6		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-135719/7

Matrix: Water Lab File ID: 50317008.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 15:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	10.2		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	10.4		1.0	0.20
107-13-1	Acrylonitrile	106		20	0.55
123-91-1	1,4-Dioxane	213		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-135
2037-26-5	Toluene-d8 (Surr)	104		71-118
460-00-4	4-Bromofluorobenzene (Surr)	104		70-118
1868-53-7	Dibromofluoromethane (Surr)	102		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317008.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 17-Mar-2015 15:54:30 ALS Bottle#: 8 Worklist Smp#: 7
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0006051-007
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 17-Mar-2015 16:14:56 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK012

First Level Reviewer: fergusond Date: 17-Mar-2015 16:14:56

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.323	4.311	0.012	85	142299	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.274	7.274	0.000	99	512018	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.364	10.358	0.006	99	119994	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.682	12.682	0.000	98	173292	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.526	6.526	0.000	98	118737	50.0	51.0	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.903	6.897	0.006	99	158301	50.0	51.6	
$ 7 Toluene-d8 (Surr)	98	8.922	8.923	-0.001	100	499179	50.0	52.2	
$ 8 4-Bromofluorobenzene (Surr	95	11.532	11.532	0.000	98	179345	50.0	52.1	
11 Dichlorodifluoromethane	85	1.622	1.616	0.006	99	135921	50.0	61.9	
12 Chloromethane	50	1.780	1.781	-0.001	99	171019	50.0	56.5	
13 Vinyl chloride	62	1.902	1.908	-0.006	100	183734	50.0	54.3	
14 Butadiene	39	1.951	1.951	0.000	98	201302	50.0	52.1	
15 Bromomethane	94	2.255	2.249	0.006	99	103983	50.0	57.4	
16 Chloroethane	64	2.383	2.377	0.006	99	121766	50.0	52.0	
17 Dichlorofluoromethane	67	2.656	2.657	-0.001	99	282241	50.0	52.8	
18 Trichlorofluoromethane	101	2.711	2.705	0.006	98	221418	50.0	54.5	
20 Ethyl ether	59	3.088	3.089	-0.001	99	139125	50.0	51.9	
21 Acrolein	56	3.259	3.265	-0.006	98	47034	150.0	144.6	
22 1,1-Dichloroethene	96	3.386	3.381	0.005	99	147556	50.0	50.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.423	3.435	-0.012	98	151399	50.0	50.7	
24 Acetone	43	3.502	3.496	0.006	100	112730	100.0	107.5	
25 Iodomethane	142	3.581	3.587	-0.006	100	216817	50.0	52.9	
26 Carbon disulfide	76	3.666	3.654	0.012	100	345973	50.0	47.9	
28 3-Chloro-1-propene	76	3.940	3.934	0.006	99	69879	50.0	44.8	
30 Methyl acetate	43	4.019	4.019	0.000	100	626136	250.0	255.2	
31 Methylene Chloride	84	4.141	4.147	-0.006	97	164998	50.0	48.3	
32 2-Methyl-2-propanol	59	4.439	4.445	-0.006	99	77341	500.0	461.4	
33 Acrylonitrile	53	4.555	4.549	0.005	100	667129	500.0	528.5	
34 trans-1,2-Dichloroethene	96	4.561	4.561	0.000	92	155071	50.0	50.8	
35 Methyl tert-butyl ether	73	4.597	4.597	0.000	99	344752	50.0	51.1	
36 Hexane	57	4.980	4.981	0.000	99	244293	50.0	50.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.169	5.163	0.006	100	287060	50.0	52.7	
38 Vinyl acetate	43	5.297	5.291	0.006	100	187774	50.0	48.6	
44 2,2-Dichloropropane	77	5.929	5.923	0.006	97	66286	50.0	48.6	
45 cis-1,2-Dichloroethene	96	5.935	5.936	-0.001	97	164840	50.0	51.2	
46 2-Butanone (MEK)	43	5.990	5.984	0.006	100	159503	100.0	95.1	
49 Chlorobromomethane	128	6.227	6.222	0.005	99	71963	50.0	51.7	
51 Tetrahydrofuran	42	6.294	6.282	0.012	98	108593	100.0	103.4	
52 Chloroform	83	6.349	6.343	0.006	100	256077	50.0	51.7	
53 1,1,1-Trichloroethane	97	6.532	6.526	0.006	98	162952	50.0	51.5	
54 Cyclohexane	56	6.586	6.580	0.006	98	301709	50.0	49.7	
56 Carbon tetrachloride	117	6.720	6.720	0.000	99	125277	50.0	49.4	
55 1,1-Dichloropropene	75	6.726	6.726	0.000	99	229993	50.0	56.0	
57 Isobutyl alcohol	41	6.951	6.939	0.012	98	77596	1250.0	1135.4	
58 Benzene	78	6.957	6.952	0.005	98	645218	50.0	53.2	
59 1,2-Dichloroethane	62	6.988	6.982	0.006	99	212105	50.0	53.4	
62 n-Heptane	43	7.280	7.274	0.006	81	201731	50.0	48.4	
64 Trichloroethene	130	7.669	7.669	0.000	99	158698	50.0	52.2	
66 Methylcyclohexane	83	7.858	7.864	-0.006	99	272224	50.0	50.2	
67 1,2-Dichloropropane	63	7.900	7.901	-0.001	99	157602	50.0	52.5	
68 Dibromomethane	93	8.022	8.022	0.000	98	85440	50.0	52.9	
70 1,4-Dioxane	88	8.065	8.065	0.000	98	33666	1000.0	1065.4	
71 Dichlorobromomethane	83	8.199	8.199	-0.001	99	171589	50.0	52.0	
74 cis-1,3-Dichloropropene	75	8.655	8.655	0.000	99	160888	50.0	50.6	
75 4-Methyl-2-pentanone (MIBK	43	8.825	8.825	0.000	99	293197	100.0	90.3	
76 Toluene	91	8.989	8.990	-0.001	100	659143	50.0	53.6	
77 trans-1,3-Dichloropropene	75	9.221	9.221	0.000	98	108647	50.0	48.9	
78 Ethyl methacrylate	69	9.318	9.318	0.000	98	143381	50.0	49.5	
79 1,1,2-Trichloroethane	97	9.397	9.403	-0.006	99	121479	50.0	52.7	
80 Tetrachloroethene	164	9.537	9.537	0.000	98	121209	50.0	50.4	
81 1,3-Dichloropropane	76	9.567	9.567	0.000	99	221404	50.0	51.7	
82 2-Hexanone	43	9.659	9.659	0.000	99	193681	100.0	78.1	
84 Chlorodibromomethane	129	9.792	9.786	0.006	98	97826	50.0	53.1	
85 Ethylene Dibromide	107	9.902	9.902	0.000	99	111097	50.0	50.5	
86 3-Chlorobenzotrifluoride	180	10.370	10.370	0.000	96	259950	50.0	55.4	
87 Chlorobenzene	112	10.389	10.395	-0.006	100	402909	50.0	51.7	
88 4-Chlorobenzotrifluoride	180	10.431	10.431	0.000	98	250476	50.0	55.2	
89 1,1,1,2-Tetrachloroethane	131	10.474	10.474	0.000	98	104969	50.0	52.2	
90 Ethylbenzene	106	10.504	10.504	0.000	100	235769	50.0	52.7	
91 m-Xylene & p-Xylene	106	10.620	10.620	0.000	100	287356	50.0	52.6	
92 o-Xylene	106	11.009	11.015	-0.006	99	280179	50.0	52.4	
93 Styrene	104	11.027	11.021	0.006	99	456688	50.0	53.0	
94 Bromoform	173	11.210	11.210	0.000	99	57772	50.0	50.8	
96 2-Chlorobenzotrifluoride	180	11.277	11.277	0.000	99	266432	50.0	56.9	
97 Isopropylbenzene	105	11.380	11.380	0.000	100	721233	50.0	54.1	
99 1,1,2,2-Tetrachloroethane	83	11.672	11.672	0.000	98	171413	50.0	51.8	
100 Bromobenzene	156	11.684	11.684	0.000	99	163555	50.0	51.0	
101 1,2,3-Trichloropropane	110	11.721	11.721	0.000	97	54036	50.0	51.3	
102 trans-1,4-Dichloro-2-buten	53	11.733	11.733	0.000	97	45017	50.0	51.4	
103 N-Propylbenzene	120	11.788	11.788	0.000	100	201417	50.0	50.9	
104 2-Chlorotoluene	126	11.873	11.873	0.000	100	165171	50.0	49.7	
105 3-Chlorotoluene	126	11.934	11.934	0.000	99	224062	50.0	60.3	
106 1,3,5-Trimethylbenzene	105	11.964	11.964	0.000	100	584837	50.0	53.0	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.982	11.983	-0.001	99	174644	50.0	48.5	
108 tert-Butylbenzene	119	12.287	12.287	0.000	99	500510	50.0	52.4	
110 1,2,4-Trimethylbenzene	105	12.335	12.335	0.000	97	581975	50.0	51.4	
111 1,2-dichloro-4-(trifluorom	214	12.402	12.402	0.000	99	197867	50.0	55.3	
112 sec-Butylbenzene	105	12.512	12.506	0.006	100	705470	50.0	52.4	
113 1,3-Dichlorobenzene	146	12.615	12.621	-0.006	99	304033	50.0	51.5	
114 4-Isopropyltoluene	119	12.652	12.652	0.000	100	580099	50.0	52.2	
115 1,4-Dichlorobenzene	146	12.712	12.707	0.005	100	310909	50.0	51.5	
116 2,4-Dichloro-1-(triflourom	214	12.761	12.755	0.006	99	188372	50.0	56.2	
118 2,5-Dichlorobenzotrifluori	214	12.810	12.804	0.006	98	203175	50.0	54.2	
120 n-Butylbenzene	91	13.059	13.059	0.000	100	524628	50.0	51.9	
121 1,2-Dichlorobenzene	146	13.084	13.084	0.000	99	280623	50.0	51.3	
122 1,2-Dibromo-3-Chloropropan	75	13.856	13.862	-0.006	93	19952	50.0	44.6	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.014	14.008	0.006	99	674695	150.0	163.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.428	14.428	0.000	99	444897	100.0	110.6	
126 1,2,4-Trichlorobenzene	180	14.696	14.696	0.000	99	139585	50.0	49.0	
127 Hexachlorobutadiene	225	14.866	14.860	0.006	97	64569	50.0	47.3	
128 Naphthalene	128	14.945	14.939	0.006	99	366723	50.0	49.0	
129 1,2,3-Trichlorobenzene	180	15.188	15.189	-0.001	98	112907	50.0	48.3	
131 2,4,5-Trichlorotoluene	159	15.967	15.967	0.000	97	60763	50.0	48.4	
130 2,3,6-Trichlorotoluene	159	16.064	16.065	-0.001	96	54965	50.0	48.5	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	105.0	
S 134 1,2-Dichloroethene, Total	96				0		100.0	102.0	
S 135 1,3-Dichloropropene, Total	1				0		100.0	99.5	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00106	Amount Added:	2.00	Units: uL	
voaWKet2 Rest_00002	Amount Added:	2.00	Units: uL	
VOAEE2ND_00001	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00006	Amount Added:	2.00	Units: uL	
VOAACRO2ND_00005	Amount Added:	6.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

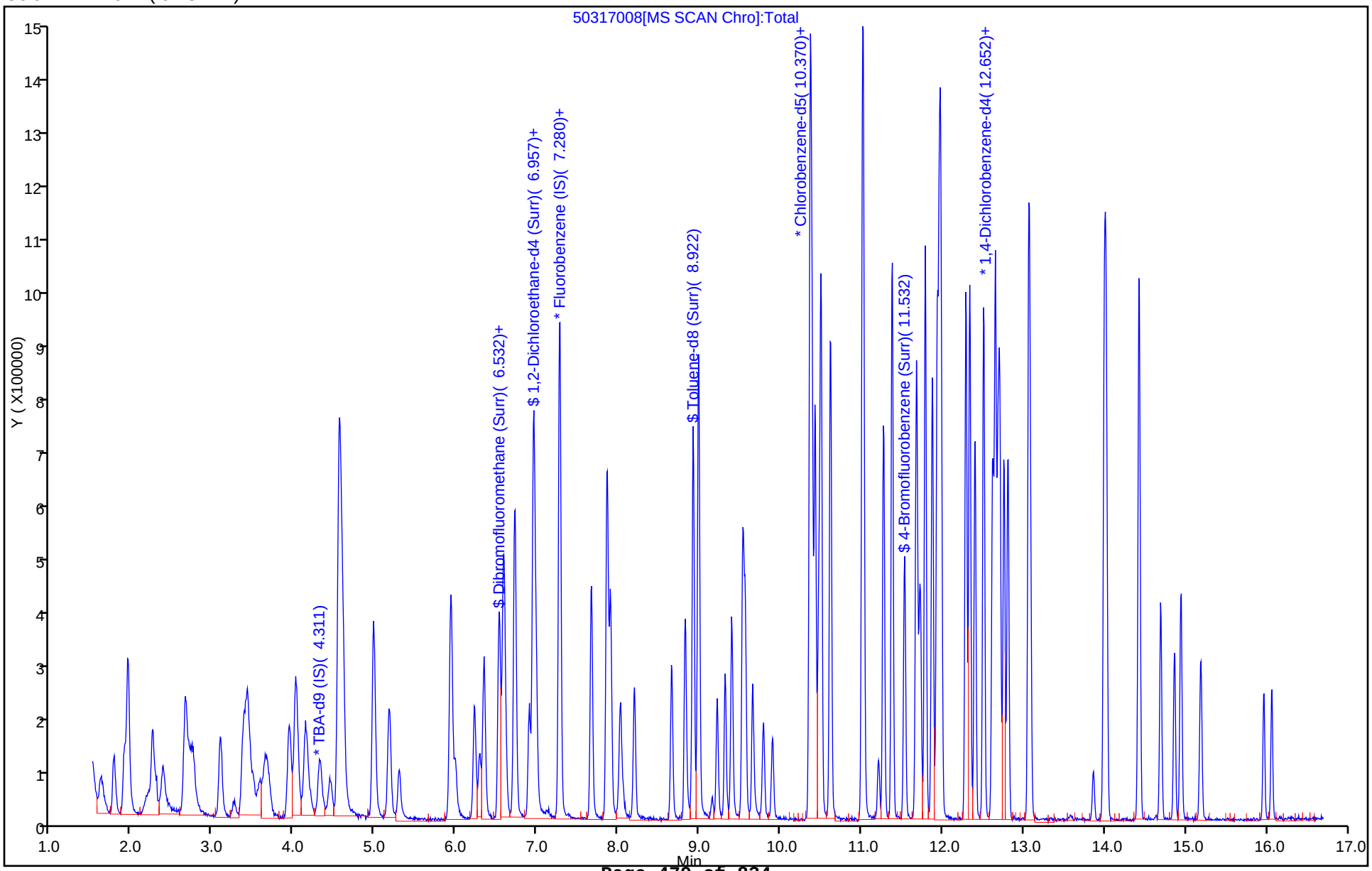
Report Date: 17-Mar-2015 16:14:56 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317008.D

Injection Date:	17-Mar-2015 15:54:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCS			Worklist Smp#:	7
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 180-135984/10

Matrix: Water | Lab File ID: 50319010.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 03/19/2015 15:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135984 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	8.56		1.0	0.28
75-01-4	Vinyl chloride	9.32		1.0	0.23
74-83-9	Bromomethane	8.40		1.0	0.31
75-00-3	Chloroethane	9.06		1.0	0.21
75-35-4	1,1-Dichloroethene	8.60		1.0	0.30
67-64-1	Acetone	25.5		5.0	2.5
75-15-0	Carbon disulfide	8.61		1.0	0.21
75-09-2	Methylene Chloride	7.82		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	8.60		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.44		1.0	0.18
75-34-3	1,1-Dichloroethane	8.82		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	8.70		1.0	0.24
74-97-5	Bromochloromethane	8.03		1.0	0.18
78-93-3	2-Butanone (MEK)	16.9		5.0	0.55
67-66-3	Chloroform	8.66		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.28		1.0	0.29
56-23-5	Carbon tetrachloride	8.90		1.0	0.14
71-43-2	Benzene	9.12		1.0	0.11
107-06-2	1,2-Dichloroethane	8.86		1.0	0.21
79-01-6	Trichloroethene	9.09		1.0	0.14
78-87-5	1,2-Dichloropropane	8.70		1.0	0.095
75-27-4	Bromodichloromethane	8.81		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	8.77		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	17.7		5.0	0.53
108-88-3	Toluene	9.82		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	8.19		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.12		1.0	0.20
127-18-4	Tetrachloroethene	9.28		1.0	0.15
591-78-6	2-Hexanone	15.9		5.0	0.16
124-48-1	Dibromochloromethane	9.62		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.29		1.0	0.18
108-90-7	Chlorobenzene	9.62		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.02		1.0	0.28
100-41-4	Ethylbenzene	9.53		1.0	0.23
1330-20-7	Xylenes, Total	18.6		3.0	0.49
100-42-5	Styrene	9.63		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-135984/10

Matrix: Water Lab File ID: 50319010.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 03/19/2015 15:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135984 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.78		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.09		1.0	0.20
107-13-1	Acrylonitrile	88.8		20	0.55
123-91-1	1,4-Dioxane	175	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		64-135
2037-26-5	Toluene-d8 (Surr)	92		71-118
460-00-4	4-Bromofluorobenzene (Surr)	89		70-118
1868-53-7	Dibromofluoromethane (Surr)	85		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319010.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Mar-2015 15:55:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: LCS
Misc. Info.: 180-0006092-010
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 19-Mar-2015 16:17:10 Calib Date: 18-Mar-2015 16:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150318-6071.b\50318010.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK007

First Level Reviewer: fergusond Date: 19-Mar-2015 16:17:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.298	0.023	97	138831	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.273	-0.002	100	545539	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.368	10.363	0.005	98	121466	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.687	-0.002	96	174559	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.529	6.531	-0.002	96	105374	50.0	42.5	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.896	0.004	100	143658	50.0	43.9	
$ 7 Toluene-d8 (Surr)	98	8.920	8.922	-0.002	100	445991	50.0	46.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.531	-0.001	97	155587	50.0	44.6	
11 Dichlorodifluoromethane	85	1.626	1.615	0.011	97	108471	50.0	46.4	
12 Chloromethane	50	1.784	1.780	0.004	99	138150	50.0	42.8	
13 Vinyl chloride	62	1.912	1.907	0.005	100	168154	50.0	46.6	
14 Butadiene	39	1.948	1.950	-0.002	99	191710	50.0	46.5	
15 Bromomethane	94	2.258	2.254	0.004	99	83379	50.0	42.0	
16 Chloroethane	64	2.386	2.394	-0.008	98	113116	50.0	45.3	
17 Dichlorofluoromethane	67	2.660	2.662	-0.002	99	260101	50.0	45.6	
18 Trichlorofluoromethane	101	2.708	2.716	-0.008	95	190904	50.0	44.1	
20 Ethyl ether	59	3.086	3.087	-0.001	100	123517	50.0	43.3	
21 Acrolein	56	3.262	3.258	0.004	97	48202	150.0	139.1	
22 1,1-Dichloroethene	96	3.378	3.386	-0.008	98	135303	50.0	43.0	
23 1,1,2-Trichloro-1,2,2-trif	101	3.439	3.434	0.004	98	145836	50.0	45.8	
24 Acetone	43	3.499	3.501	-0.002	99	142332	100.0	127.4	
25 Iodomethane	142	3.578	3.574	0.004	99	186650	50.0	42.7	
26 Carbon disulfide	76	3.658	3.647	0.011	100	331151	50.0	43.0	
28 3-Chloro-1-propene	76	3.937	3.933	0.004	99	72994	50.0	43.9	
30 Methyl acetate	43	4.016	4.018	-0.002	100	583279	250.0	223.1	
31 Methylene Chloride	84	4.144	4.146	-0.002	97	142189	50.0	39.1	
32 2-Methyl-2-propanol	59	4.442	4.438	0.004	98	74774	500.0	457.2	
33 Acrylonitrile	53	4.552	4.554	-0.002	99	597238	500.0	444.1	
34 trans-1,2-Dichloroethene	96	4.564	4.560	0.004	62	139982	50.0	43.0	
35 Methyl tert-butyl ether	73	4.594	4.590	0.004	100	303415	50.0	42.2	
36 Hexane	57	4.978	4.979	-0.001	99	231069	50.0	44.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.172	5.174	-0.002	100	256275	50.0	44.1	
38 Vinyl acetate	43	5.294	5.290	0.004	100	149986	50.0	36.4	
44 2,2-Dichloropropane	77	5.921	5.928	-0.007	98	67050	50.0	46.2	
45 cis-1,2-Dichloroethene	96	5.939	5.935	0.004	98	149093	50.0	43.5	
46 2-Butanone (MEK)	43	5.987	5.983	0.004	99	151374	100.0	84.7	
49 Chlorobromomethane	128	6.231	6.220	0.011	99	59579	50.0	40.2	
51 Tetrahydrofuran	42	6.286	6.287	-0.001	98	93574	100.0	83.6	
52 Chloroform	83	6.346	6.342	0.004	100	228382	50.0	43.3	
53 1,1,1-Trichloroethane	97	6.529	6.525	0.004	96	156305	50.0	46.4	
54 Cyclohexane	56	6.590	6.585	0.005	98	286174	50.0	44.2	
56 Carbon tetrachloride	117	6.717	6.713	0.004	99	120368	50.0	44.5	
55 1,1-Dichloropropene	75	6.724	6.725	-0.001	99	196529	50.0	44.9	
57 Isobutyl alcohol	41	6.943	6.938	0.005	99	70136	1250.0	963.2	
58 Benzene	78	6.955	6.950	0.005	99	589713	50.0	45.6	
59 1,2-Dichloroethane	62	6.985	6.981	0.004	98	187461	50.0	44.3	
62 n-Heptane	43	7.283	7.279	0.004	80	198899	50.0	44.8	
64 Trichloroethene	130	7.667	7.662	0.005	98	147166	50.0	45.4	
66 Methylcyclohexane	83	7.861	7.863	-0.002	100	259962	50.0	45.0	
67 1,2-Dichloropropane	63	7.904	7.900	0.004	99	139184	50.0	43.5	
68 Dibromomethane	93	8.019	8.021	-0.002	97	77301	50.0	44.9	
70 1,4-Dioxane	88	8.062	8.052	0.010	96	29380	1000.0	872.6	M
71 Dichlorobromomethane	83	8.196	8.198	-0.002	98	154675	50.0	44.0	
73 2-Chloroethyl vinyl ether	63	8.524	8.520	0.004	99	163139	100.0	90.5	
74 cis-1,3-Dichloropropene	75	8.658	8.654	0.004	99	148655	50.0	43.9	
75 4-Methyl-2-pentanone (MIBK	43	8.822	8.824	-0.002	99	290785	100.0	88.5	
76 Toluene	91	8.993	8.988	0.005	100	611365	50.0	49.1	
77 trans-1,3-Dichloropropene	75	9.218	9.214	0.004	100	92100	50.0	41.0	
78 Ethyl methacrylate	69	9.315	9.317	-0.002	97	129843	50.0	44.3	
79 1,1,2-Trichloroethane	97	9.400	9.402	-0.002	98	106412	50.0	45.6	
80 Tetrachloroethene	164	9.534	9.536	-0.002	98	112926	50.0	46.4	
81 1,3-Dichloropropane	76	9.565	9.566	-0.001	99	205700	50.0	47.4	
82 2-Hexanone	43	9.656	9.658	-0.002	99	200162	100.0	79.7	
84 Chlorodibromomethane	129	9.790	9.785	0.005	98	89636	50.0	48.1	
85 Ethylene Dibromide	107	9.899	9.901	-0.002	98	103450	50.0	46.4	
86 3-Chlorobenzotrifluoride	180	10.374	10.369	0.005	92	223776	50.0	47.1	
87 Chlorobenzene	112	10.392	10.388	0.004	99	379402	50.0	48.1	
88 4-Chlorobenzotrifluoride	180	10.428	10.424	0.004	99	215986	50.0	47.0	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.473	0.004	97	91855	50.0	45.1	
90 Ethylbenzene	106	10.501	10.497	0.004	100	215701	50.0	47.7	
91 m-Xylene & p-Xylene	106	10.617	10.619	-0.002	100	258637	50.0	46.7	
92 o-Xylene	106	11.012	11.008	0.004	96	250138	50.0	46.2	
93 Styrene	104	11.025	11.026	-0.001	98	420119	50.0	48.2	
94 Bromoform	173	11.213	11.215	-0.002	98	50494	50.0	43.9	
96 2-Chlorobenzotrifluoride	180	11.274	11.276	-0.002	99	221552	50.0	46.7	
97 Isopropylbenzene	105	11.377	11.379	-0.002	100	666482	50.0	49.3	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.677	-0.001	98	152162	50.0	45.5	
100 Bromobenzene	156	11.688	11.683	0.005	99	148331	50.0	45.9	
101 1,2,3-Trichloropropane	110	11.718	11.720	-0.002	97	49057	50.0	46.2	
102 trans-1,4-Dichloro-2-buten	53	11.730	11.732	-0.002	97	32698	50.0	37.0	
103 N-Propylbenzene	120	11.785	11.793	-0.008	100	183724	50.0	46.1	
104 2-Chlorotoluene	126	11.876	11.872	0.004	100	154427	50.0	46.1	
105 3-Chlorotoluene	126	11.937	11.933	0.004	100	176414	50.0	47.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
106 1,3,5-Trimethylbenzene	105	11.961	11.963	-0.002	100	534323	50.0	48.1	
107 4-Chlorotoluene	126	11.980	11.982	-0.002	98	162027	50.0	44.7	
108 tert-Butylbenzene	119	12.290	12.286	0.004	100	448146	50.0	46.5	
110 1,2,4-Trimethylbenzene	105	12.333	12.334	-0.001	99	534375	50.0	46.9	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.401	-0.002	99	170856	50.0	47.4	
112 sec-Butylbenzene	105	12.509	12.505	0.004	100	657558	50.0	48.5	
113 1,3-Dichlorobenzene	146	12.618	12.620	-0.002	99	276801	50.0	46.5	
114 4-Isopropyltoluene	119	12.649	12.651	-0.002	100	524035	50.0	46.8	
115 1,4-Dichlorobenzene	146	12.710	12.705	0.005	99	280290	50.0	46.1	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.760	-0.002	98	160669	50.0	47.6	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.809	-0.002	99	171249	50.0	45.4	
120 n-Butylbenzene	91	13.063	13.064	-0.001	99	493254	50.0	48.4	
121 1,2-Dichlorobenzene	146	13.081	13.083	-0.002	100	257447	50.0	46.7	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.861	-0.002	95	18374	50.0	40.7	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.007	-0.002	99	578188	150.0	138.8	
124 1,3,5-Trichlorobenzene	180	14.072	14.068	0.004	98	152785	50.0	45.7	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.427	-0.002	100	354347	100.0	87.4	
126 1,2,4-Trichlorobenzene	180	14.693	14.695	-0.002	98	122994	50.0	42.9	
127 Hexachlorobutadiene	225	14.857	14.865	-0.008	97	61185	50.0	44.5	
128 Naphthalene	128	14.942	14.944	-0.002	100	320181	50.0	42.5	
129 1,2,3-Trichlorobenzene	180	15.186	15.181	0.005	99	97691	50.0	41.5	
131 2,4,5-Trichlorotoluene	159	15.964	15.966	-0.002	97	50145	50.0	39.6	
130 2,3,6-Trichlorotoluene	159	16.062	16.064	-0.002	98	43183	50.0	37.8	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
S 134 1,2-Dichloroethene, Total	96				0		100.0	86.5	
S 133 Xylenes, Total	106				0		100.0	92.9	
S 135 1,3-Dichloropropene, Total	1				0		100.0	84.8	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

VOA8260VOA2ND_00106	Amount Added:	2.00	Units: uL	
voaW1,3,5TCab_00001	Amount Added:	2.00	Units: uL	
voaWKet2 Rest_00002	Amount Added:	2.00	Units: uL	
VOAEE2ND_00001	Amount Added:	2.00	Units: uL	
voaW2cle2ndRe_00002	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00006	Amount Added:	2.00	Units: uL	
VOAACRO2ND_00005	Amount Added:	6.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

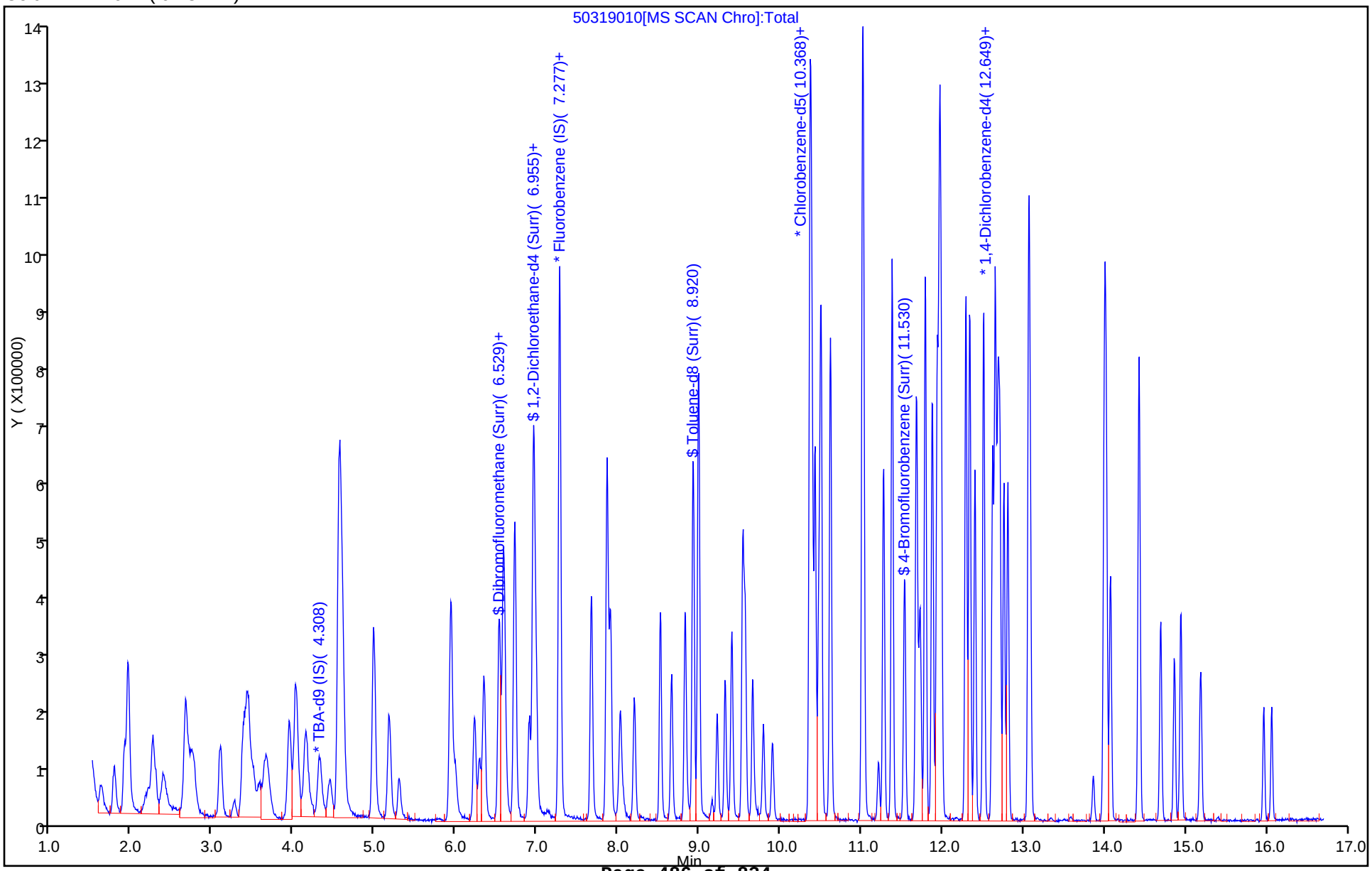
Report Date: 19-Mar-2015 16:17:10 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319010.D

Injection Date:	19-Mar-2015 15:55:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	LCS			Worklist Smp#:	10
Client ID:					
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



Manual Integration/User Assign Peak Report

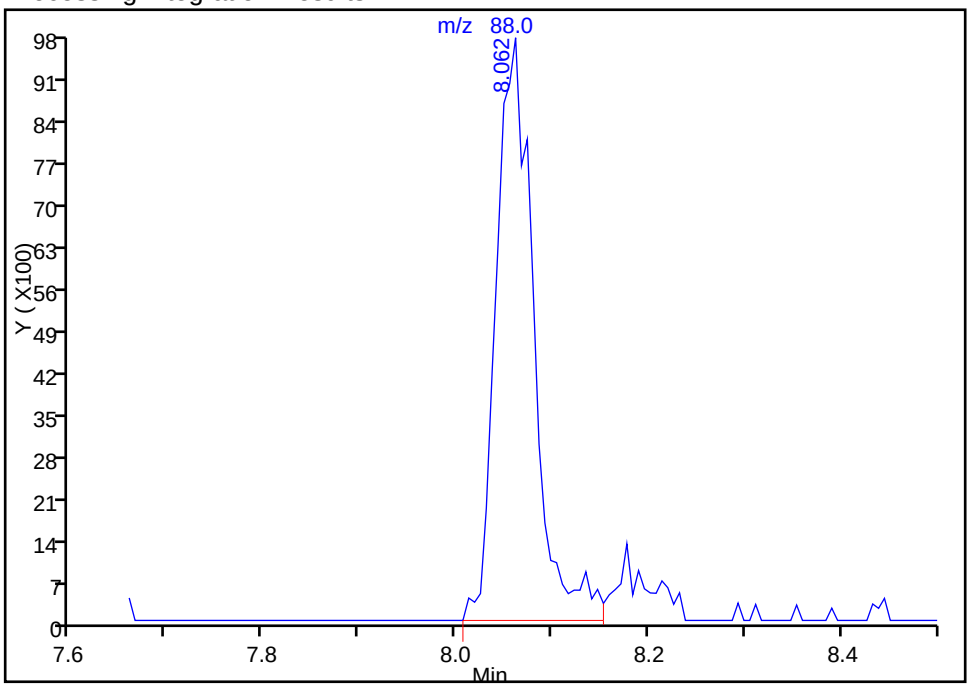
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150319-6092.b\50319010.D
Injection Date: 19-Mar-2015 15:55:30 Instrument ID: CHHP5
Lims ID: LCS
Client ID:
Operator ID: 001562 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Method: MSVOA_LL_CHHP5 Limit Group: VOA 8260C ICAL
Column: DB-624 (0.18 mm) Detector MS SCAN

70 1,4-Dioxane, CAS: 123-91-1

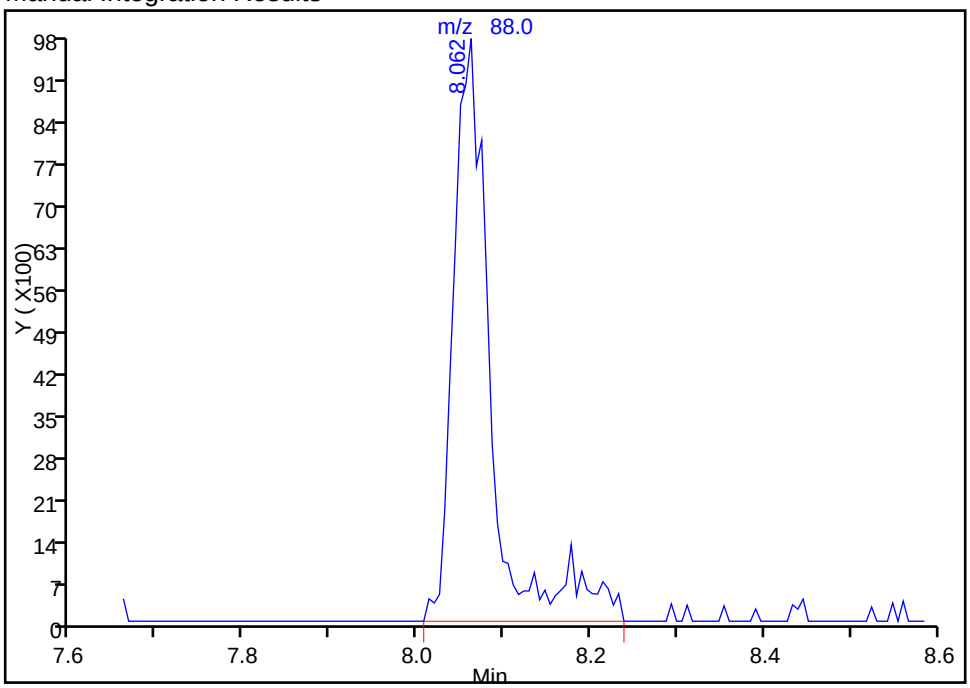
Processing Integration Results

RT: 8.06
Area: 26637
Amount: 791.1368
Amount Units: ng



Manual Integration Results

RT: 8.06
Area: 29380
Amount: 872.6057
Amount Units: ng



Reviewer: fergusond, 19-Mar-2015 16:17:10
Audit Action: Manually Integrated
Audit Reason: Peak Tail

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh | Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MS | Lab Sample ID: 180-41935-11 MS

Matrix: Water | Lab File ID: 50317009.D

Analysis Method: 8260C | Date Collected: 03/10/2015 11:00

Sample wt/vol: 5(mL) | Date Analyzed: 03/17/2015 16:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 135719 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	10.1		1.0	0.28
75-01-4	Vinyl chloride	10.0		1.0	0.23
74-83-9	Bromomethane	10.3		1.0	0.31
75-00-3	Chloroethane	9.73		1.0	0.21
75-35-4	1,1-Dichloroethene	8.78		1.0	0.30
67-64-1	Acetone	22.9		5.0	2.5
75-15-0	Carbon disulfide	8.19		1.0	0.21
75-09-2	Methylene Chloride	8.13		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	8.88		1.0	0.17
1634-04-4	Methyl tert-butyl ether	8.95		1.0	0.18
75-34-3	1,1-Dichloroethane	9.52		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	9.86		1.0	0.24
74-97-5	Bromochloromethane	8.52		1.0	0.18
78-93-3	2-Butanone (MEK)	17.2		5.0	0.55
67-66-3	Chloroform	8.93		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.06		1.0	0.29
56-23-5	Carbon tetrachloride	8.93		1.0	0.14
71-43-2	Benzene	9.26		1.0	0.11
107-06-2	1,2-Dichloroethane	9.24		1.0	0.21
79-01-6	Trichloroethene	9.91		1.0	0.14
78-87-5	1,2-Dichloropropane	9.12		1.0	0.095
75-27-4	Bromodichloromethane	8.75		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	8.41		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	18.9		5.0	0.53
108-88-3	Toluene	10.1		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.10		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.58		1.0	0.20
127-18-4	Tetrachloroethene	13.2		1.0	0.15
591-78-6	2-Hexanone	15.1		5.0	0.16
124-48-1	Dibromochloromethane	9.42		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.73		1.0	0.18
108-90-7	Chlorobenzene	9.81		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.70		1.0	0.28
100-41-4	Ethylbenzene	9.64		1.0	0.23
1330-20-7	Xylenes, Total	19.1		3.0	0.49
100-42-5	Styrene	9.60		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MS Lab Sample ID: 180-41935-11 MS

Matrix: Water Lab File ID: 50317009.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 16:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.84		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.53		1.0	0.20
107-13-1	Acrylonitrile	91.2		20	0.55
123-91-1	1,4-Dioxane	184	J	200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		64-135
2037-26-5	Toluene-d8 (Surr)	110		71-118
460-00-4	4-Bromofluorobenzene (Surr)	100		70-118
1868-53-7	Dibromofluoromethane (Surr)	94		70-128

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317009.D
Lims ID: 180-41935-D-11 MS
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MS
Inject. Date: 17-Mar-2015 16:18:30 ALS Bottle#: 9 Worklist Smp#: 9
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-D-11 MS
Misc. Info.: 180-0006051-009
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 00:37:22 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:05:16

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.321	4.311	0.010	85	158862	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.271	7.274	-0.003	99	578620	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.362	10.358	0.004	94	125151	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.680	12.682	-0.002	99	185571	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.523	6.526	-0.003	96	124140	50.0	47.2	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.900	6.897	0.003	98	168359	50.0	48.5	
$ 7 Toluene-d8 (Surr)	98	8.920	8.923	-0.003	100	549764	50.0	55.1	
$ 8 4-Bromofluorobenzene (Surr	95	11.530	11.532	-0.002	98	179889	50.0	50.1	
11 Dichlorodifluoromethane	85	1.620	1.616	0.004	99	151259	50.0	61.0	
12 Chloromethane	50	1.766	1.781	-0.015	100	172765	50.0	50.5	
13 Vinyl chloride	62	1.906	1.908	-0.002	99	192123	50.0	50.2	
14 Butadiene	39	1.942	1.951	-0.009	99	202279	50.0	46.3	
15 Bromomethane	94	2.252	2.249	0.003	99	106348	50.0	51.5	
16 Chloroethane	64	2.374	2.377	-0.003	98	128731	50.0	48.6	
17 Dichlorofluoromethane	67	2.648	2.657	-0.009	100	279498	50.0	46.2	
18 Trichlorofluoromethane	101	2.727	2.705	0.022	99	220440	50.0	48.0	
20 Ethyl ether	59	3.086	3.089	-0.003	99	133420	50.0	44.1	
21 Acrolein	56	3.262	3.265	-0.003	99	47924	150.0	130.3	
22 1,1-Dichloroethene	96	3.378	3.381	-0.003	98	146408	50.0	43.9	
23 1,1,2-Trichloro-1,2,2-trif	101	3.433	3.435	-0.002	98	148240	50.0	43.9	
24 Acetone	43	3.500	3.496	0.004	99	135435	100.0	114.3	
25 Iodomethane	142	3.591	3.587	0.004	100	211400	50.0	45.6	
26 Carbon disulfide	76	3.658	3.654	0.004	100	334276	50.0	41.0	
28 3-Chloro-1-propene	76	3.938	3.934	0.004	99	70895	50.0	40.2	
30 Methyl acetate	43	4.023	4.019	0.004	100	630454	250.0	227.3	
31 Methylene Chloride	84	4.144	4.147	-0.003	99	156881	50.0	40.7	
32 2-Methyl-2-propanol	59	4.443	4.445	-0.003	96	81763	500.0	436.9	
33 Acrylonitrile	53	4.552	4.549	0.003	99	650670	500.0	456.1	
34 trans-1,2-Dichloroethene	96	4.564	4.561	0.003	61	153252	50.0	44.4	
35 Methyl tert-butyl ether	73	4.601	4.597	0.004	99	341431	50.0	44.7	
36 Hexane	57	4.984	4.981	0.004	98	239201	50.0	43.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.173	5.163	0.010	100	293105	50.0	47.6	
38 Vinyl acetate	43	5.294	5.291	0.003	100	205491	50.0	47.0	
44 2,2-Dichloropropane	77	5.921	5.923	-0.002	97	67833	50.0	44.0	
45 cis-1,2-Dichloroethene	96	5.939	5.936	0.003	97	179235	50.0	49.3	
46 2-Butanone (MEK)	43	5.994	5.984	0.010	100	163198	100.0	86.1	
49 Chlorobromomethane	128	6.225	6.222	0.003	99	67004	50.0	42.6	
51 Tetrahydrofuran	42	6.286	6.282	0.004	99	108543	100.0	91.5	
52 Chloroform	83	6.341	6.343	-0.002	100	249997	50.0	44.7	
53 1,1,1-Trichloroethane	97	6.529	6.526	0.003	96	161810	50.0	45.3	
54 Cyclohexane	56	6.584	6.580	0.004	98	297321	50.0	43.3	
56 Carbon tetrachloride	117	6.718	6.720	-0.002	99	127981	50.0	44.6	
55 1,1-Dichloropropene	75	6.724	6.726	-0.002	97	223757	50.0	48.2	
57 Isobutyl alcohol	41	6.949	6.939	0.010	98	75814	1250.0	981.6	
58 Benzene	78	6.955	6.952	0.003	99	634872	50.0	46.3	
59 1,2-Dichloroethane	62	6.985	6.982	0.003	100	207385	50.0	46.2	
62 n-Heptane	43	7.277	7.274	0.003	77	202486	50.0	43.0	
64 Trichloroethene	130	7.667	7.669	-0.002	99	170259	50.0	49.6	
66 Methylcyclohexane	83	7.861	7.864	-0.003	100	271482	50.0	44.3	
67 1,2-Dichloropropane	63	7.898	7.901	-0.003	98	154743	50.0	45.6	
68 Dibromomethane	93	8.026	8.022	0.004	99	83425	50.0	45.7	
70 1,4-Dioxane	88	8.062	8.065	-0.003	96	32812	1000.0	918.8	
71 Dichlorobromomethane	83	8.196	8.199	-0.003	99	162986	50.0	43.7	
74 cis-1,3-Dichloropropene	75	8.658	8.655	0.003	99	151214	50.0	42.1	
75 4-Methyl-2-pentanone (MIBK	43	8.823	8.825	-0.002	99	319408	100.0	94.3	
76 Toluene	91	8.993	8.990	0.003	100	650001	50.0	50.7	
77 trans-1,3-Dichloropropene	75	9.224	9.221	0.003	99	105440	50.0	45.5	
78 Ethyl methacrylate	69	9.315	9.318	-0.003	98	135589	50.0	44.9	
79 1,1,2-Trichloroethane	97	9.394	9.403	-0.009	98	115252	50.0	47.9	
80 Tetrachloroethene	164	9.534	9.537	-0.003	99	165064	50.0	65.8	
81 1,3-Dichloropropane	76	9.565	9.567	-0.002	99	216977	50.0	48.5	
82 2-Hexanone	43	9.656	9.659	-0.003	99	195897	100.0	75.7	
84 Chlorodibromomethane	129	9.784	9.786	-0.002	98	90447	50.0	47.1	
85 Ethylene Dibromide	107	9.899	9.902	-0.003	100	111670	50.0	48.7	
86 3-Chlorobenzotrifluoride	180	10.374	10.370	0.004	96	276938	50.0	56.6	
87 Chlorobenzene	112	10.392	10.395	-0.003	99	398560	50.0	49.0	
88 4-Chlorobenzotrifluoride	180	10.429	10.431	-0.002	99	268506	50.0	56.8	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.474	0.003	99	101796	50.0	48.5	
90 Ethylbenzene	106	10.502	10.504	-0.002	100	224734	50.0	48.2	
91 m-Xylene & p-Xylene	106	10.617	10.620	-0.003	100	274119	50.0	48.1	
92 o-Xylene	106	11.013	11.015	-0.002	99	265466	50.0	47.6	
93 Styrene	104	11.025	11.021	0.004	99	431476	50.0	48.0	
94 Bromoform	173	11.213	11.210	0.003	97	52380	50.0	44.2	
96 2-Chlorobenzotrifluoride	180	11.274	11.277	-0.003	99	275792	50.0	56.4	
97 Isopropylbenzene	105	11.378	11.380	-0.002	100	707060	50.0	50.8	
99 1,1,2,2-Tetrachloroethane	83	11.676	11.672	0.004	98	164383	50.0	47.7	
100 Bromobenzene	156	11.682	11.684	-0.002	100	158152	50.0	46.0	
101 1,2,3-Trichloropropane	110	11.724	11.721	0.003	97	52140	50.0	46.2	
102 trans-1,4-Dichloro-2-buten	53	11.731	11.733	-0.003	96	39508	50.0	42.1	
103 N-Propylbenzene	120	11.785	11.788	-0.003	100	193352	50.0	45.6	
104 2-Chlorotoluene	126	11.870	11.873	-0.003	100	162914	50.0	45.8	
105 3-Chlorotoluene	126	11.937	11.934	0.003	99	219849	50.0	55.3	
106 1,3,5-Trimethylbenzene	105	11.962	11.964	-0.002	99	568811	50.0	48.2	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.980	11.983	-0.003	98	168079	50.0	43.6	
108 tert-Butylbenzene	119	12.290	12.287	0.003	98	494221	50.0	48.3	
110 1,2,4-Trimethylbenzene	105	12.339	12.335	0.004	99	565601	50.0	46.6	
111 1,2-dichloro-4-(trifluorom	214	12.400	12.402	-0.002	99	203637	50.0	53.2	
112 sec-Butylbenzene	105	12.509	12.506	0.003	100	683137	50.0	47.4	
113 1,3-Dichlorobenzene	146	12.619	12.621	-0.002	98	294136	50.0	46.5	
114 4-Isopropyltoluene	119	12.649	12.652	-0.003	100	563470	50.0	47.4	
115 1,4-Dichlorobenzene	146	12.704	12.707	-0.003	99	306649	50.0	47.5	
116 2,4-Dichloro-1-(triflourom	214	12.759	12.755	0.004	98	195755	50.0	54.6	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.804	0.003	99	213509	50.0	53.2	
120 n-Butylbenzene	91	13.063	13.059	0.004	100	511290	50.0	47.2	
121 1,2-Dichlorobenzene	146	13.081	13.084	-0.003	99	277839	50.0	47.4	
122 1,2-Dibromo-3-Chloropropan	75	13.860	13.862	-0.002	97	22133	50.0	46.2	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.006	14.008	-0.002	99	731543	150.0	165.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.428	-0.003	100	472103	100.0	109.6	
126 1,2,4-Trichlorobenzene	180	14.693	14.696	-0.003	99	145174	50.0	47.6	
127 Hexachlorobutadiene	225	14.863	14.860	0.003	97	66237	50.0	45.3	
128 Naphthalene	128	14.943	14.939	0.004	100	402308	50.0	50.2	
129 1,2,3-Trichlorobenzene	180	15.186	15.189	-0.003	97	120092	50.0	48.0	
131 2,4,5-Trichlorotoluene	159	15.965	15.967	-0.002	96	74294	50.0	55.2	
130 2,3,6-Trichlorotoluene	159	16.062	16.065	-0.003	98	69245	50.0	57.0	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	95.7	
S 134 1,2-Dichloroethene, Total	96				0		100.0	93.7	
S 135 1,3-Dichloropropene, Total	1				0		100.0	87.6	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOA8260VOA2ND_00106	Amount Added:	2.00	Units: uL	
voaWKet2 Rest_00002	Amount Added:	2.00	Units: uL	
VOAEE2ND_00001	Amount Added:	2.00	Units: uL	
voaWVA2nd Res_00006	Amount Added:	2.00	Units: uL	
VOAACRO2ND_00005	Amount Added:	6.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

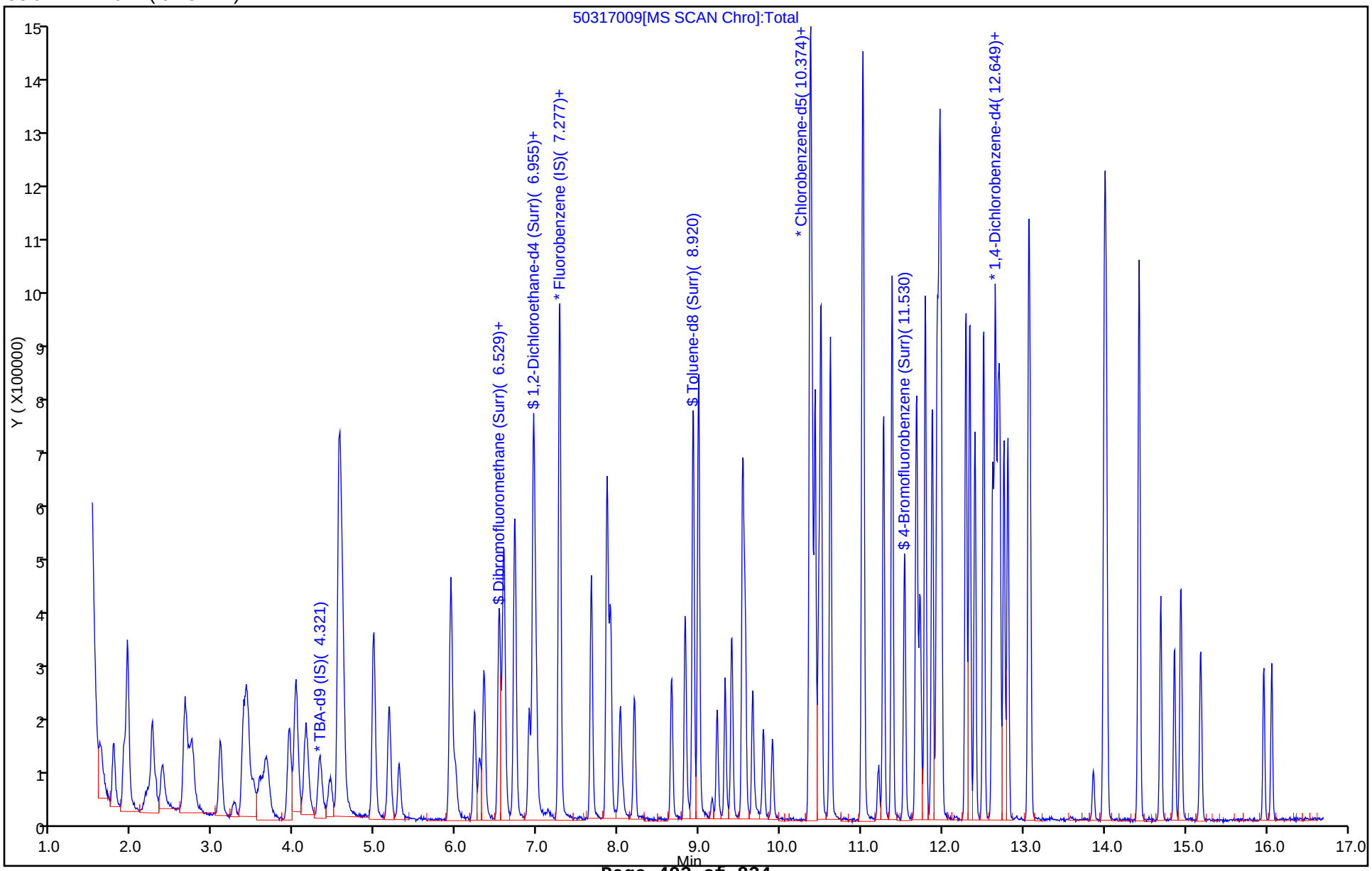
Report Date: 18-Mar-2015 10:05:16 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317009.D

Injection Date:	17-Mar-2015 16:18:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-D-11 MS			Worklist Smp#:	9
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MSD Lab Sample ID: 180-41935-11 MSD

Matrix: Water Lab File ID: 50317010.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 16:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-87-3	Chloromethane	10.7		1.0	0.28
75-01-4	Vinyl chloride	10.4		1.0	0.23
74-83-9	Bromomethane	12.0		1.0	0.31
75-00-3	Chloroethane	10.4		1.0	0.21
75-35-4	1,1-Dichloroethene	9.30		1.0	0.30
67-64-1	Acetone	23.7		5.0	2.5
75-15-0	Carbon disulfide	8.59		1.0	0.21
75-09-2	Methylene Chloride	8.77		1.0	0.13
156-60-5	trans-1,2-Dichloroethene	9.70		1.0	0.17
1634-04-4	Methyl tert-butyl ether	9.83		1.0	0.18
75-34-3	1,1-Dichloroethane	10.2		1.0	0.12
156-59-2	cis-1,2-Dichloroethene	11.0		1.0	0.24
74-97-5	Bromochloromethane	9.45		1.0	0.18
78-93-3	2-Butanone (MEK)	19.4		5.0	0.55
67-66-3	Chloroform	9.82		1.0	0.17
71-55-6	1,1,1-Trichloroethane	9.71		1.0	0.29
56-23-5	Carbon tetrachloride	9.34		1.0	0.14
71-43-2	Benzene	10.1		1.0	0.11
107-06-2	1,2-Dichloroethane	10.0		1.0	0.21
79-01-6	Trichloroethene	10.6		1.0	0.14
78-87-5	1,2-Dichloropropane	9.87		1.0	0.095
75-27-4	Bromodichloromethane	9.37		1.0	0.13
10061-01-5	cis-1,3-Dichloropropene	9.44		1.0	0.19
108-10-1	4-Methyl-2-pentanone (MIBK)	18.5		5.0	0.53
108-88-3	Toluene	9.98		1.0	0.15
10061-02-6	trans-1,3-Dichloropropene	9.54		1.0	0.15
79-00-5	1,1,2-Trichloroethane	9.96		1.0	0.20
127-18-4	Tetrachloroethene	12.7		1.0	0.15
591-78-6	2-Hexanone	15.8		5.0	0.16
124-48-1	Dibromochloromethane	9.20		1.0	0.14
106-93-4	1,2-Dibromoethane (EDB)	9.38		1.0	0.18
108-90-7	Chlorobenzene	9.89		1.0	0.14
630-20-6	1,1,1,2-Tetrachloroethane	9.13		1.0	0.28
100-41-4	Ethylbenzene	9.81		1.0	0.23
1330-20-7	Xylenes, Total	19.5		3.0	0.49
100-42-5	Styrene	9.80		1.0	0.097

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MSD Lab Sample ID: 180-41935-11 MSD

Matrix: Water Lab File ID: 50317010.D

Analysis Method: 8260C Date Collected: 03/10/2015 11:00

Sample wt/vol: 5(mL) Date Analyzed: 03/17/2015 16:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 135719 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-25-2	Bromoform	8.95		1.0	0.19
79-34-5	1,1,2,2-Tetrachloroethane	9.78		1.0	0.20
107-13-1	Acrylonitrile	98.7		20	0.55
123-91-1	1,4-Dioxane	205		200	34

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		64-135
2037-26-5	Toluene-d8 (Surr)	105		71-118
460-00-4	4-Bromofluorobenzene (Surr)	105		70-118
1868-53-7	Dibromofluoromethane (Surr)	99		70-128

Report Date: 18-Mar-2015 10:06:19 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317010.D
Lims ID: 180-41935-C-11 MSD
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MSD
Inject. Date: 17-Mar-2015 16:42:30 ALS Bottle#: 10 Worklist Smp#: 10
Purge Vol: 5.000 mL Dil. Factor: 1.0000
Sample Info: 180-41935-C-11 MSD
Misc. Info.: 180-0006051-010
Operator ID: 001562 Instrument ID: CHHP5

Method: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\MSVOA_LL_CHHP5.m
Limit Group: VOA 8260C ICAL
Last Update: 18-Mar-2015 00:37:22 Calib Date: 16-Mar-2015 16:17:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHHP5\20150316-6031.b\50316013.D

Column 1 : DB-624 (0.18 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: fergusond Date: 18-Mar-2015 10:06:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
* 1 TBA-d9 (IS)	65	4.314	4.311	0.003	85	157805	1000.0	1000.0	
* 2 Fluorobenzene (IS)	96	7.277	7.274	0.003	100	548107	50.0	50.0	
* 3 Chlorobenzene-d5	119	10.361	10.358	0.003	93	128124	50.0	50.0	
* 4 1,4-Dichlorobenzene-d4	152	12.685	12.682	0.003	96	180031	50.0	50.0	
$ 5 Dibromofluoromethane (Surr	113	6.522	6.526	-0.004	98	123059	50.0	49.4	
$ 6 1,2-Dichloroethane-d4 (Sur	65	6.906	6.897	0.009	98	172390	50.0	52.5	
$ 7 Toluene-d8 (Surr)	98	8.925	8.923	0.002	100	536656	50.0	52.5	
$ 8 4-Bromofluorobenzene (Surr	95	11.529	11.532	-0.003	98	192781	50.0	52.4	
11 Dichlorodifluoromethane	85	1.613	1.616	-0.003	99	150892	50.0	64.2	
12 Chloromethane	50	1.777	1.781	-0.004	100	173813	50.0	53.6	
13 Vinyl chloride	62	1.899	1.908	-0.009	100	187771	50.0	51.8	
14 Butadiene	39	1.941	1.951	-0.010	99	202115	50.0	48.8	
15 Bromomethane	94	2.246	2.249	-0.003	100	115712	50.0	59.8	
16 Chloroethane	64	2.386	2.377	0.009	99	130295	50.0	52.0	
17 Dichlorofluoromethane	67	2.647	2.657	-0.010	100	287474	50.0	50.2	
18 Trichlorofluoromethane	101	2.696	2.705	-0.009	100	219903	50.0	50.6	
20 Ethyl ether	59	3.085	3.089	-0.004	99	142282	50.0	49.6	
21 Acrolein	56	3.255	3.265	-0.010	98	52134	150.0	149.7	
22 1,1-Dichloroethene	96	3.383	3.381	0.002	99	146921	50.0	46.5	
23 1,1,2-Trichloro-1,2,2-trif	101	3.432	3.435	-0.003	95	145615	50.0	45.5	
24 Acetone	43	3.493	3.496	-0.003	100	133113	100.0	118.6	
25 Iodomethane	142	3.590	3.587	0.003	97	221341	50.0	50.4	
26 Carbon disulfide	76	3.663	3.654	0.009	100	331847	50.0	42.9	
28 3-Chloro-1-propene	76	3.943	3.934	0.009	99	72582	50.0	43.4	
30 Methyl acetate	43	4.022	4.019	0.003	100	644016	250.0	245.2	
31 Methylene Chloride	84	4.144	4.147	-0.003	98	160213	50.0	43.8	
32 2-Methyl-2-propanol	59	4.436	4.445	-0.009	99	85703	500.0	461.1	
33 Acrylonitrile	53	4.551	4.549	0.002	100	666720	500.0	493.4	
34 trans-1,2-Dichloroethene	96	4.563	4.561	0.002	63	158501	50.0	48.5	
35 Methyl tert-butyl ether	73	4.600	4.597	0.003	99	355071	50.0	49.1	
36 Hexane	57	4.977	4.981	-0.003	98	249154	50.0	47.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
37 1,1-Dichloroethane	63	5.178	5.163	0.015	99	297918	50.0	51.1	
38 Vinyl acetate	43	5.300	5.291	0.009	100	215574	50.0	52.1	
44 2,2-Dichloropropane	77	5.932	5.923	0.009	96	68168	50.0	46.7	
45 cis-1,2-Dichloroethene	96	5.938	5.936	0.002	96	189684	50.0	55.1	
46 2-Butanone (MEK)	43	5.987	5.984	0.003	99	174154	100.0	97.0	
49 Chlorobromomethane	128	6.224	6.222	0.002	99	70389	50.0	47.2	
51 Tetrahydrofuran	42	6.285	6.282	0.003	98	109465	100.0	97.4	
52 Chloroform	83	6.340	6.343	-0.003	100	260256	50.0	49.1	
53 1,1,1-Trichloroethane	97	6.534	6.526	0.008	98	164325	50.0	48.5	
54 Cyclohexane	56	6.589	6.580	0.009	98	299733	50.0	46.1	
56 Carbon tetrachloride	117	6.717	6.720	-0.003	99	126858	50.0	46.7	
55 1,1-Dichloropropene	75	6.723	6.726	-0.003	99	222065	50.0	50.5	
57 Isobutyl alcohol	41	6.942	6.939	0.003	99	79783	1250.0	1090.5	
58 Benzene	78	6.954	6.952	0.002	99	654587	50.0	50.4	
59 1,2-Dichloroethane	62	6.985	6.982	0.003	99	212823	50.0	50.0	
62 n-Heptane	43	7.277	7.274	0.003	78	204488	50.0	45.8	
64 Trichloroethene	130	7.666	7.669	-0.003	99	172718	50.0	53.1	
66 Methylcyclohexane	83	7.861	7.864	-0.003	99	270343	50.0	46.6	
67 1,2-Dichloropropane	63	7.903	7.901	0.002	98	158581	50.0	49.4	
68 Dibromomethane	93	8.025	8.022	0.003	98	84684	50.0	49.0	
70 1,4-Dioxane	88	8.061	8.065	-0.004	95	34705	1000.0	1025.9	
71 Dichlorobromomethane	83	8.195	8.199	-0.004	99	165440	50.0	46.9	
74 cis-1,3-Dichloropropene	75	8.658	8.655	0.003	99	160738	50.0	47.2	
75 4-Methyl-2-pentanone (MIBK	43	8.828	8.825	0.003	100	321411	100.0	92.7	
76 Toluene	91	8.992	8.990	0.002	100	655451	50.0	49.9	
77 trans-1,3-Dichloropropene	75	9.223	9.221	0.002	99	113153	50.0	47.7	
78 Ethyl methacrylate	69	9.315	9.318	-0.003	98	149565	50.0	48.4	
79 1,1,2-Trichloroethane	97	9.400	9.403	-0.003	98	122631	50.0	49.8	
80 Tetrachloroethene	164	9.540	9.537	0.003	99	162785	50.0	63.4	
81 1,3-Dichloropropane	76	9.564	9.567	-0.003	99	223018	50.0	48.7	
82 2-Hexanone	43	9.661	9.659	0.002	100	208650	100.0	78.8	
84 Chlorodibromomethane	129	9.789	9.786	0.003	99	90431	50.0	46.0	
85 Ethylene Dibromide	107	9.899	9.902	-0.003	100	110152	50.0	46.9	
86 3-Chlorobenzotrifluoride	180	10.373	10.370	0.003	99	268845	50.0	53.7	
87 Chlorobenzene	112	10.391	10.395	-0.004	99	411500	50.0	49.5	
88 4-Chlorobenzotrifluoride	180	10.428	10.431	-0.003	100	264670	50.0	54.6	
89 1,1,1,2-Tetrachloroethane	131	10.477	10.474	0.003	96	98036	50.0	45.6	
90 Ethylbenzene	106	10.501	10.504	-0.003	100	234131	50.0	49.1	
91 m-Xylene & p-Xylene	106	10.616	10.620	-0.004	100	282920	50.0	48.5	
92 o-Xylene	106	11.012	11.015	-0.003	99	279493	50.0	48.9	
93 Styrene	104	11.024	11.021	0.003	97	451007	50.0	49.0	
94 Bromoform	173	11.213	11.210	0.003	97	54327	50.0	44.8	
96 2-Chlorobenzotrifluoride	180	11.273	11.277	-0.004	99	272260	50.0	54.4	
97 Isopropylbenzene	105	11.377	11.380	-0.003	100	711231	50.0	49.9	
99 1,1,2,2-Tetrachloroethane	83	11.675	11.672	0.003	98	172599	50.0	48.9	
100 Bromobenzene	156	11.681	11.684	-0.003	99	161697	50.0	48.5	
101 1,2,3-Trichloropropane	110	11.724	11.721	0.003	96	54642	50.0	49.9	
102 trans-1,4-Dichloro-2-buten	53	11.736	11.733	0.003	97	45518	50.0	50.0	
103 N-Propylbenzene	120	11.791	11.788	0.003	100	195329	50.0	47.5	
104 2-Chlorotoluene	126	11.876	11.873	0.003	100	167435	50.0	48.5	
105 3-Chlorotoluene	126	11.937	11.934	0.003	99	216989	50.0	56.2	
106 1,3,5-Trimethylbenzene	105	11.961	11.964	-0.003	100	575923	50.0	50.3	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ng	OnCol Amt ng	Flags
107 4-Chlorotoluene	126	11.979	11.983	-0.004	97	178749	50.0	47.8	
108 tert-Butylbenzene	119	12.289	12.287	0.002	99	486584	50.0	49.0	
110 1,2,4-Trimethylbenzene	105	12.338	12.335	0.003	99	572530	50.0	48.7	
111 1,2-dichloro-4-(trifluorom	214	12.399	12.402	-0.003	99	203131	50.0	54.6	
112 sec-Butylbenzene	105	12.508	12.506	0.002	100	687162	50.0	49.2	
113 1,3-Dichlorobenzene	146	12.618	12.621	-0.003	99	296676	50.0	48.3	
114 4-Isopropyltoluene	119	12.654	12.652	0.002	100	571335	50.0	49.5	
115 1,4-Dichlorobenzene	146	12.709	12.707	0.002	99	307707	50.0	49.1	
116 2,4-Dichloro-1-(triflourom	214	12.758	12.755	0.003	98	189458	50.0	54.4	
118 2,5-Dichlorobenzotrifluori	214	12.807	12.804	0.002	99	211843	50.0	54.4	
120 n-Butylbenzene	91	13.062	13.059	0.003	100	513553	50.0	48.9	
121 1,2-Dichlorobenzene	146	13.080	13.084	-0.004	99	281614	50.0	49.5	
122 1,2-Dibromo-3-Chloropropan	75	13.859	13.862	-0.003	95	20719	50.0	44.5	
123 2,4- & 2,5- & 2,6- Dichlor	125	14.005	14.008	-0.003	100	713911	150.0	166.1	
125 2,3- & 3,4- Dichlorotoluen	125	14.425	14.428	-0.003	99	462396	100.0	110.6	
126 1,2,4-Trichlorobenzene	180	14.692	14.696	-0.004	99	145651	50.0	49.2	
127 Hexachlorobutadiene	225	14.863	14.860	0.003	97	64432	50.0	45.4	
128 Naphthalene	128	14.942	14.939	0.003	100	401880	50.0	51.7	
129 1,2,3-Trichlorobenzene	180	15.185	15.189	-0.004	99	118588	50.0	48.9	
131 2,4,5-Trichlorotoluene	159	15.964	15.967	-0.003	97	72001	50.0	55.2	
130 2,3,6-Trichlorotoluene	159	16.061	16.065	-0.004	97	65054	50.0	55.2	
149 3,4-Dichlorotoluene	1		0.000				ND	ND	
148 2,3-Dichlorotoluene	1		0.000				ND	ND	
147 2,4-Dichlorotoluene	1		0.000				ND	ND	
146 2,5-Dichlorotoluene	1		0.000				ND	ND	
150 2,6-Dichlorotoluene	1		0.000				ND	ND	
S 133 Xylenes, Total	106				0		100.0	97.4	
S 134 1,2-Dichloroethene, Total	96				0		100.0	103.6	
S 135 1,3-Dichloropropene, Total	1				0		100.0	94.9	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

VOAACRO2ND_00005	Amount Added:	6.00	Units: uL	
voaWVA2nd Res_00006	Amount Added:	2.00	Units: uL	
VOAEE2ND_00001	Amount Added:	2.00	Units: uL	
voaWKet2 Rest_00002	Amount Added:	2.00	Units: uL	
VOA8260VOA2ND_00106	Amount Added:	2.00	Units: uL	
VOA8260INT_00030	Amount Added:	2.00	Units: uL	Run Reagent
VOA8260SURR_00032	Amount Added:	2.00	Units: uL	Run Reagent

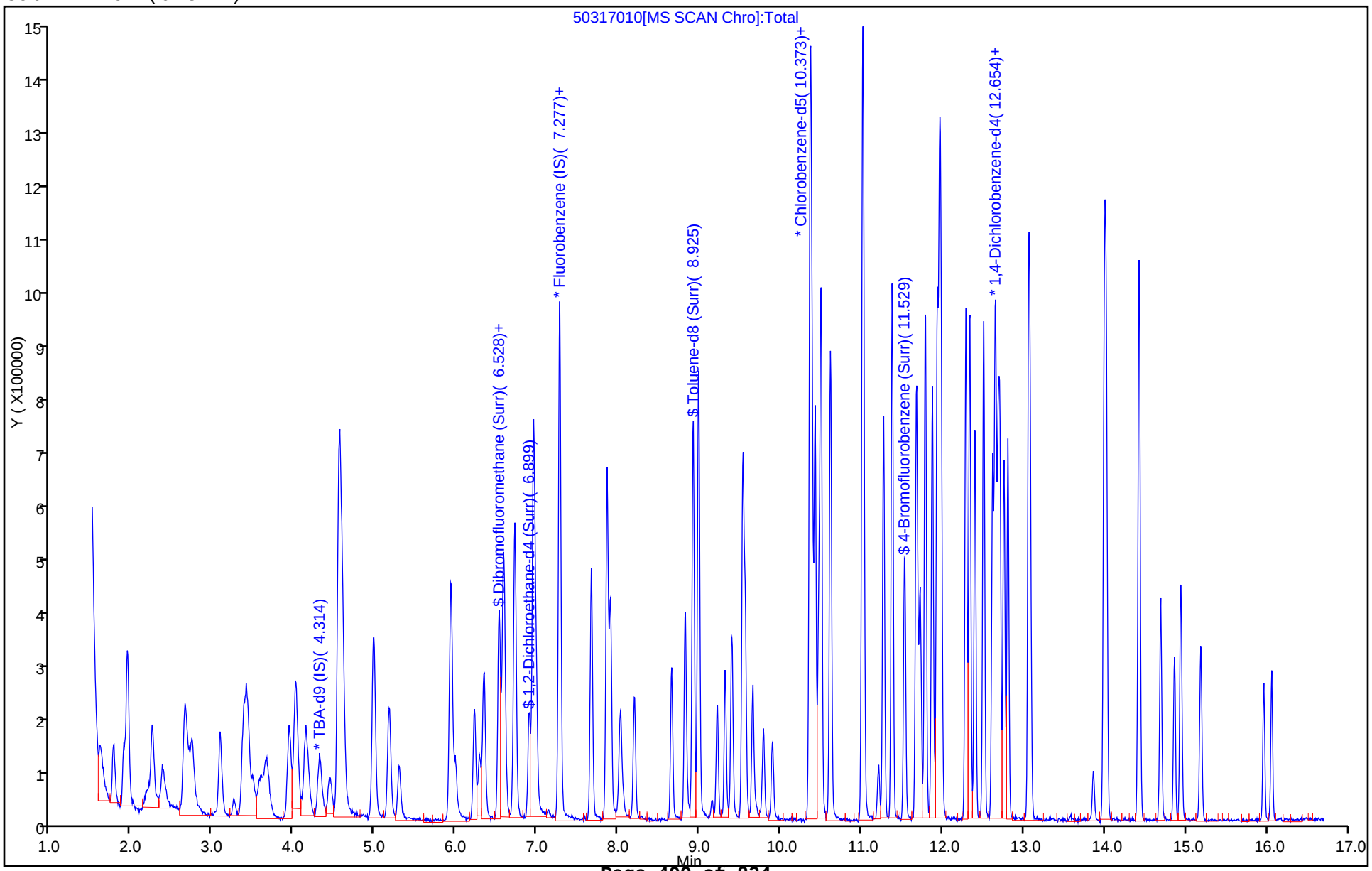
Report Date: 18-Mar-2015 10:06:19 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHHP5\20150317-6051.b\50317010.D

Injection Date:	17-Mar-2015 16:42:30	Instrument ID:	CHHP5	Operator ID:	001562
Lims ID:	180-41935-C-11 MSD			Worklist Smp#:	10
Client ID:	HD-COD-SW-17-0/1-0				
Purge Vol:	5.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSVOA_LL_CHHP5	Limit Group:	VOA 8260C ICAL		

Column: DB-624 (0.18 mm)



GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Start Date: 03/16/2015 10:49

Analysis Batch Number: 135593 End Date: 03/16/2015 17:05

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-135593/1		03/16/2015 10:49	1	50316001.D	DB-624 0.18(mm)
IC 180-135593/4		03/16/2015 12:41	1	50316004.D	DB-624 0.18(mm)
ICIS 180-135593/5		03/16/2015 13:05	1	50316005.D	DB-624 0.18(mm)
IC 180-135593/6		03/16/2015 13:29	1	50316006.D	DB-624 0.18(mm)
IC 180-135593/7		03/16/2015 13:53	1	50316007.D	DB-624 0.18(mm)
IC 180-135593/8		03/16/2015 14:17	1	50316008.D	DB-624 0.18(mm)
IC 180-135593/9		03/16/2015 14:41	1	50316009.D	DB-624 0.18(mm)
IC 180-135593/10		03/16/2015 15:05	1	50316010.D	DB-624 0.18(mm)
IC 180-135593/13		03/16/2015 16:17	1	50316013.D	DB-624 0.18(mm)
ICV 180-135593/15		03/16/2015 17:05	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Start Date: 03/17/2015 12:22

Analysis Batch Number: 135719 End Date: 03/17/2015 23:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-135719/1		03/17/2015 12:22	1	50317001.D	DB-624 0.18(mm)
CCVIS 180-135719/2		03/17/2015 12:59	1	50317002.D	DB-624 0.18(mm)
MB 180-135719/4		03/17/2015 14:17	1	50317004.D	DB-624 0.18(mm)
180-41935-18	HD-QC1-0/1-2	03/17/2015 15:06	1	50317006.D	DB-624 0.18(mm)
180-41935-11	HD-COD-SW-17-0/1-0	03/17/2015 15:30	1	50317007.D	DB-624 0.18(mm)
LCS 180-135719/7		03/17/2015 15:54	1	50317008.D	DB-624 0.18(mm)
180-41935-11 MS	HD-COD-SW-17-0/1-0 MS	03/17/2015 16:18	1	50317009.D	DB-624 0.18(mm)
180-41935-11 MSD	HD-COD-SW-17-0/1-0 MSD	03/17/2015 16:42	1	50317010.D	DB-624 0.18(mm)
180-41935-1	HD-COD-SW-6-0/1-0	03/17/2015 17:31	1	50317012.D	DB-624 0.18(mm)
180-41935-2	HD-COD-SW-7-0/1-0	03/17/2015 17:55	1	50317013.D	DB-624 0.18(mm)
180-41935-3	HD-COD-SW-8-0/1-0	03/17/2015 18:19	1	50317014.D	DB-624 0.18(mm)
180-41935-4	HD-COD-SW-9-0/1-0	03/17/2015 18:43	1	50317015.D	DB-624 0.18(mm)
180-41935-5	HD-COD-SW-10-0/1-0	03/17/2015 19:07	1	50317016.D	DB-624 0.18(mm)
180-41935-6	HD-COD-SW-11-0/1-0	03/17/2015 19:31	1	50317017.D	DB-624 0.18(mm)
180-41935-7	HD-COD-SW-12-0/1-0	03/17/2015 19:55	1	50317018.D	DB-624 0.18(mm)
180-41935-8	HD-COD-SW-13-0/1-0	03/17/2015 20:19	1	50317019.D	DB-624 0.18(mm)
180-41935-9	HD-COD-SW-15-0/1-0	03/17/2015 20:44	1	50317020.D	DB-624 0.18(mm)
180-41935-10	HD-COD-SW-16-0/1-0	03/17/2015 21:08	1	50317021.D	DB-624 0.18(mm)
180-41935-12	HD-COD-SW-20-0/1-0	03/17/2015 21:32	1	50317022.D	DB-624 0.18(mm)
ZZZZZ		03/17/2015 21:56	1		DB-624 0.18(mm)
180-41935-14	HD-COD-SW-27-0/1-0	03/17/2015 22:19	1	50317024.D	DB-624 0.18(mm)
180-41935-15	HD-COD-SW-28-0/1-0	03/17/2015 22:43	1	50317025.D	DB-624 0.18(mm)
180-41935-16	HD-COD-SW-29-0/1-0	03/17/2015 23:07	1	50317026.D	DB-624 0.18(mm)
ZZZZZ		03/17/2015 23:56	1		DB-624 0.18(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHHP5 Start Date: 03/19/2015 11:31

Analysis Batch Number: 135984 End Date: 03/19/2015 23:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 180-135984/1		03/19/2015 11:31	1	50319001.D	DB-624 0.18(mm)
CCVIS 180-135984/2		03/19/2015 12:15	1	50319002.D	DB-624 0.18(mm)
ZZZZZ		03/19/2015 12:15	1		DB-624 0.18(mm)
CCV 180-135984/3		03/19/2015 12:39	1	50319003.D	DB-624 0.18(mm)
ZZZZZ		03/19/2015 12:39	1		DB-624 0.18(mm)
MB 180-135984/4		03/19/2015 13:17	1	50319004.D	DB-624 0.18(mm)
ZZZZZ		03/19/2015 13:55	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 14:19	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 14:43	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 15:07	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 15:31	1		DB-624 0.18(mm)
LCS 180-135984/10		03/19/2015 15:55	1	50319010.D	DB-624 0.18(mm)
180-41935-13	HD-COD-SW-26-0/1-0	03/19/2015 19:09	1	50319018.D	DB-624 0.18(mm)
180-41935-17	HD-QC1-0/1-1	03/19/2015 19:33	1	50319019.D	DB-624 0.18(mm)
ZZZZZ		03/19/2015 21:10	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 21:34	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 21:58	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 22:46	1		DB-624 0.18(mm)
ZZZZZ		03/19/2015 23:11	1		DB-624 0.18(mm)

300_ORGFMS

Anions, Ion Chromatography

FORM III
HPLC/IC LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 03-11-201532.0000.d

Lab ID: LCS 180-135268/32 Client ID:

COMPOUND	SPIKE ADDED (mg/L)	LCS CONCENTRATION (mg/L)	LCS % REC	QC LIMITS REC	#
Nitrate as N	2.50	2.44	98	90-110	
Chloride	50.0	47.4	95	90-110	
Sulfate	50.0	46.5	93	90-110	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 03-11-201545.0000.d

Lab ID: 180-41935-2 MS Client ID: HD-COD-SW-7-0/1-0 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Nitrate as N	1.25	2.0	3.28	100	80-120	
Chloride	25.0	55	82.1	107	80-120	
Sulfate	25.0	13	36.0	94	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 03-11-201542.0000.d

Lab ID: 180-41935-11 MS Client ID: HD-COD-SW-17-0/1-0 MS

COMPOUND	SPIKE ADDED (mg/L)	SAMPLE CONCENTRATION (mg/L)	MS CONCENTRATION (mg/L)	MS % REC	QC LIMITS REC	#
Nitrate as N	1.25	2.1	3.39	106	80-120	
Chloride	25.0	73	100	110	80-120	E
Sulfate	25.0	12	35.5	93	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 03-11-201546.0000.d

Lab ID: 180-41935-2 MSD Client ID: HD-COD-SW-7-0/1-0 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Nitrate as N	1.25	3.25	98	1	20	80-120	
Chloride	25.0	81.7	105	0	20	80-120	
Sulfate	25.0	35.9	93	0	20	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM III
HPLC/IC MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 03-11-201543.0000.d

Lab ID: 180-41935-11 MSD Client ID: HD-COD-SW-17-0/1-0 MSD

COMPOUND	SPIKE ADDED (mg/L)	MSD CONCENTRATION (mg/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Nitrate as N	1.25	3.36	104	1	20	80-120	
Chloride	25.0	99.0	104	1	20	80-120	
Sulfate	25.0	34.8	91	2	20	80-120	

Column to be used to flag recovery and RPD values

FORM III 300.0

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 03-11-201533.0000.d Lab Sample ID: MB 180-135268/33

Matrix: Water Date Extracted:

Instrument ID: CHIC25 Date Analyzed: 03/11/2015 19:47

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	CCB 180-135268/28	03-11-201528.0000.d	03/11/2015 18:29
	LCS 180-135268/32	03-11-201532.0000.d	03/11/2015 19:32
HD-COD-SW-8-0/1-0	180-41935-3	03-11-201534.0000.d	03/11/2015 20:03
HD-COD-SW-16-0/1-0	180-41935-10	03-11-201535.0000.d	03/11/2015 20:18
HD-COD-SW-26-0/1-0	180-41935-13	03-11-201536.0000.d	03/11/2015 20:34
HD-COD-SW-27-0/1-0	180-41935-14	03-11-201537.0000.d	03/11/2015 20:49
HD-COD-SW-29-0/1-0	180-41935-16	03-11-201538.0000.d	03/11/2015 21:05
	CCB 180-135268/40	03-11-201540.0000.d	03/11/2015 21:36
HD-COD-SW-17-0/1-0	180-41935-11	03-11-201541.0000.d	03/11/2015 21:52
HD-COD-SW-17-0/1-0 MS	180-41935-11 MS	03-11-201542.0000.d	03/11/2015 22:07
HD-COD-SW-17-0/1-0 MSD	180-41935-11 MSD	03-11-201543.0000.d	03/11/2015 22:23
HD-COD-SW-7-0/1-0	180-41935-2	03-11-201544.0000.d	03/11/2015 22:38
HD-COD-SW-7-0/1-0 MS	180-41935-2 MS	03-11-201545.0000.d	03/11/2015 22:54
HD-COD-SW-7-0/1-0 MSD	180-41935-2 MSD	03-11-201546.0000.d	03/11/2015 23:09
HD-COD-SW-6-0/1-0	180-41935-1	03-11-201547.0000.d	03/11/2015 23:25
HD-COD-SW-6-0/1-0	180-41935-1	03-11-201548.0000.d	03/11/2015 23:41
HD-QC1-0/1-1	180-41935-17	03-11-201549.0000.d	03/11/2015 23:56
HD-QC1-0/1-1	180-41935-17	03-11-201550.0000.d	03/12/2015 00:12
	CCB 180-135268/52	03-11-201552.0000.d	03/12/2015 00:43
HD-COD-SW-10-0/1-0	180-41935-5	03-11-201553.0000.d	03/12/2015 00:58
HD-COD-SW-10-0/1-0	180-41935-5	03-11-201554.0000.d	03/12/2015 01:14
HD-COD-SW-11-0/1-0	180-41935-6	03-11-201555.0000.d	03/12/2015 01:29

FORM IV
HPLC/IC METHOD BLANK SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab File ID: 03-11-201533.0000.d Lab Sample ID: MB 180-135268/33

Matrix: Water Date Extracted:

Instrument ID: CHIC25 Date Analyzed: 03/11/2015 19:47

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
HD-COD-SW-11-0/1-0	180-41935-6	03-11-201556.0000.d	03/12/2015 01:45
HD-COD-SW-12-0/1-0	180-41935-7	03-11-201557.0000.d	03/12/2015 02:01
HD-COD-SW-12-0/1-0	180-41935-7	03-11-201558.0000.d	03/12/2015 02:16
HD-COD-SW-15-0/1-0	180-41935-9	03-11-201559.0000.d	03/12/2015 02:32
HD-COD-SW-15-0/1-0	180-41935-9	03-11-201560.0000.d	03/12/2015 02:47
HD-COD-SW-20-0/1-0	180-41935-12	03-11-201561.0000.d	03/12/2015 03:03
HD-COD-SW-20-0/1-0	180-41935-12	03-11-201562.0000.d	03/12/2015 03:18
	CCB 180-135268/64	03-11-201564.0000.d	03/12/2015 03:50
HD-COD-SW-13-0/1-0	180-41935-8	03-11-201565.0000.d	03/12/2015 04:05
HD-COD-SW-9-0/1-0	180-41935-4	03-11-201566.0000.d	03/12/2015 04:21
HD-COD-SW-9-0/1-0	180-41935-4	03-11-201567.0000.d	03/12/2015 04:36
HD-COD-SW-28-0/1-0	180-41935-15	03-11-201568.0000.d	03/12/2015 04:52
HD-COD-SW-28-0/1-0	180-41935-15	03-11-201569.0000.d	03/12/2015 05:07
	CCB 180-135268/71	03-11-201571.0000.d	03/12/2015 05:38

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-41935-1

Matrix: Water Lab File ID: 03-11-201547.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 23:25

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.1		0.10	0.0062
14808-79-8	Sulfate	11		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201547.0000.d				
Lims ID:	180-41935-A-1	Lab Sample ID:	180-41935-1		
Client ID:	HD-COD-SW-6-0/1-0				
Sample Type:	Client				
Inject. Date:	11-Mar-2015 23:25:00	ALS Bottle#:	0	Worklist Smp#:	47
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-047				
Misc. Info.:	47 180-41935-A-1				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:32	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.558	3.392	0.166	5051605042	205.4	E
8 Nitrate as N	5.158	5.133	0.025	4994801H	2.15	
3 Sulfate	7.783	7.742	0.041	186534000	11.4	

QC Flag Legend

Processing Flags

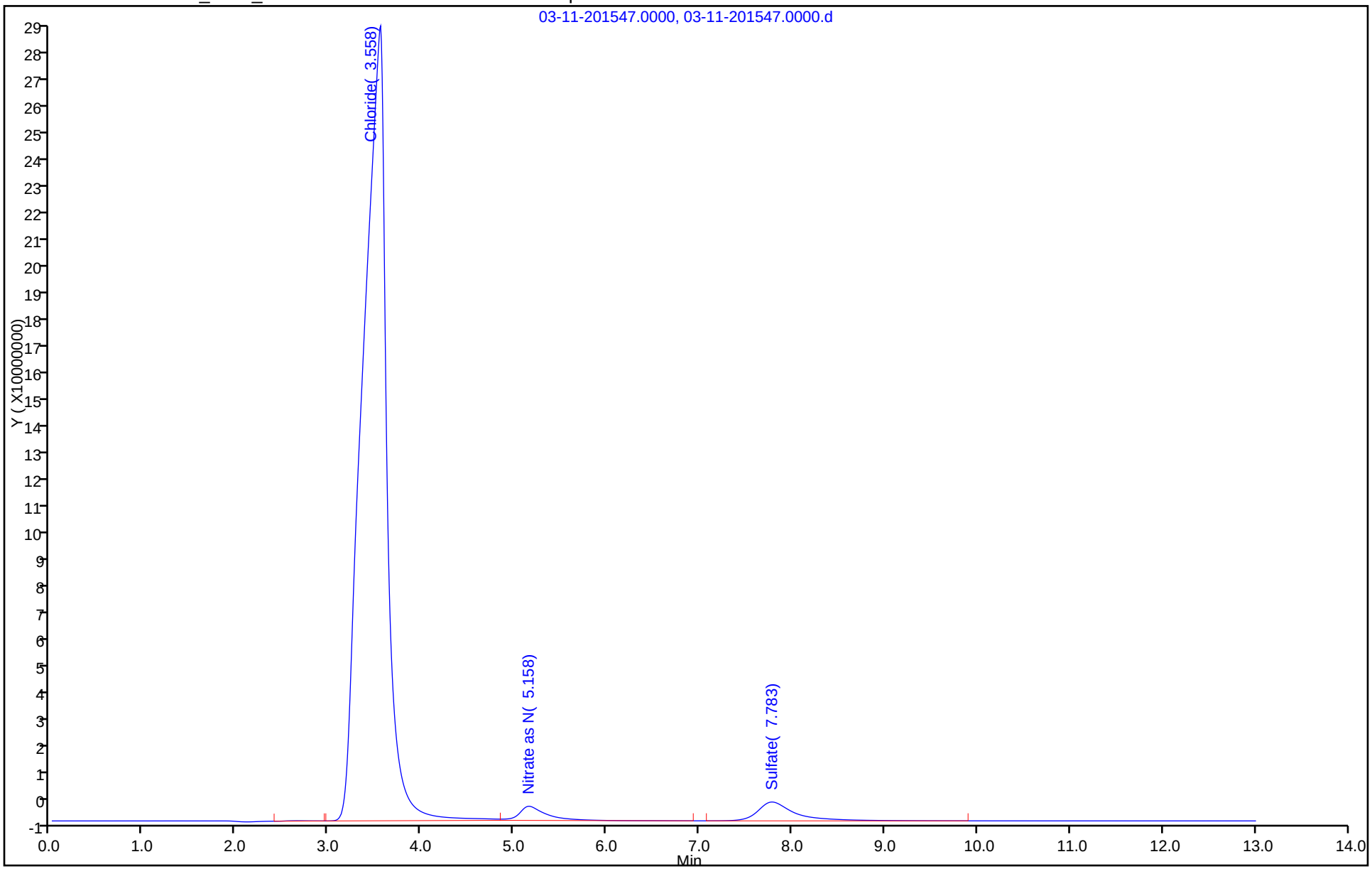
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201547.0000.d				
Injection Date:	11-Mar-2015 23:25:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-1	Lab Sample ID:	180-41935-1	Worklist Smp#:	47
Client ID:	HD-COD-SW-6-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-41935-1

Matrix: Water Lab File ID: 03-11-201548.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 23:41

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	160		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

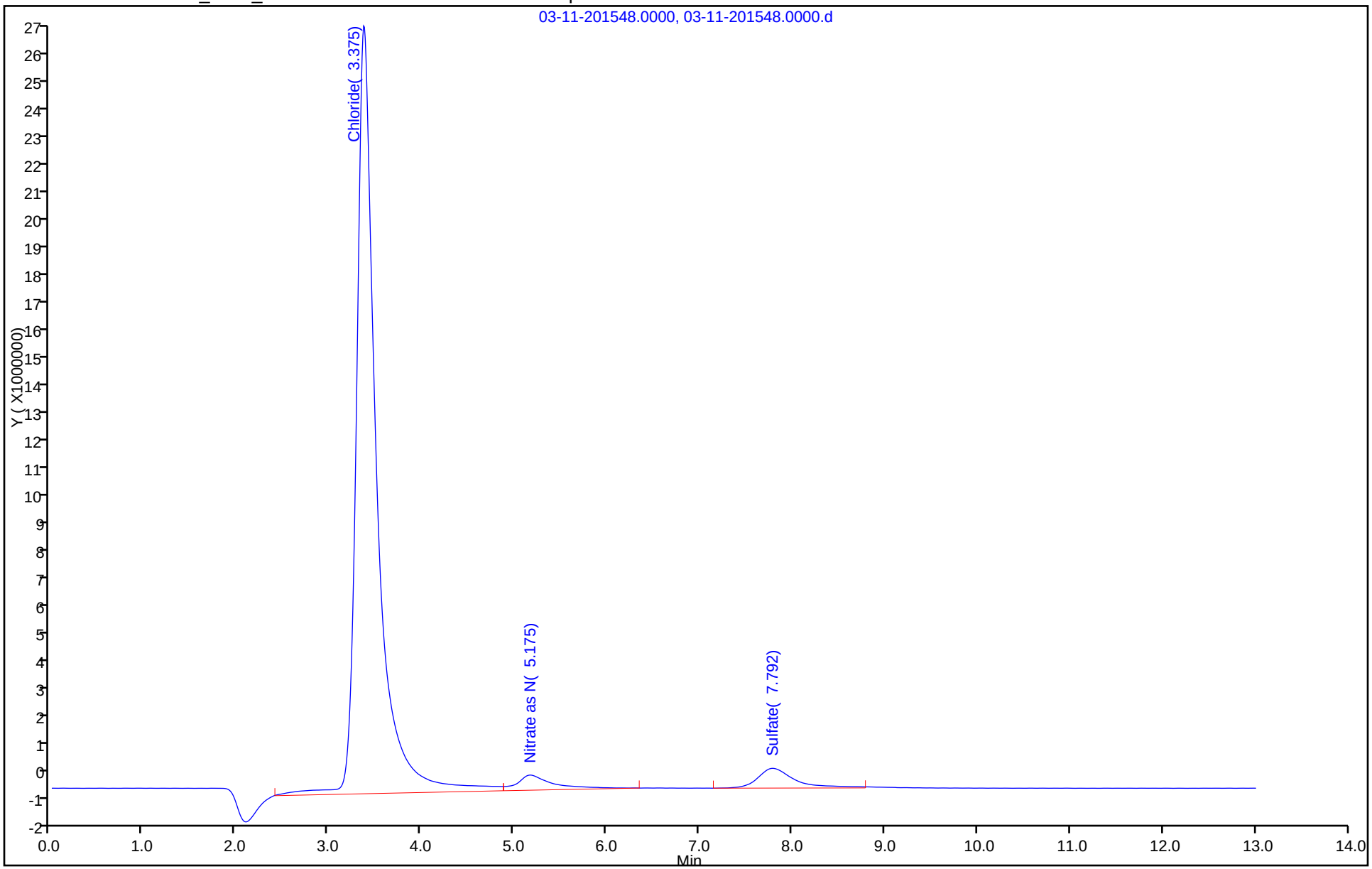
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201548.0000.d				
Lims ID:	180-41935-A-1	Lab Sample ID:	180-41935-1		
Client ID:	HD-COD-SW-6-0/1-0				
Sample Type:	Client				
Inject. Date:	11-Mar-2015 23:41:00	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-048				
Misc. Info.:	48 180-41935-A-1 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:32	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.375	3.392	-0.017	405391115	16.5	
8 Nitrate as N	5.175	5.133	0.042	526397H	0.2287	
3 Sulfate	7.792	7.742	0.050	19143685	1.17	

Report Date: 12-Mar-2015 10:46:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201548.0000.d				
Injection Date:	11-Mar-2015 23:41:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-1	Lab Sample ID:	180-41935-1	Worklist Smp#:	48
Client ID:	HD-COD-SW-6-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-41935-2

Matrix: Water Lab File ID: 03-11-201544.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 12:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 22:38

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.0		0.10	0.0062
16887-00-6	Chloride	55		1.0	0.20
14808-79-8	Sulfate	13		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201544.0000.d
Lims ID: 180-41935-A-2 Lab Sample ID: 180-41935-2
Client ID: HD-COD-SW-7-0/1-0
Sample Type: Client
Inject. Date: 11-Mar-2015 22:38:00 ALS Bottle#: 0 Worklist Smp#: 44
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-044
Misc. Info.: 44 180-41935-A-2
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

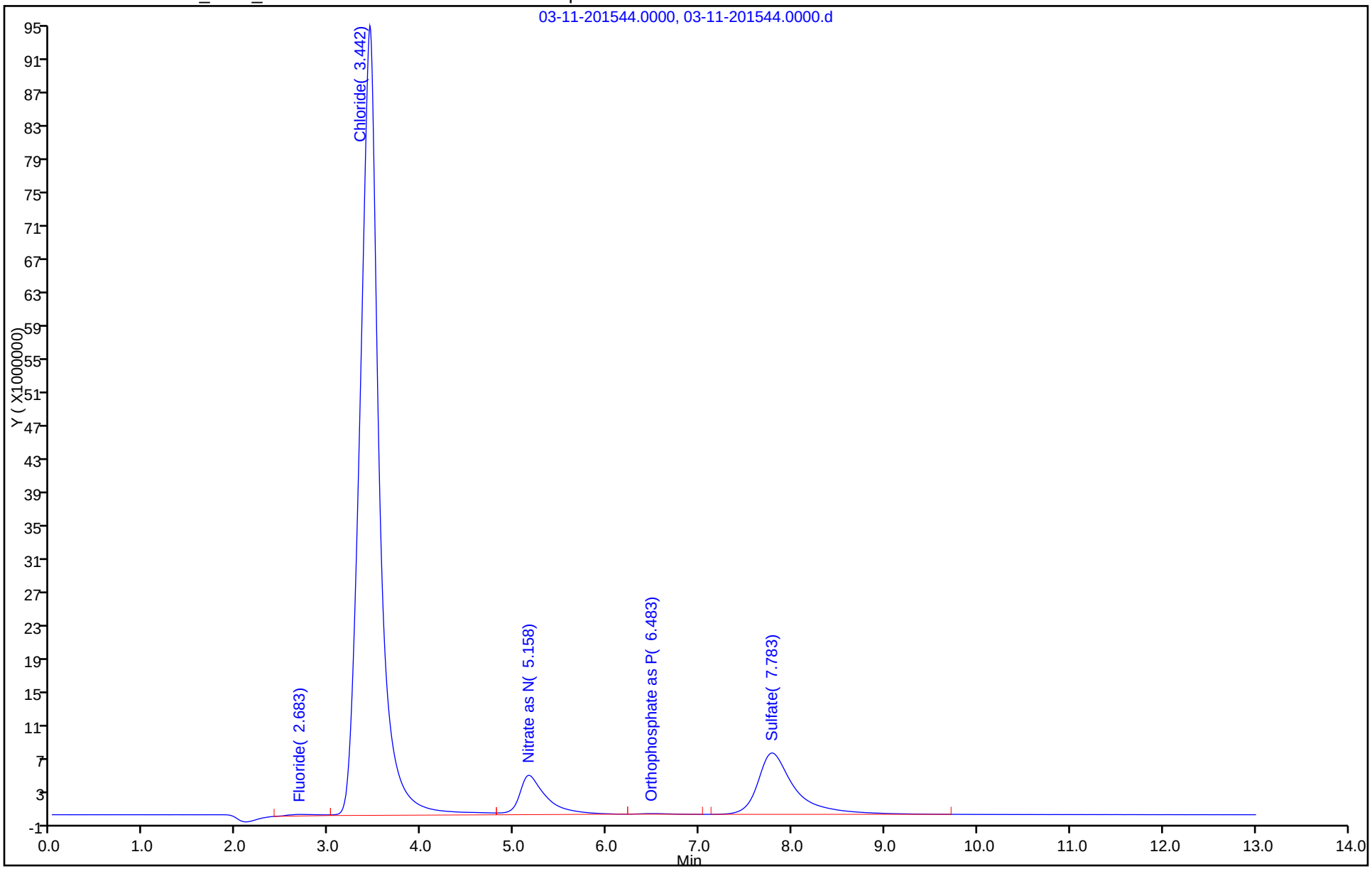
Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.683	2.575	0.108	189833H	0.0150	
2 Chloride	3.442	3.392	0.050	1361738932	55.4	
10 Nitrite as N		3.817			ND	
4 Bromide		4.575			ND	
8 Nitrate as N	5.158	5.133	0.025	4720409H	2.03	
9 Orthophosphate as P	6.483	6.442	0.041	72668H	0.1460	
3 Sulfate	7.783	7.742	0.041	205690254	12.6	

Report Date: 12-Mar-2015 10:46:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201544.0000.d				
Injection Date:	11-Mar-2015 22:38:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-2	Lab Sample ID:	180-41935-2	Worklist Smp#:	44
Client ID:	HD-COD-SW-7-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-41935-3

Matrix: Water Lab File ID: 03-11-201534.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 08:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 20:03

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.1		0.10	0.0062
16887-00-6	Chloride	66		1.0	0.20
14808-79-8	Sulfate	12		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201534.0000.d
Lims ID: 180-41935-A-3 Lab Sample ID: 180-41935-3
Client ID: HD-COD-SW-8-0/1-0
Sample Type: Client
Inject. Date: 11-Mar-2015 20:03:00 ALS Bottle#: 0 Worklist Smp#: 34
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-034
Misc. Info.: 34 180-41935-A-3
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:36 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

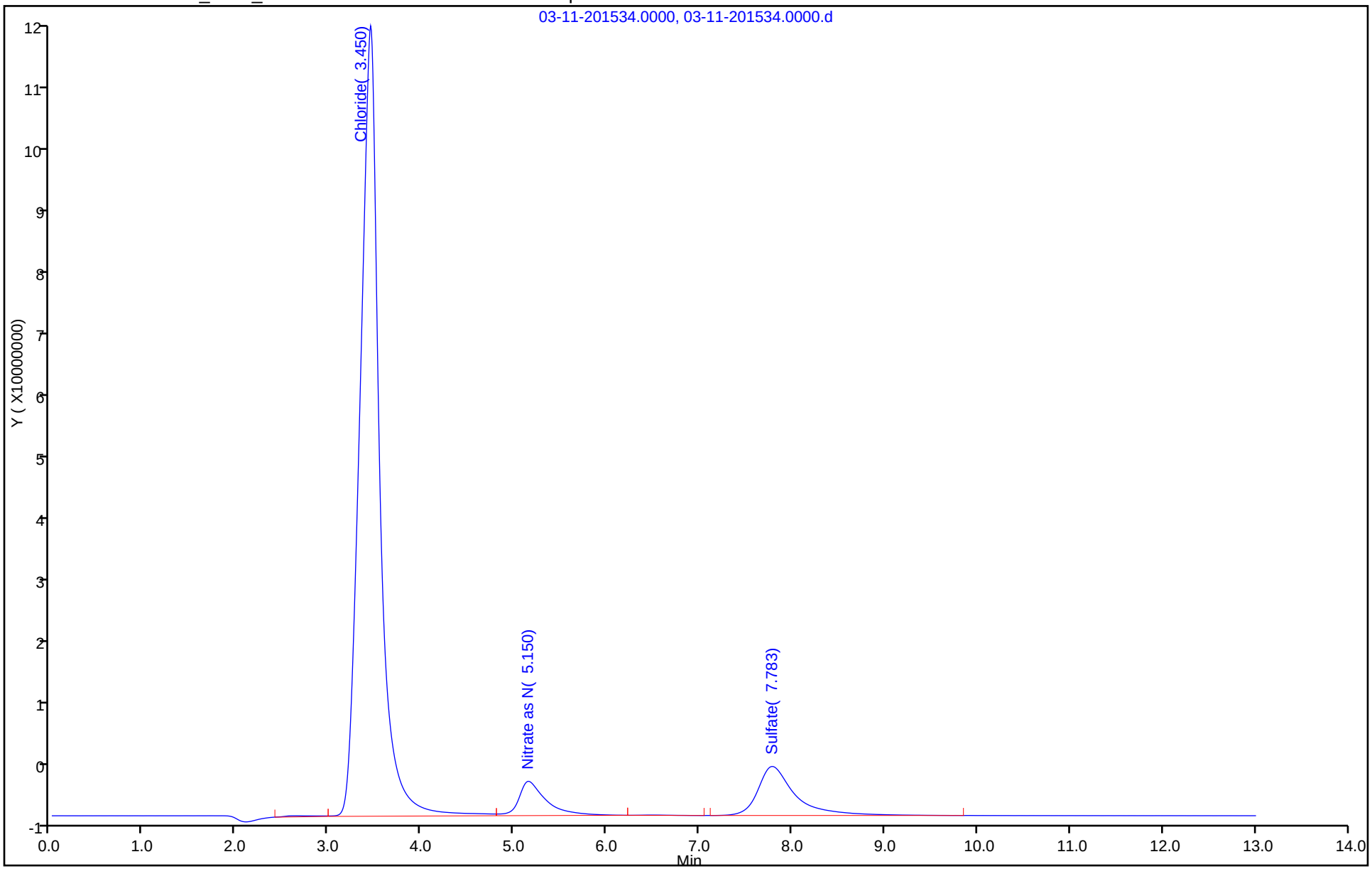
Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.450	3.392	0.058	1613189226	65.6	
8 Nitrate as N	5.150	5.133	0.017	4771941H	2.05	
3 Sulfate	7.783	7.742	0.041	191669047	11.7	

Report Date: 12-Mar-2015 10:46:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201534.0000.d				
Injection Date:	11-Mar-2015 20:03:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-3	Lab Sample ID:	180-41935-3	Worklist Smp#:	34
Client ID:	HD-COD-SW-8-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-41935-4

Matrix: Water Lab File ID: 03-11-201566.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 12:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 04:21

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.4		0.10	0.0062
14808-79-8	Sulfate	17		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201566.0000.d				
Lims ID:	180-41935-A-4	Lab Sample ID:	180-41935-4		
Client ID:	HD-COD-SW-9-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 04:21:00	ALS Bottle#:	0	Worklist Smp#:	66
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-066				
Misc. Info.:	17034 180-41935-A-4				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:26	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.492	3.392	0.100	2526077650	102.7	E
8 Nitrate as N	5.167	5.142	0.025	5675879H	2.44	
3 Sulfate	7.758	7.725	0.033	271945536	16.6	

QC Flag Legend

Processing Flags

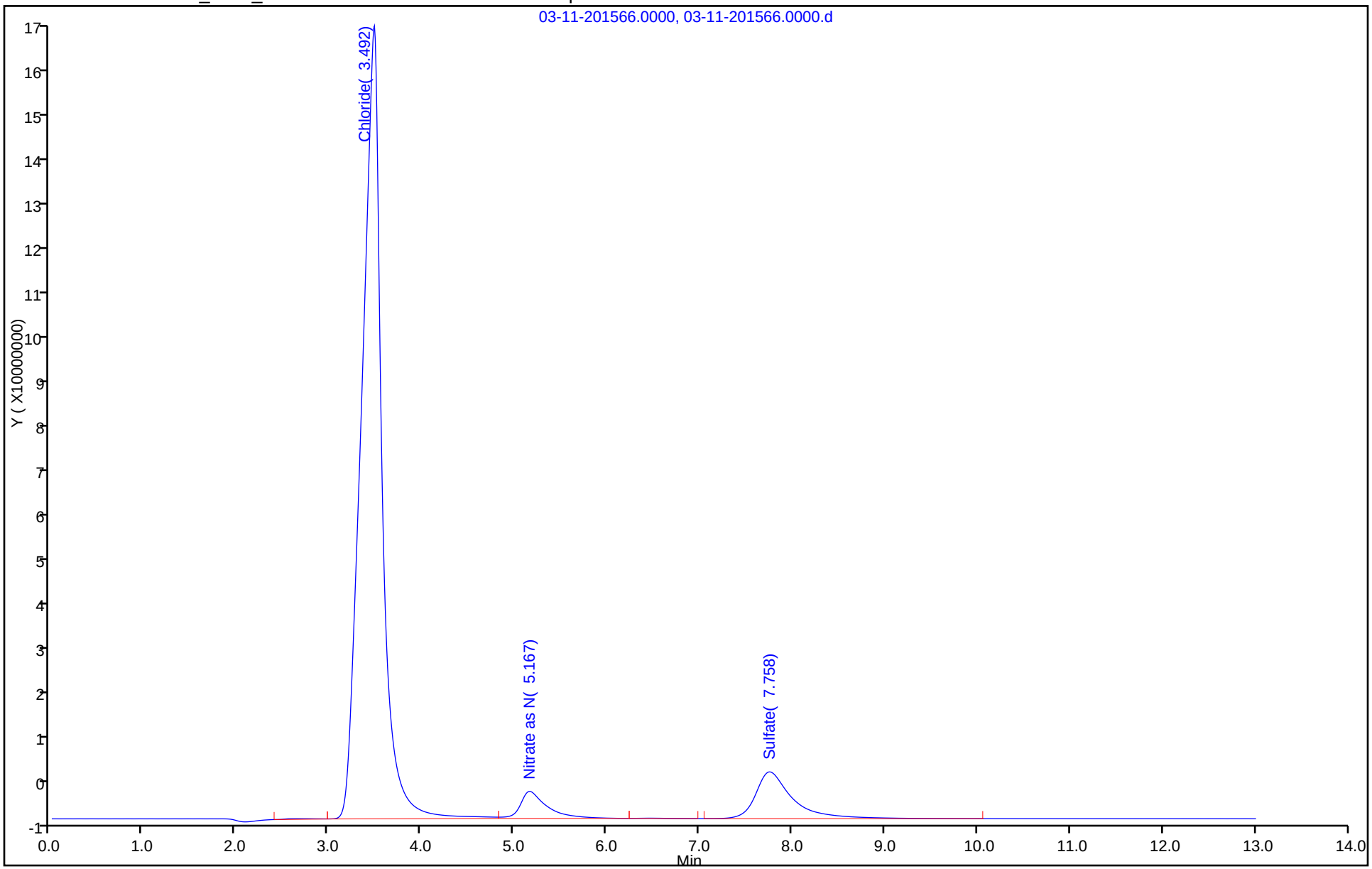
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201566.0000.d				
Injection Date:	12-Mar-2015 04:21:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-4	Lab Sample ID:	180-41935-4	Worklist Smp#:	66
Client ID:	HD-COD-SW-9-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-41935-4

Matrix: Water Lab File ID: 03-11-201567.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 12:50

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 04:36

Con. Extract Vol.: Dilution Factor: 5

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	86		5.0	0.98

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201567.0000.d				
Lims ID:	180-41935-A-4	Lab Sample ID:	180-41935-4		
Client ID:	HD-COD-SW-9-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 04:36:00	ALS Bottle#:	0	Worklist Smp#:	67
Injection Vol:	25.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0005979-067				
Misc. Info.:	14315 180-41935-A-4 5				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:26	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

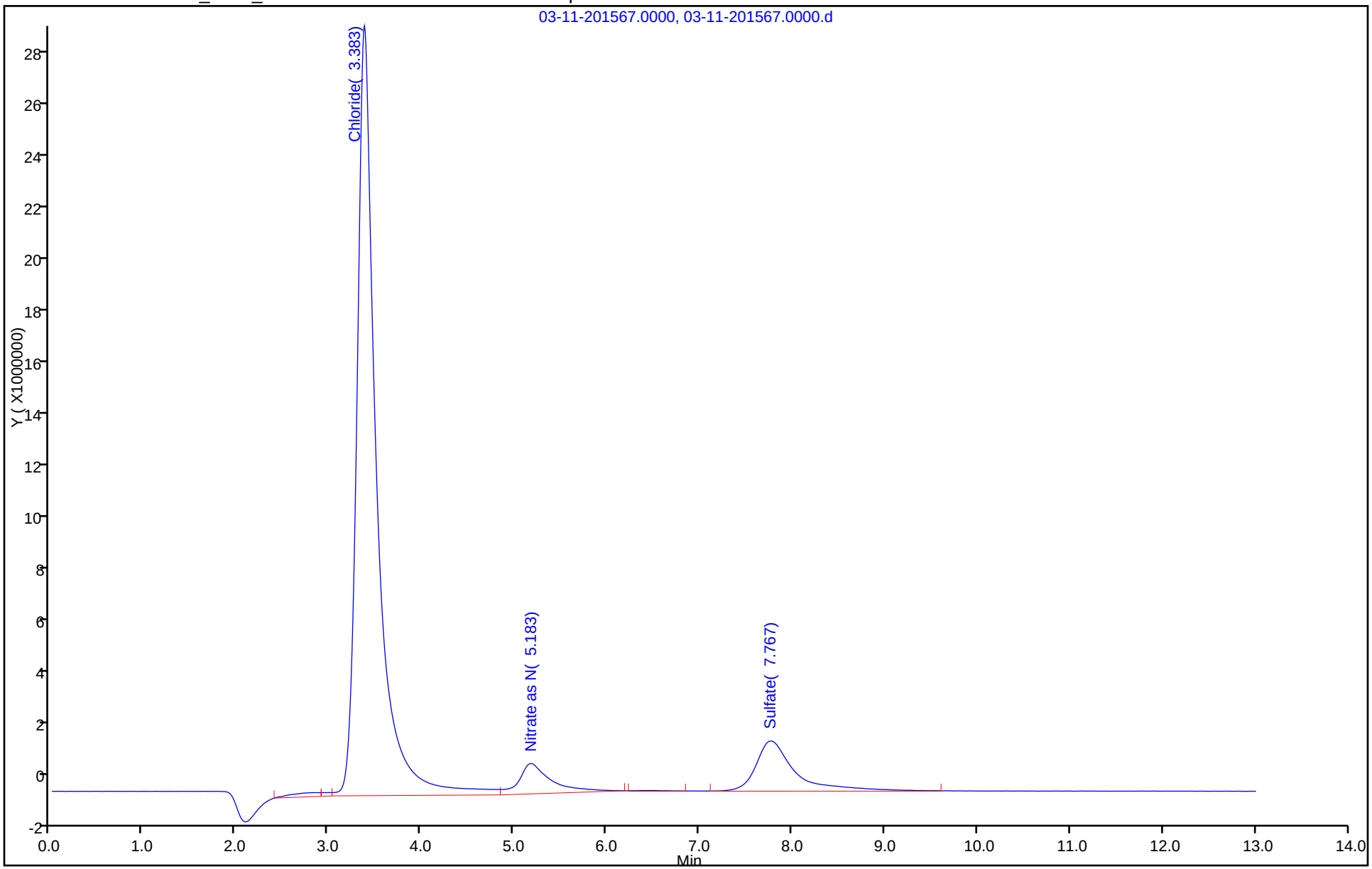
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.383	3.392	-0.009	425065688	17.3	
8 Nitrate as N	5.183	5.142	0.041	1136332	0.4909	H
3 Sulfate	7.767	7.725	0.042	55500682	3.40	

Report Date: 12-Mar-2015 10:46:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201567.0000.d

Injection Date:	12-Mar-2015 04:36:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-4	Lab Sample ID:	180-41935-4	Worklist Smp#:	67
Client ID:	HD-COD-SW-9-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-41935-5

Matrix: Water Lab File ID: 03-11-201553.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 10:05

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 00:58

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.3		0.10	0.0062
14808-79-8	Sulfate	20		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201553.0000.d				
Lims ID:	180-41935-A-5	Lab Sample ID:	180-41935-5		
Client ID:	HD-COD-SW-10-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 00:58:00	ALS Bottle#:	0	Worklist Smp#:	53
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-053				
Misc. Info.:	53 180-41935-A-5				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.583	3.392	0.191	5741812925	233.4	E
8 Nitrate as N	5.158	5.150	0.008	5313251H	2.29	
3 Sulfate	7.767	7.733	0.034	334173932	20.5	

QC Flag Legend

Processing Flags

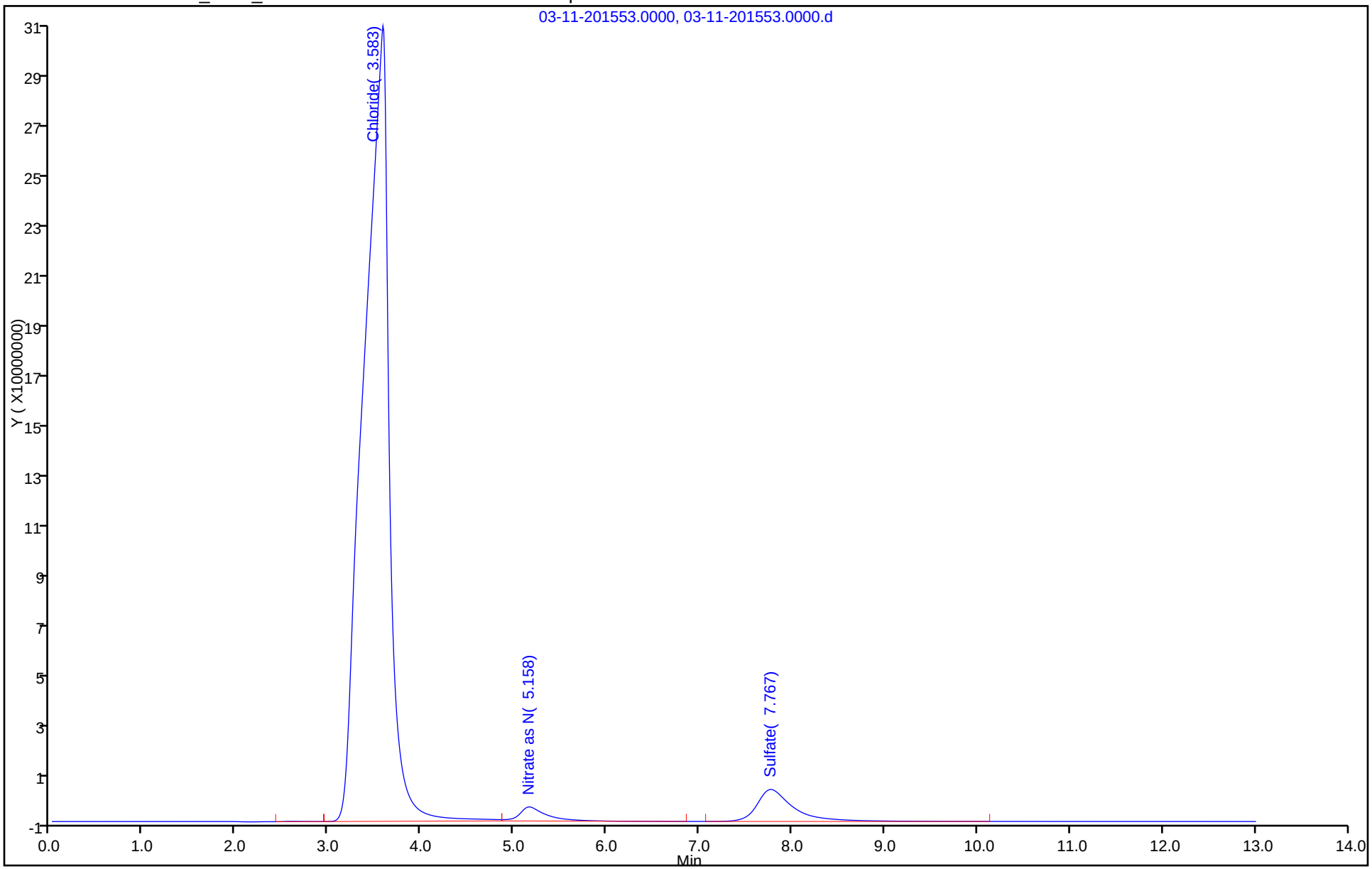
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:32 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201553.0000.d				
Injection Date:	12-Mar-2015 00:58:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-5	Lab Sample ID:	180-41935-5	Worklist Smp#:	53
Client ID:	HD-COD-SW-10-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-41935-5

Matrix: Water Lab File ID: 03-11-201554.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 10:05

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 01:14

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	190		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

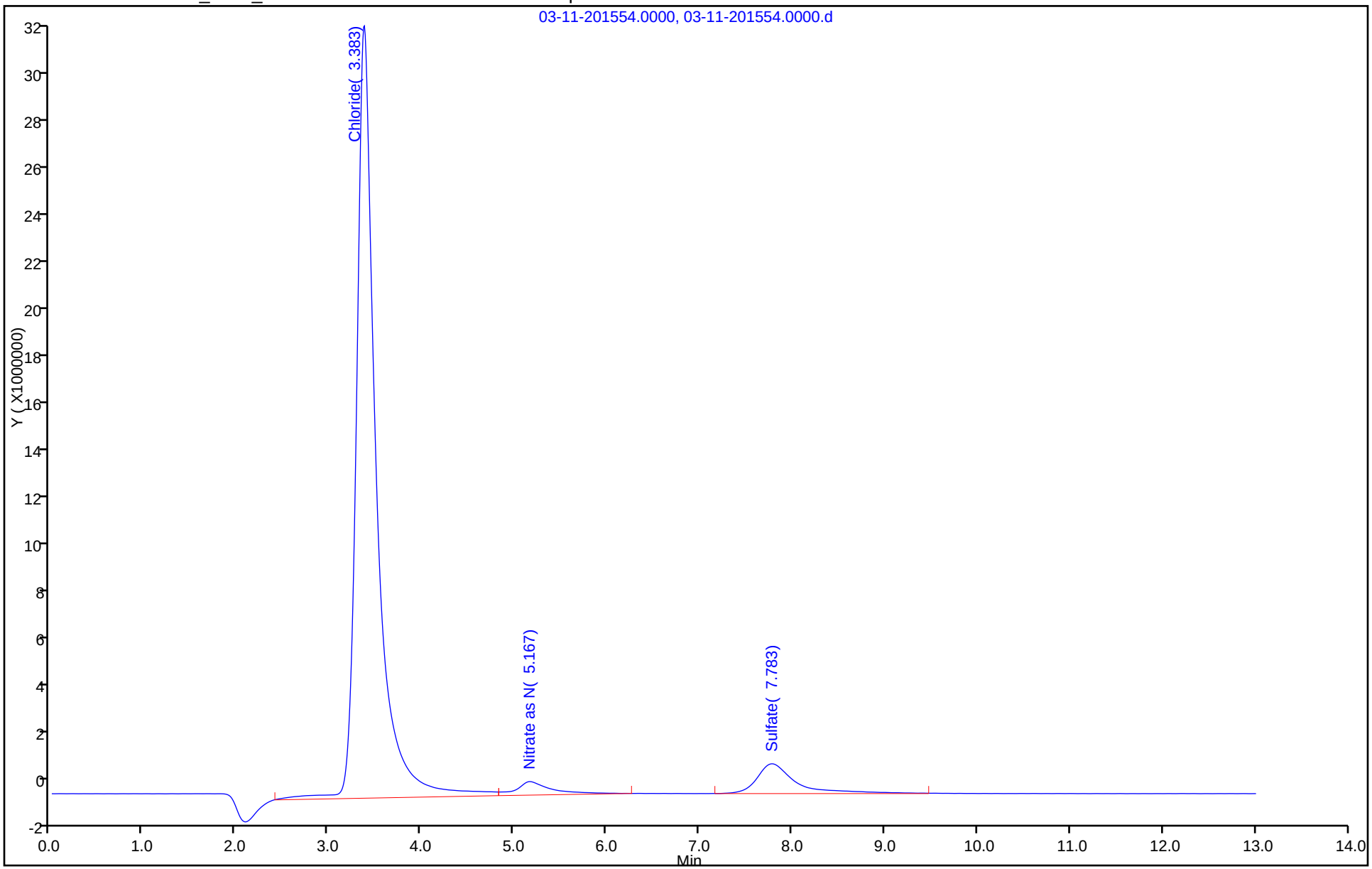
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201554.0000.d				
Lims ID:	180-41935-A-5	Lab Sample ID:	180-41935-5		
Client ID:	HD-COD-SW-10-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 01:14:00	ALS Bottle#:	0	Worklist Smp#:	54
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-054				
Misc. Info.:	54 180-41935-A-5 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.383	3.392	-0.009	466440052	19.0	
8 Nitrate as N	5.167	5.150	0.017	548973H	0.2384	
3 Sulfate	7.783	7.733	0.050	35738599	2.19	

Report Date: 12-Mar-2015 10:46:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201554.0000.d				
Injection Date:	12-Mar-2015 01:14:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-5	Lab Sample ID:	180-41935-5	Worklist Smp#:	54
Client ID:	HD-COD-SW-10-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-41935-6

Matrix: Water Lab File ID: 03-11-201555.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 13:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 01:29

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.3		0.10	0.0062
14808-79-8	Sulfate	16		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201555.0000.d				
Lims ID:	180-41935-A-6	Lab Sample ID:	180-41935-6		
Client ID:	HD-COD-SW-11-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 01:29:00	ALS Bottle#:	0	Worklist Smp#:	55
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-055				
Misc. Info.:	55 180-41935-A-6				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.550	3.392	0.158	3839621113	156.1	E
8 Nitrate as N	5.158	5.150	0.008	7768971H	3.34	
3 Sulfate	7.775	7.733	0.042	266832681	16.3	

QC Flag Legend

Processing Flags

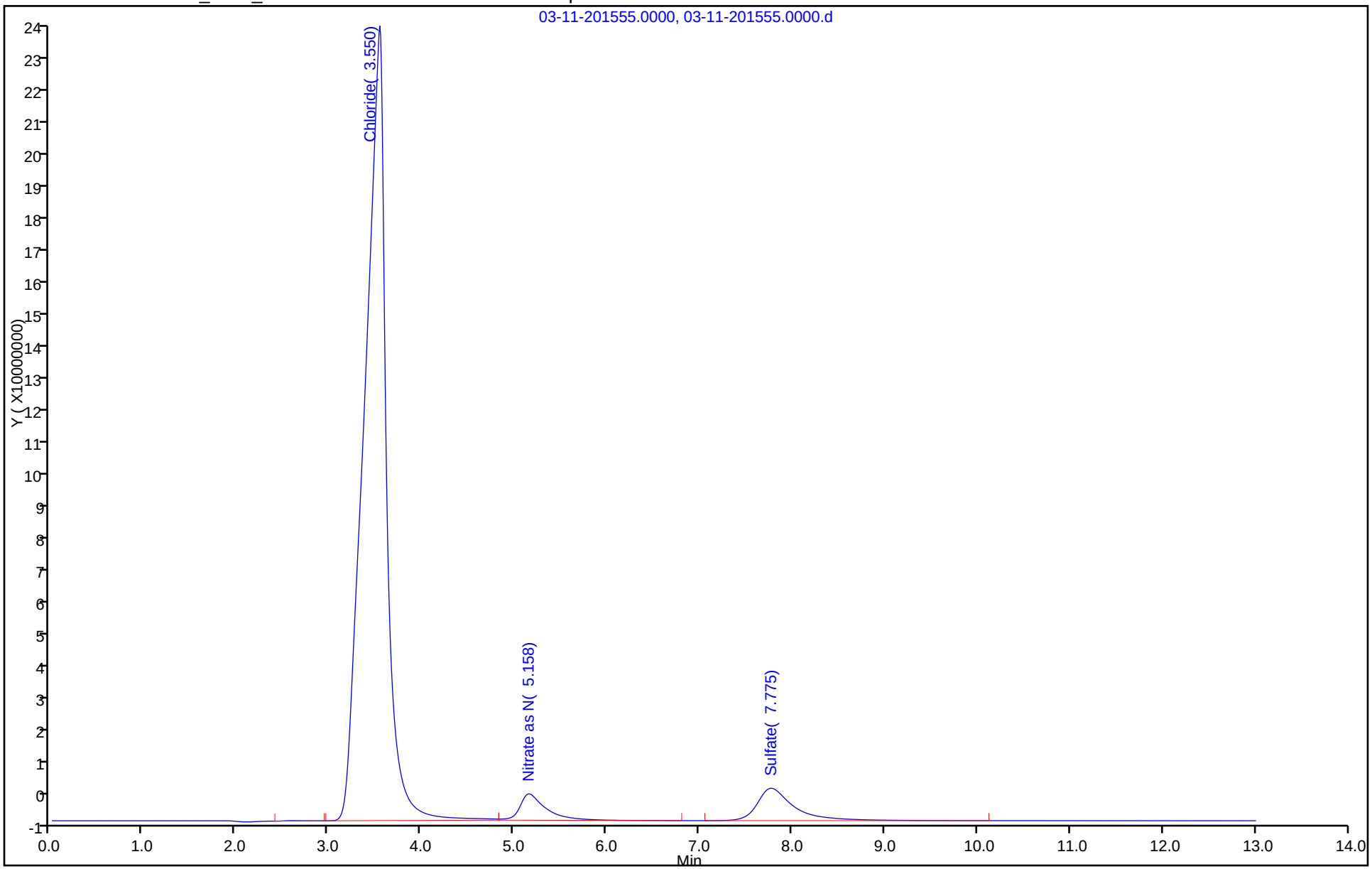
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201555.0000.d				
Injection Date:	12-Mar-2015 01:29:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-6	Lab Sample ID:	180-41935-6	Worklist Smp#:	55
Client ID:	HD-COD-SW-11-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-41935-6

Matrix: Water Lab File ID: 03-11-201556.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 13:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 01:45

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	120		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201556.0000.d				
Lims ID:	180-41935-A-6	Lab Sample ID:	180-41935-6		
Client ID:	HD-COD-SW-11-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 01:45:00	ALS Bottle#:	0	Worklist Smp#:	56
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-056				
Misc. Info.:	56 180-41935-A-6 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

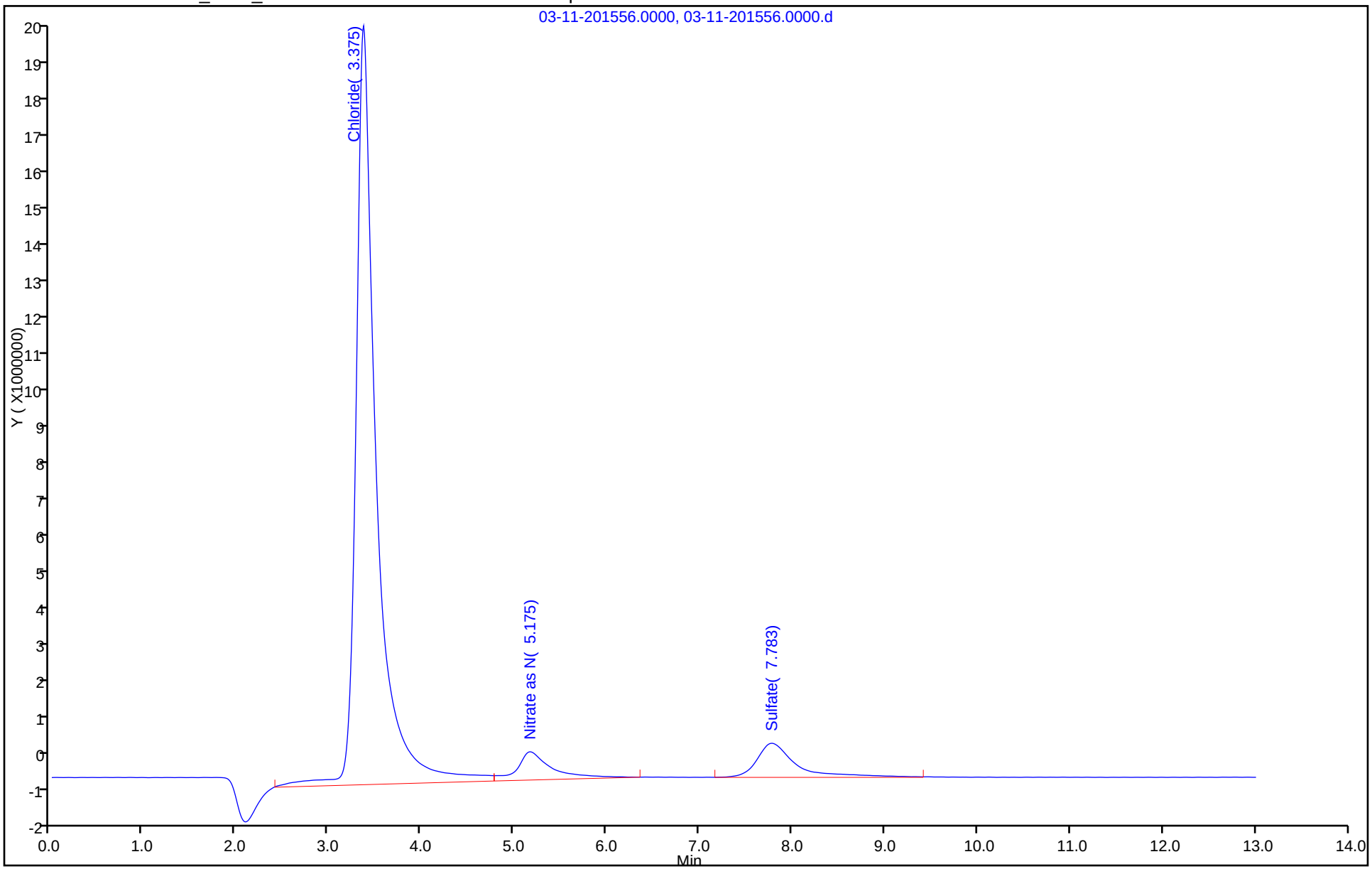
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.375	3.392	-0.017	307412963	12.5	
8 Nitrate as N	5.175	5.150	0.025	744423H	0.3224	
3 Sulfate	7.783	7.733	0.050	26699860	1.63	

Report Date: 12-Mar-2015 10:46:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201556.0000.d

Injection Date:	12-Mar-2015 01:45:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-6	Lab Sample ID:	180-41935-6	Worklist Smp#:	56
Client ID:	HD-COD-SW-11-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-41935-7

Matrix: Water Lab File ID: 03-11-201557.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 13:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 02:01

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.5		0.10	0.0062
14808-79-8	Sulfate	37		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201557.0000.d				
Lims ID:	180-41935-A-7	Lab Sample ID:	180-41935-7		
Client ID:	HD-COD-SW-12-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 02:01:00	ALS Bottle#:	0	Worklist Smp#:	57
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-057				
Misc. Info.:	57 180-41935-A-7				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.617	3.392	0.225	7421576221	301.7	E
8 Nitrate as N	5.167	5.150	0.017	8072729H	3.47	
3 Sulfate	7.758	7.733	0.025	603847362	37.0	

QC Flag Legend

Processing Flags

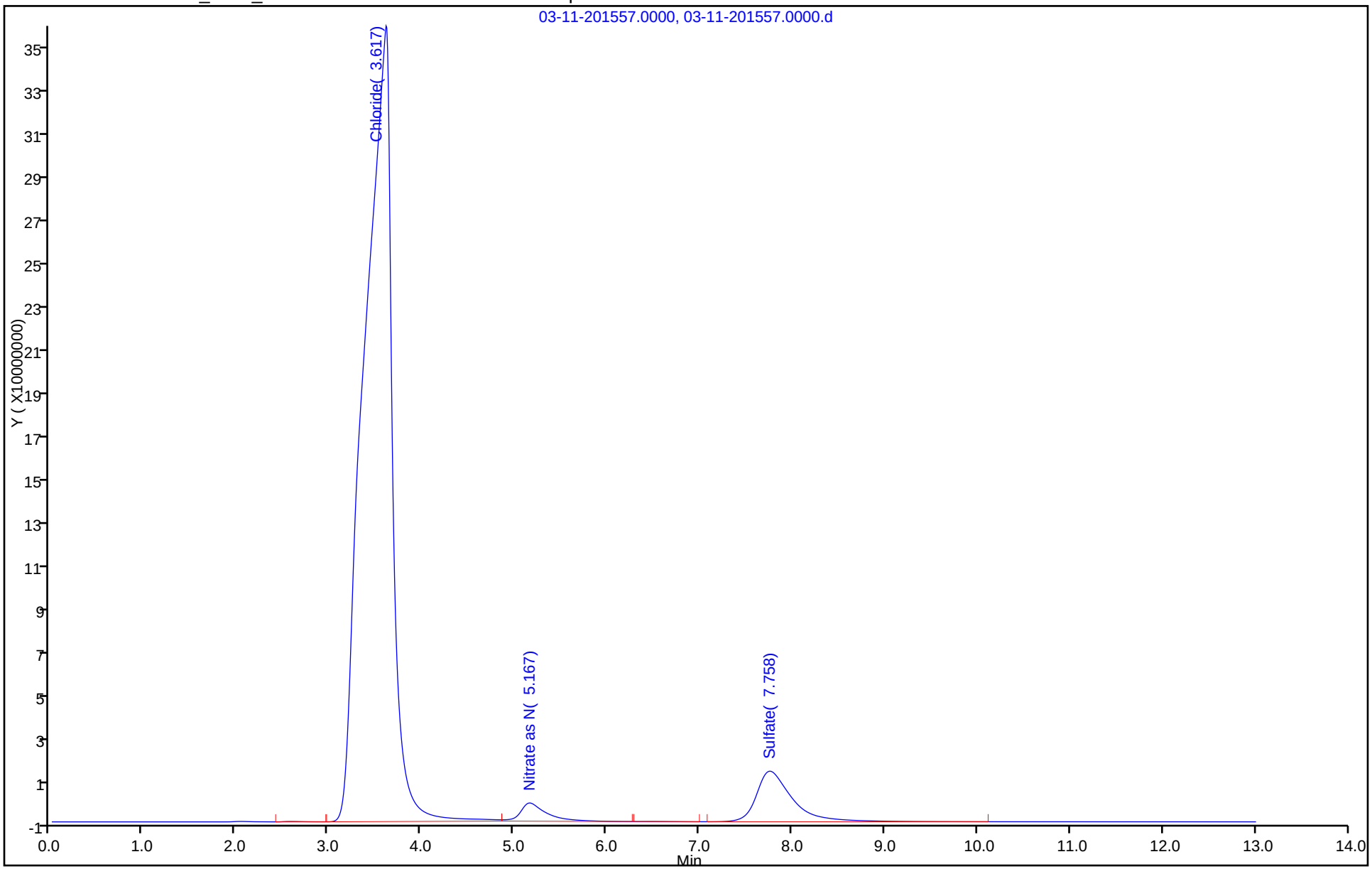
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:31 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201557.0000.d				
Injection Date:	12-Mar-2015 02:01:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-7	Lab Sample ID:	180-41935-7	Worklist Smp#:	57
Client ID:	HD-COD-SW-12-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-41935-7

Matrix: Water Lab File ID: 03-11-201558.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 13:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 02:16

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	240		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

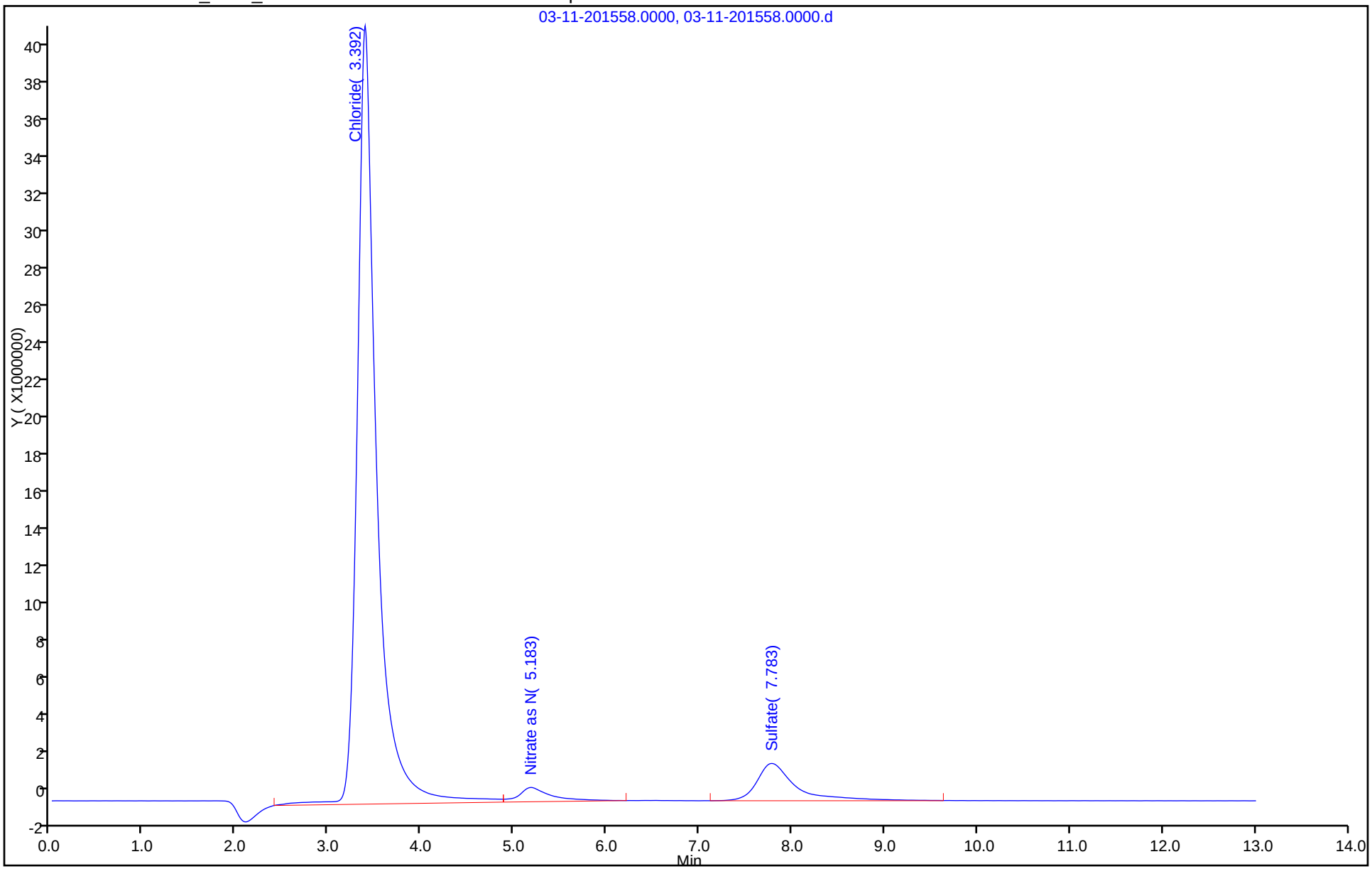
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201558.0000.d				
Lims ID:	180-41935-A-7	Lab Sample ID:	180-41935-7		
Client ID:	HD-COD-SW-12-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 02:16:00	ALS Bottle#:	0	Worklist Smp#:	58
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-058				
Misc. Info.:	58 180-41935-A-7 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.392	3.392	0.000	598883533	24.3	
8 Nitrate as N	5.183	5.150	0.033	757305H	0.3280	
3 Sulfate	7.783	7.733	0.050	57943339	3.55	

Report Date: 12-Mar-2015 10:46:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201558.0000.d				
Injection Date:	12-Mar-2015 02:16:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-7	Lab Sample ID:	180-41935-7	Worklist Smp#:	58
Client ID:	HD-COD-SW-12-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-41935-8

Matrix: Water Lab File ID: 03-11-201565.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 10:15

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 04:05

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.0		0.10	0.0062
16887-00-6	Chloride	70		1.0	0.20
14808-79-8	Sulfate	12		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201565.0000.d				
Lims ID:	180-41935-A-8	Lab Sample ID:	180-41935-8		
Client ID:	HD-COD-SW-13-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 04:05:00	ALS Bottle#:	0	Worklist Smp#:	65
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-065				
Misc. Info.:	23367 180-41935-A-8				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:26	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

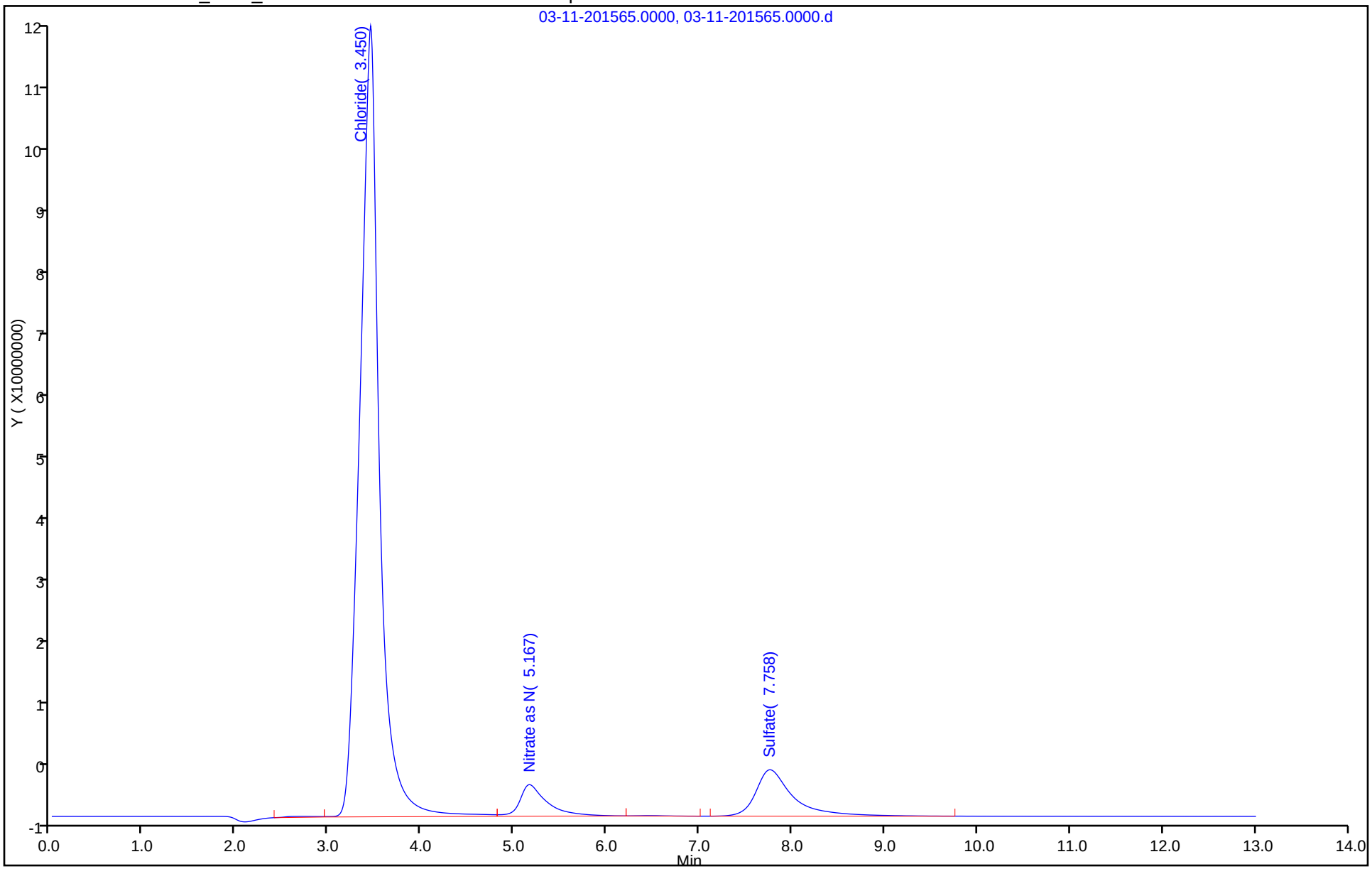
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.450	3.392	0.058	1724164194	70.1	
8 Nitrate as N	5.167	5.142	0.025	4717562	2.03	H
3 Sulfate	7.758	7.725	0.033	195187186	11.9	

Report Date: 12-Mar-2015 10:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201565.0000.d

Injection Date:	12-Mar-2015 04:05:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-8	Lab Sample ID:	180-41935-8	Worklist Smp#:	65
Client ID:	HD-COD-SW-13-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-41935-9

Matrix: Water Lab File ID: 03-11-201559.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 14:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 02:32

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.6		0.10	0.0062
14808-79-8	Sulfate	28		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201559.0000.d				
Lims ID:	180-41935-A-9	Lab Sample ID:	180-41935-9		
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 02:32:00	ALS Bottle#:	0	Worklist Smp#:	59
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-059				
Misc. Info.:	59 180-41935-A-9				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.550	3.392	0.158	3389990754	137.8	E
8 Nitrate as N	5.158	5.150	0.008	8419453H	3.62	
3 Sulfate	7.758	7.733	0.025	462108005	28.3	

QC Flag Legend

Processing Flags

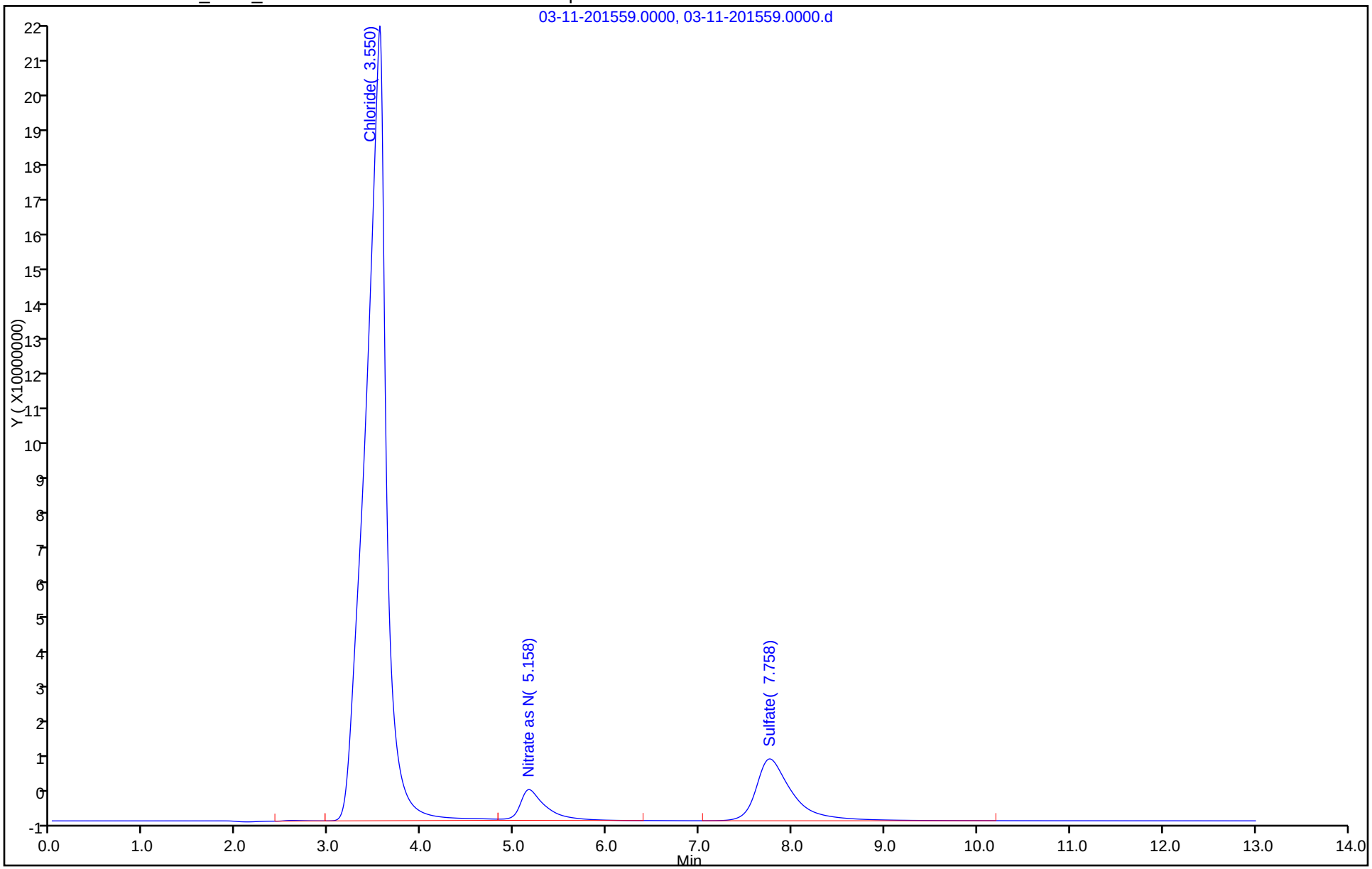
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201559.0000.d				
Injection Date:	12-Mar-2015 02:32:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-9	Lab Sample ID:	180-41935-9	Worklist Smp#:	59
Client ID:	HD-COD-SW-15-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-41935-9

Matrix: Water Lab File ID: 03-11-201560.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 14:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 02:47

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	110		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201560.0000.d				
Lims ID:	180-41935-A-9	Lab Sample ID:	180-41935-9		
Client ID:	HD-COD-SW-15-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 02:47:00	ALS Bottle#:	0	Worklist Smp#:	60
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-060				
Misc. Info.:	60 180-41935-A-9 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

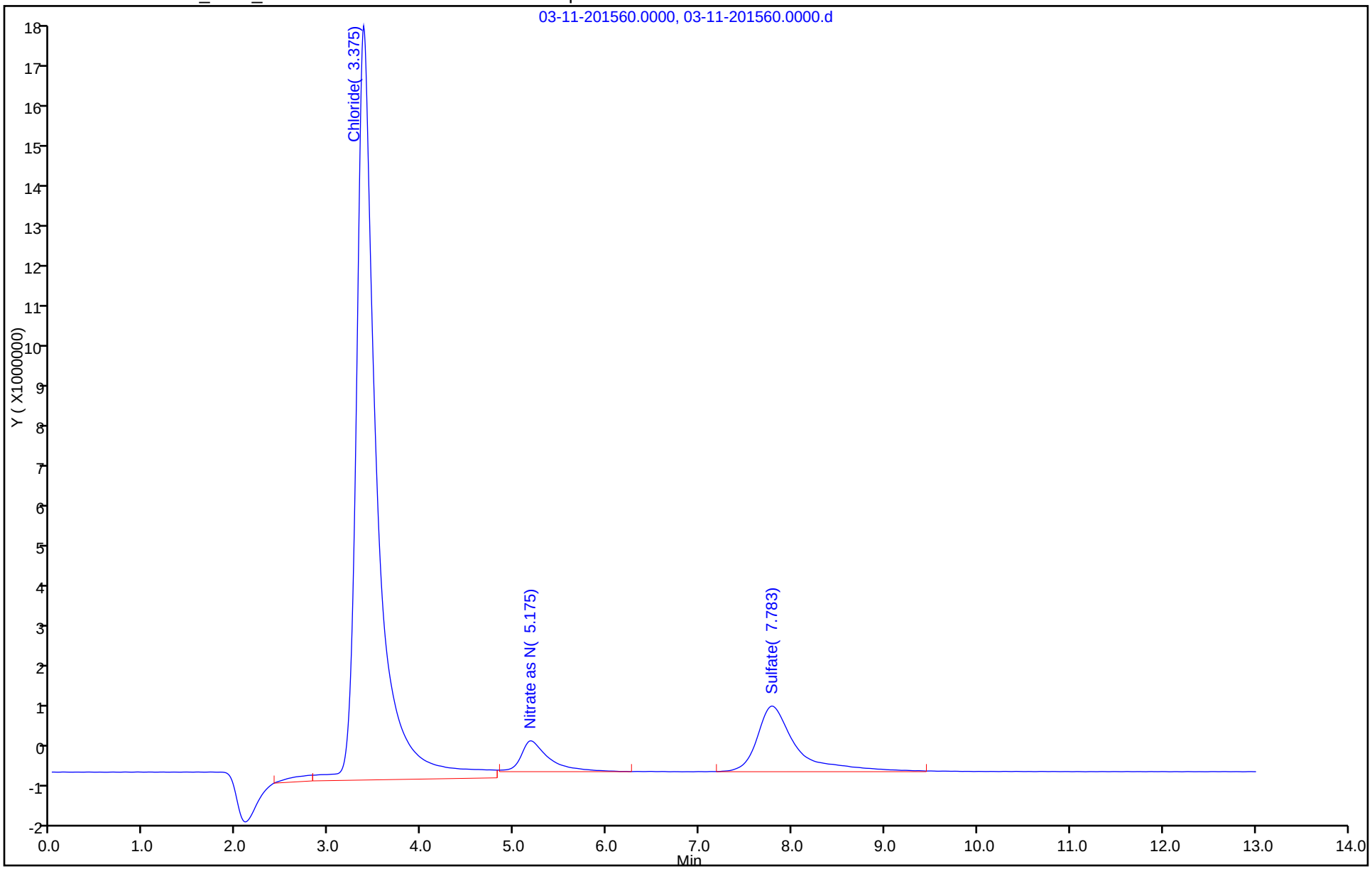
Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.375	3.392	-0.017	272834166	11.1	
8 Nitrate as N	5.175	5.150	0.025	721140H	0.3124	
3 Sulfate	7.783	7.733	0.050	45248403	2.77	

Report Date: 12-Mar-2015 10:46:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201560.0000.d

Injection Date:	12-Mar-2015 02:47:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-9	Lab Sample ID:	180-41935-9	Worklist Smp#:	60
Client ID:	HD-COD-SW-15-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-41935-10

Matrix: Water Lab File ID: 03-11-201535.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 10:40

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 20:18

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.0		0.10	0.0062
16887-00-6	Chloride	73		1.0	0.20
14808-79-8	Sulfate	12		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

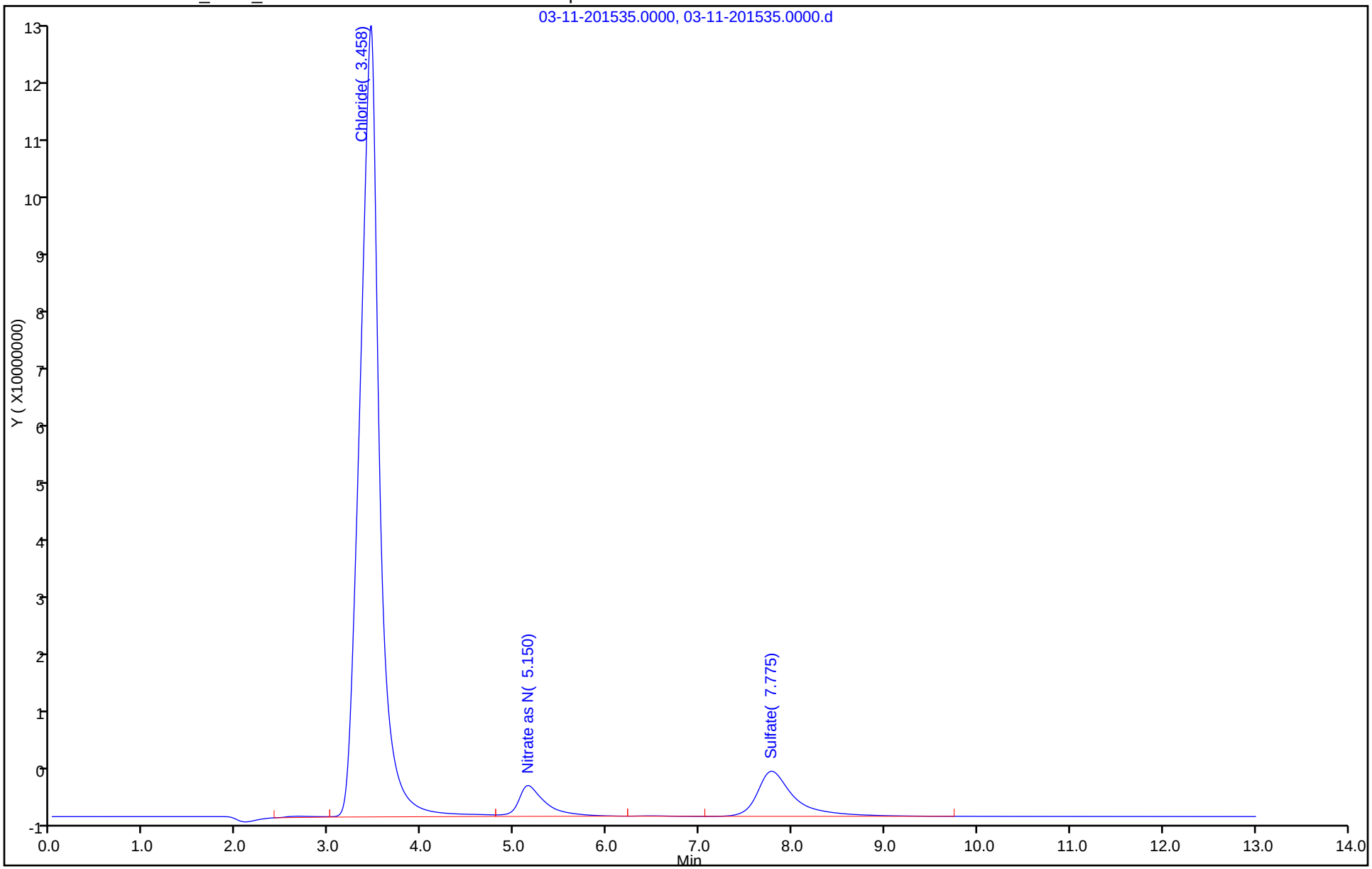
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201535.0000.d				
Lims ID:	180-41935-A-10	Lab Sample ID:	180-41935-10		
Client ID:	HD-COD-SW-16-0/1-0				
Sample Type:	Client				
Inject. Date:	11-Mar-2015 20:18:00	ALS Bottle#:	0	Worklist Smp#:	35
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-035				
Misc. Info.:	35 180-41935-A-10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:36	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.458	3.392	0.066	1784295885	72.5	
8 Nitrate as N	5.150	5.133	0.017	4716705H	2.03	
3 Sulfate	7.775	7.742	0.033	193235430	11.8	

Report Date: 12-Mar-2015 10:46:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201535.0000.d				
Injection Date:	11-Mar-2015 20:18:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-10	Lab Sample ID:	180-41935-10	Worklist Smp#:	35
Client ID:	HD-COD-SW-16-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-41935-11

Matrix: Water Lab File ID: 03-11-201541.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 21:52

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.1		0.10	0.0062
16887-00-6	Chloride	73		1.0	0.20
14808-79-8	Sulfate	12		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201541.0000.d
Lims ID: 180-41935-A-11 Lab Sample ID: 180-41935-11
Client ID: HD-COD-SW-17-0/1-0
Sample Type: Client
Inject. Date: 11-Mar-2015 21:52:00 ALS Bottle#: 0 Worklist Smp#: 41
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-041
Misc. Info.: 41 180-41935-A-11
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

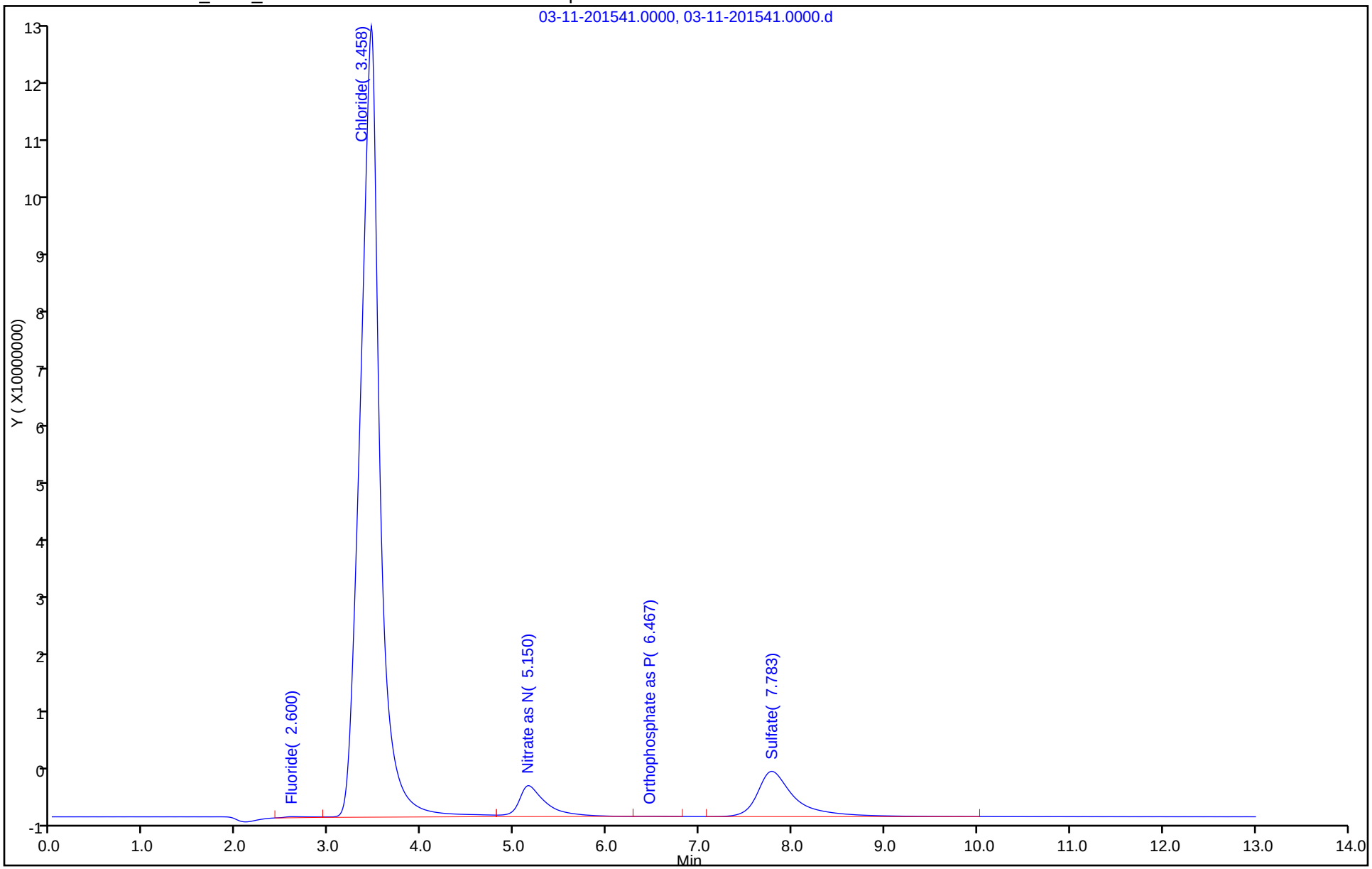
Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
1 Fluoride	2.600	2.575	0.025	166206H	0.003660	
2 Chloride	3.458	3.392	0.066	1796912957	73.1	
10 Nitrite as N		3.817			ND	
4 Bromide		4.575			ND	
8 Nitrate as N	5.150	5.133	0.017	4790926H	2.06	
9 Orthophosphate as P	6.467	6.442	0.025	24373H	0.0694	
3 Sulfate	7.783	7.742	0.041	198022634	12.1	

Report Date: 12-Mar-2015 10:46:35 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201541.0000.d				
Injection Date:	11-Mar-2015 21:52:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-11	Lab Sample ID:	180-41935-11	Worklist Smp#:	41
Client ID:	HD-COD-SW-17-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-41935-12

Matrix: Water Lab File ID: 03-11-201561.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:30

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 03:03

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.2		0.10	0.0062
14808-79-8	Sulfate	11		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201561.0000.d				
Lims ID:	180-41935-A-12	Lab Sample ID:	180-41935-12		
Client ID:	HD-COD-SW-20-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 03:03:00	ALS Bottle#:	0	Worklist Smp#:	61
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-061				
Misc. Info.:	61 180-41935-A-12				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.558	3.392	0.166	5101088367	207.4	E
8 Nitrate as N	5.175	5.150	0.025	5022314H	2.16	
3 Sulfate	7.775	7.733	0.042	186159018	11.4	

QC Flag Legend

Processing Flags

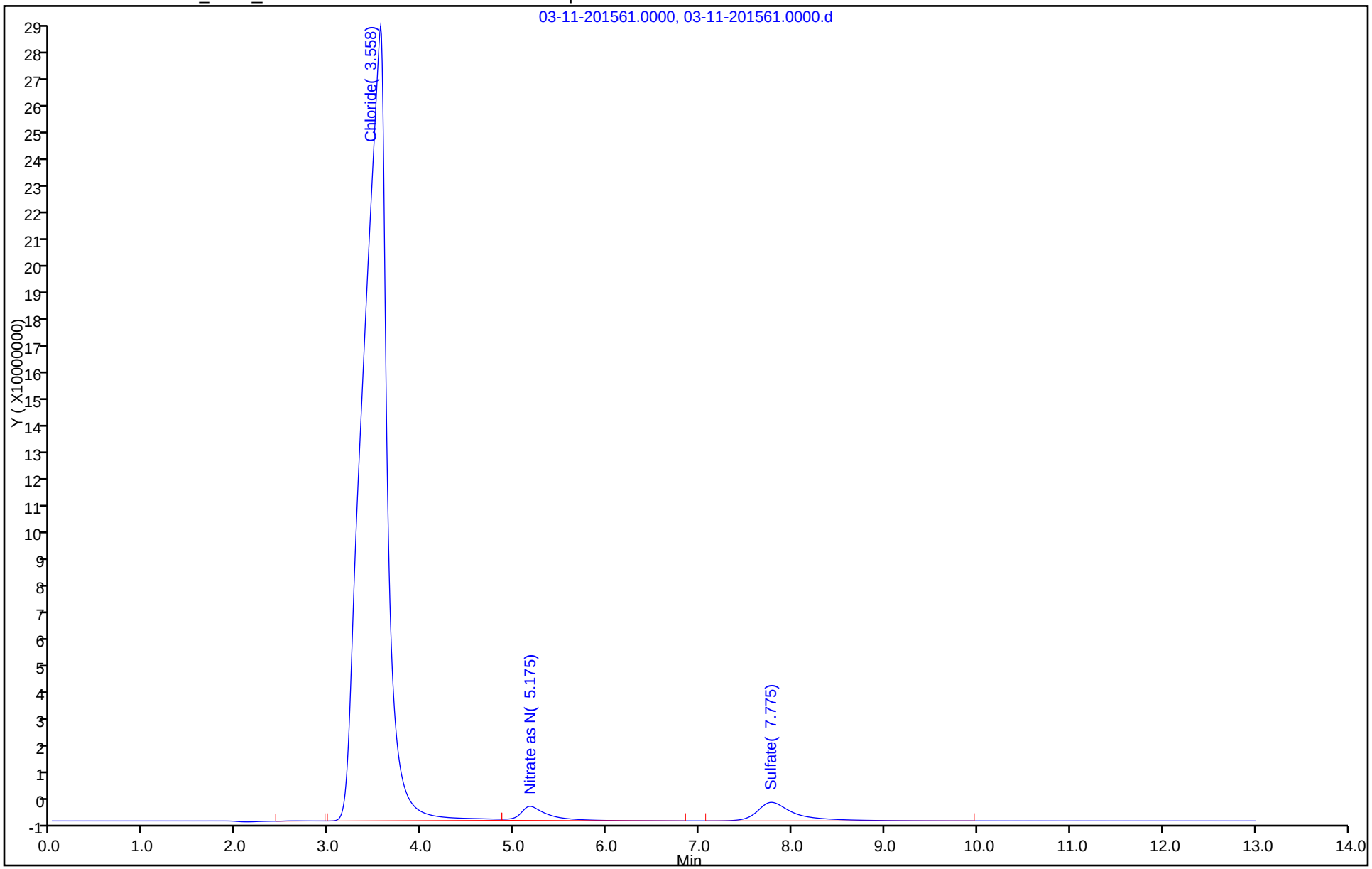
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201561.0000.d				
Injection Date:	12-Mar-2015 03:03:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-12	Lab Sample ID:	180-41935-12	Worklist Smp#:	61
Client ID:	HD-COD-SW-20-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-41935-12

Matrix: Water Lab File ID: 03-11-201562.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:30

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 03:18

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	160		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

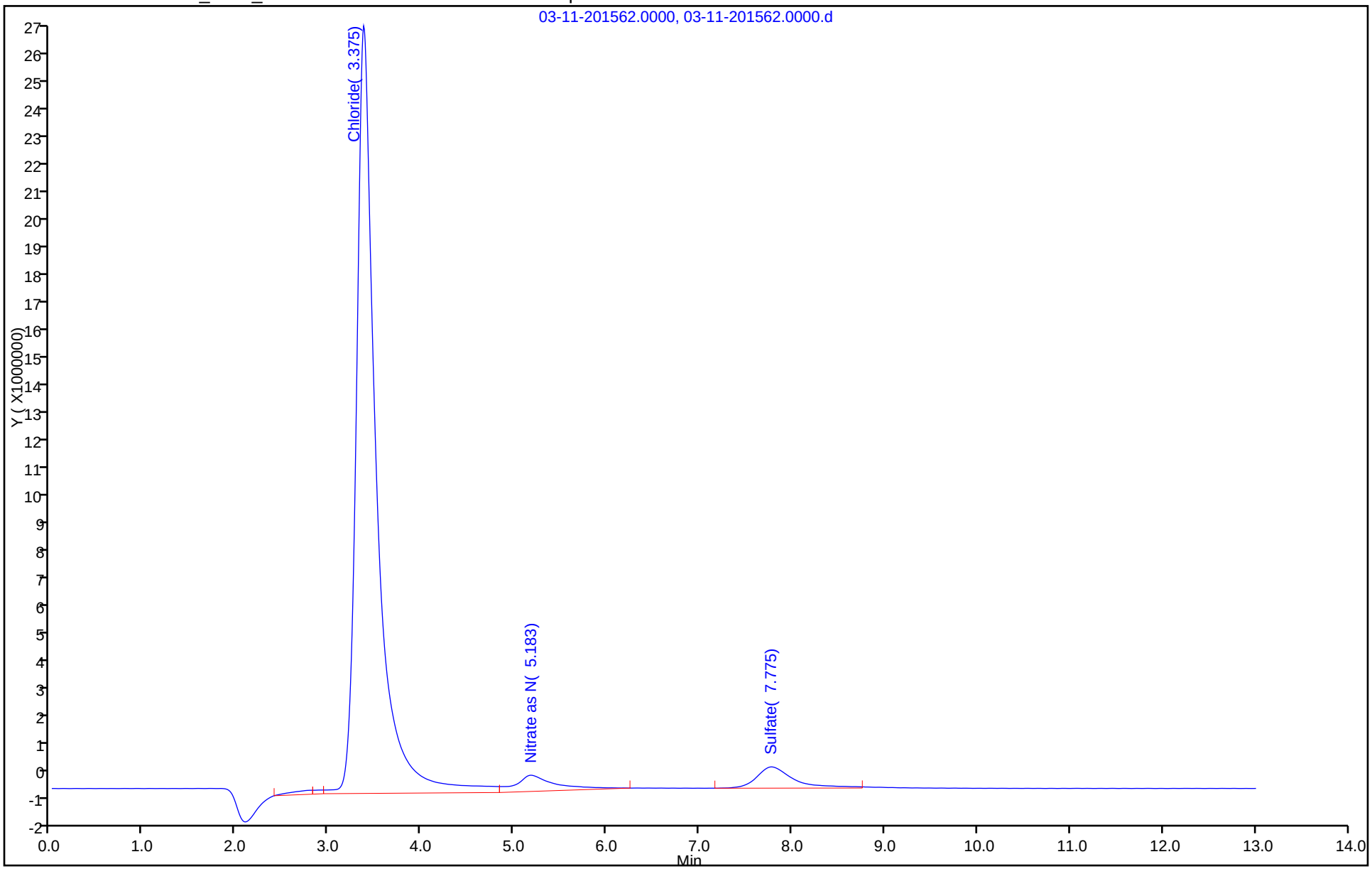
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201562.0000.d				
Lims ID:	180-41935-A-12	Lab Sample ID:	180-41935-12		
Client ID:	HD-COD-SW-20-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 03:18:00	ALS Bottle#:	0	Worklist Smp#:	62
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-062				
Misc. Info.:	62 180-41935-A-12 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:28	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.375	3.392	-0.017	399904684	16.3	
8 Nitrate as N	5.183	5.150	0.033	561170H	0.2436	
3 Sulfate	7.775	7.733	0.042	20457207	1.25	

Report Date: 12-Mar-2015 10:46:29 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201562.0000.d				
Injection Date:	12-Mar-2015 03:18:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-12	Lab Sample ID:	180-41935-12	Worklist Smp#:	62
Client ID:	HD-COD-SW-20-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-41935-13

Matrix: Water Lab File ID: 03-11-201536.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:55

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 20:34

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.1		0.10	0.0062
16887-00-6	Chloride	60		1.0	0.20
14808-79-8	Sulfate	13		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201536.0000.d
Lims ID: 180-41935-A-13 Lab Sample ID: 180-41935-13
Client ID: HD-COD-SW-26-0/1-0
Sample Type: Client
Inject. Date: 11-Mar-2015 20:34:00 ALS Bottle#: 0 Worklist Smp#: 36
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-036
Misc. Info.: 36 180-41935-A-13
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:36 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

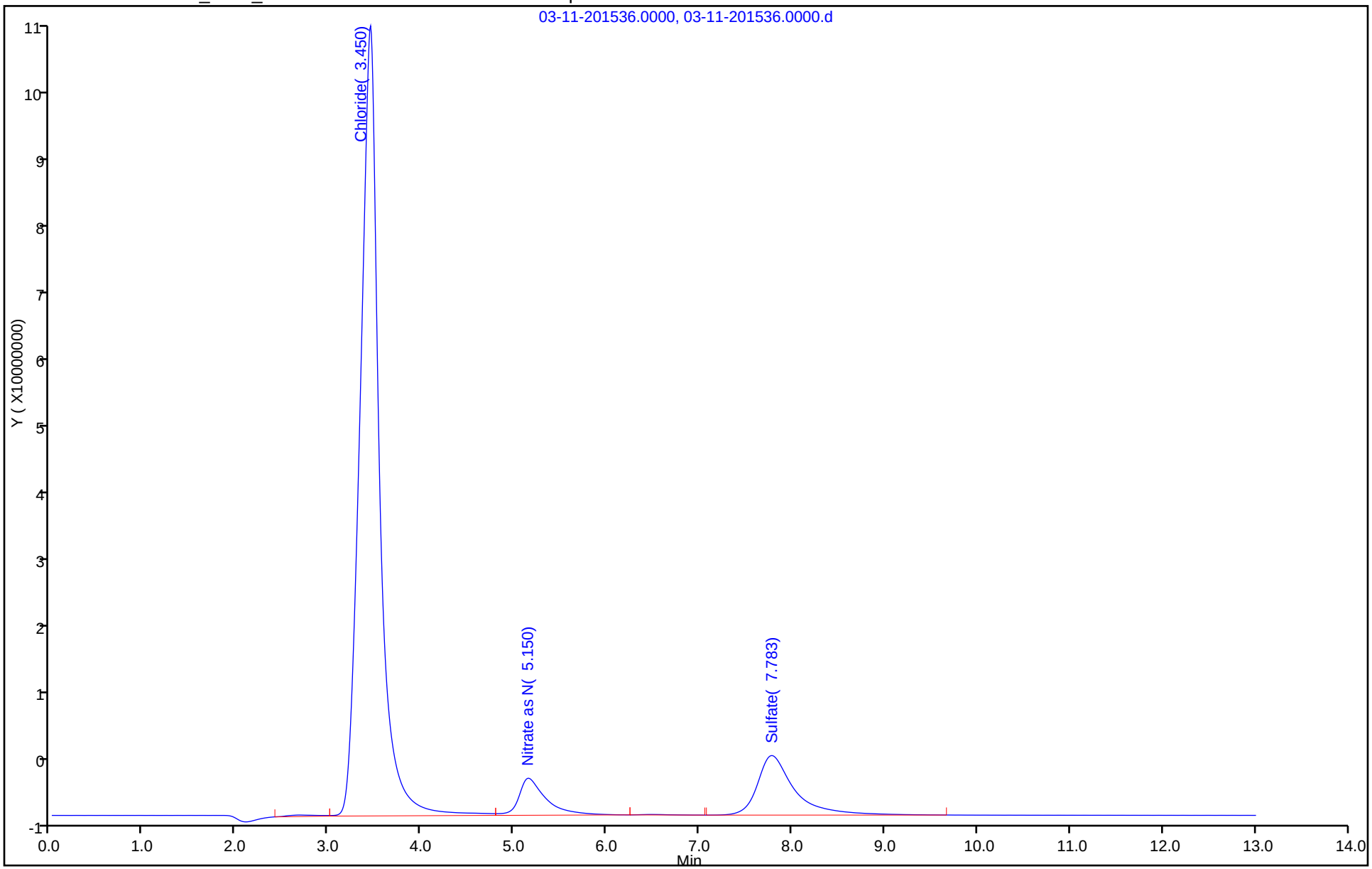
Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.450	3.392	0.058	1468459542	59.7	
8 Nitrate as N	5.150	5.133	0.017	4763226H	2.05	
3 Sulfate	7.783	7.742	0.041	213790529	13.1	

Report Date: 12-Mar-2015 10:46:36 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201536.0000.d				
Injection Date:	11-Mar-2015 20:34:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-13	Lab Sample ID:	180-41935-13	Worklist Smp#:	36
Client ID:	HD-COD-SW-26-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-41935-14

Matrix: Water Lab File ID: 03-11-201537.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 14:10

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 20:49

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.2		0.10	0.0062
16887-00-6	Chloride	62		1.0	0.20
14808-79-8	Sulfate	14		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

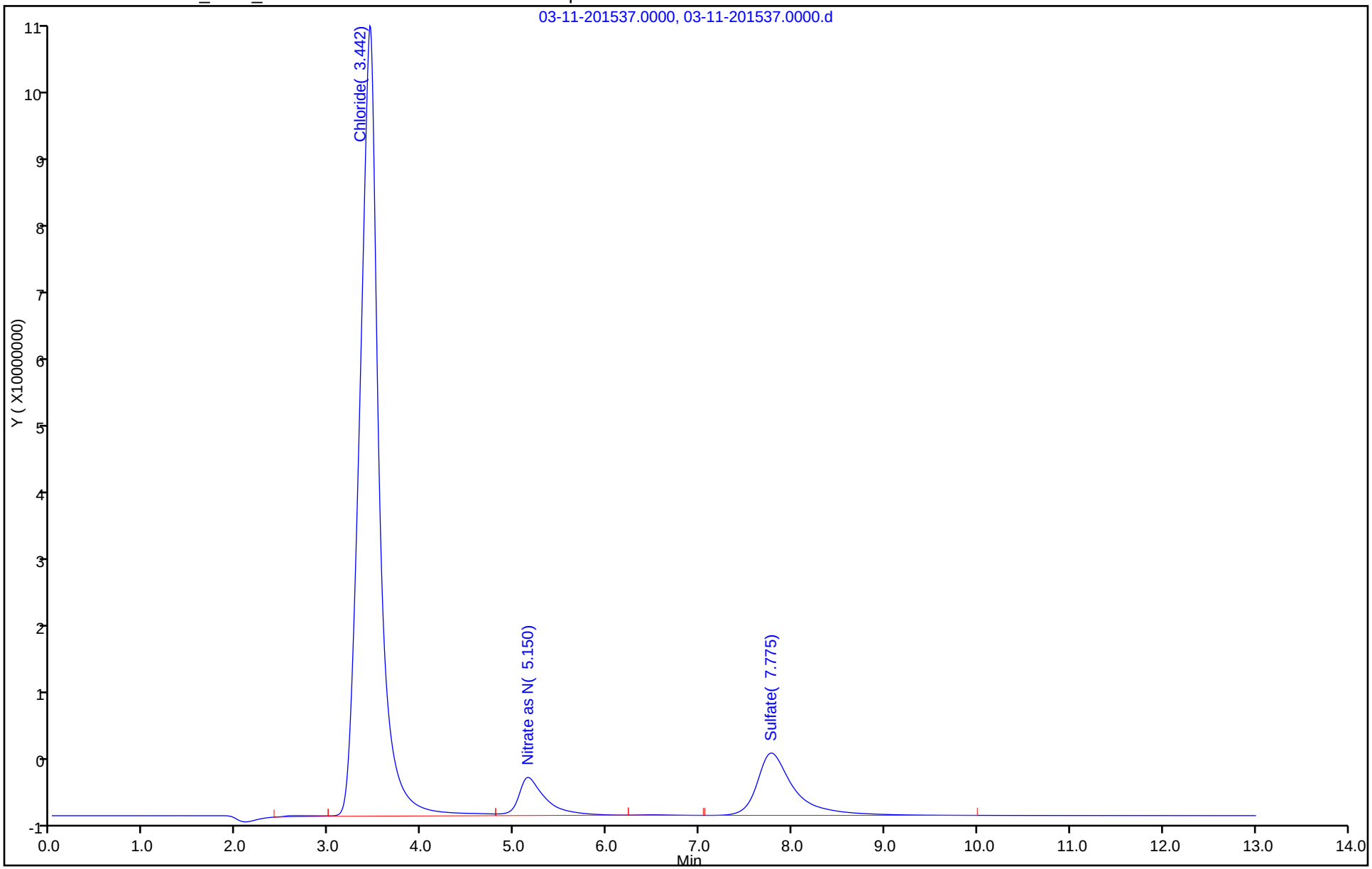
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201537.0000.d				
Lims ID:	180-41935-A-14	Lab Sample ID:	180-41935-14		
Client ID:	HD-COD-SW-27-0/1-0				
Sample Type:	Client				
Inject. Date:	11-Mar-2015 20:49:00	ALS Bottle#:	0	Worklist Smp#:	37
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-037				
Misc. Info.:	37 180-41935-A-14				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:36	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.442	3.392	0.050	1518080083	61.7	
8 Nitrate as N	5.150	5.133	0.017	5064235H	2.18	
3 Sulfate	7.775	7.742	0.033	231295112	14.2	

Report Date: 12-Mar-2015 10:46:36 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201537.0000.d				
Injection Date:	11-Mar-2015 20:49:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-14	Lab Sample ID:	180-41935-14	Worklist Smp#:	37
Client ID:	HD-COD-SW-27-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-41935-15

Matrix: Water Lab File ID: 03-11-201568.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 13:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 04:52

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.6		0.10	0.0062
14808-79-8	Sulfate	18		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201568.0000.d				
Lims ID:	180-41935-A-15	Lab Sample ID:	180-41935-15		
Client ID:	HD-COD-SW-28-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 04:52:00	ALS Bottle#:	0	Worklist Smp#:	68
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-068				
Misc. Info.:	18939 180-41935-A-15				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:26	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.508	3.392	0.116	2942868367	119.6	E
8 Nitrate as N	5.167	5.142	0.025	6105493H	2.63	
3 Sulfate	7.758	7.725	0.033	287172218	17.6	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

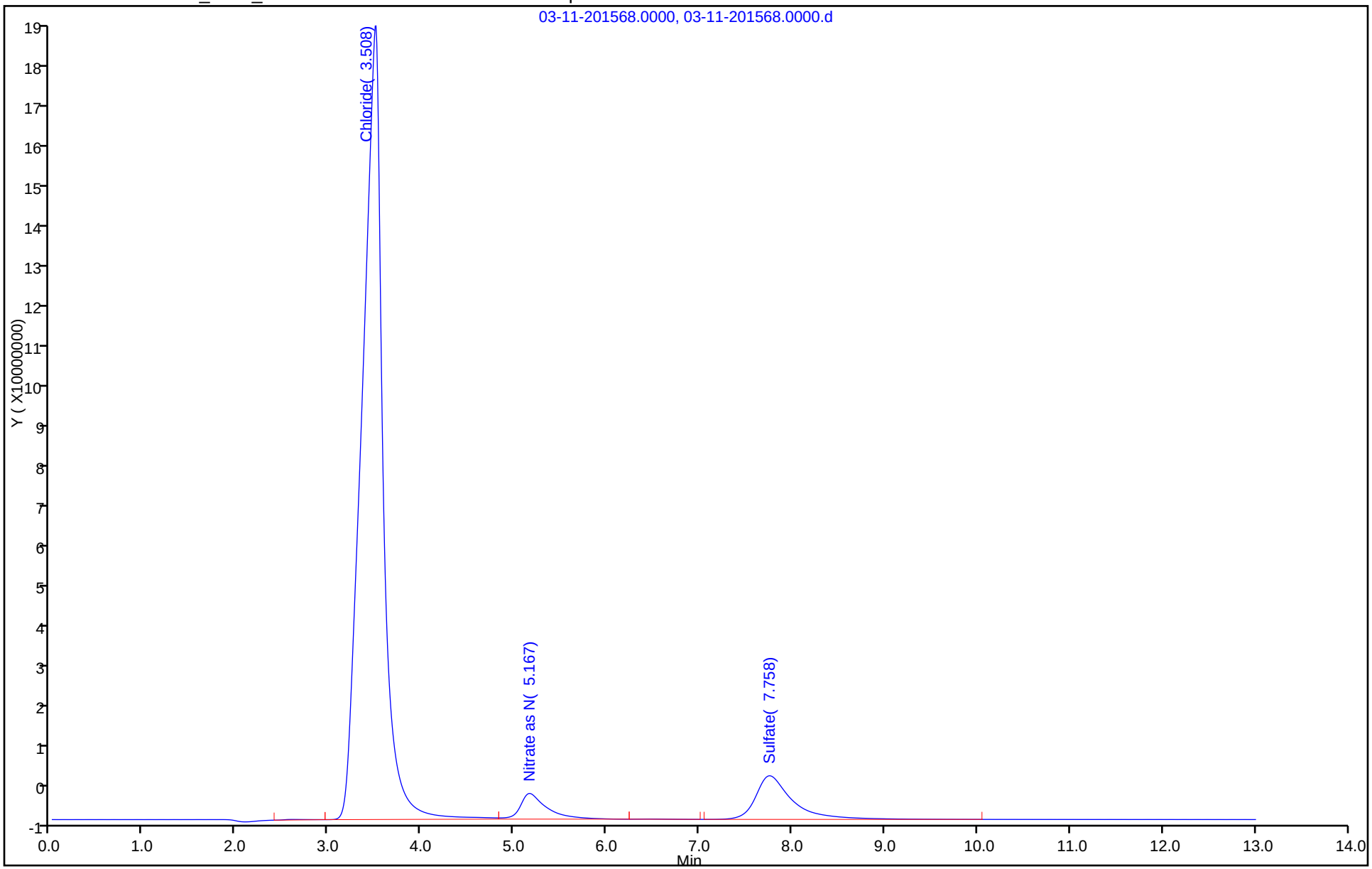
H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201568.0000.d

Injection Date:	12-Mar-2015 04:52:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-15	Lab Sample ID:	180-41935-15	Worklist Smp#:	68
Client ID:	HD-COD-SW-28-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-41935-15

Matrix: Water Lab File ID: 03-11-201569.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 13:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 05:07

Con. Extract Vol.: Dilution Factor: 5

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	100		5.0	0.98

TestAmerica Pittsburgh
Target Compound Quantitation Report

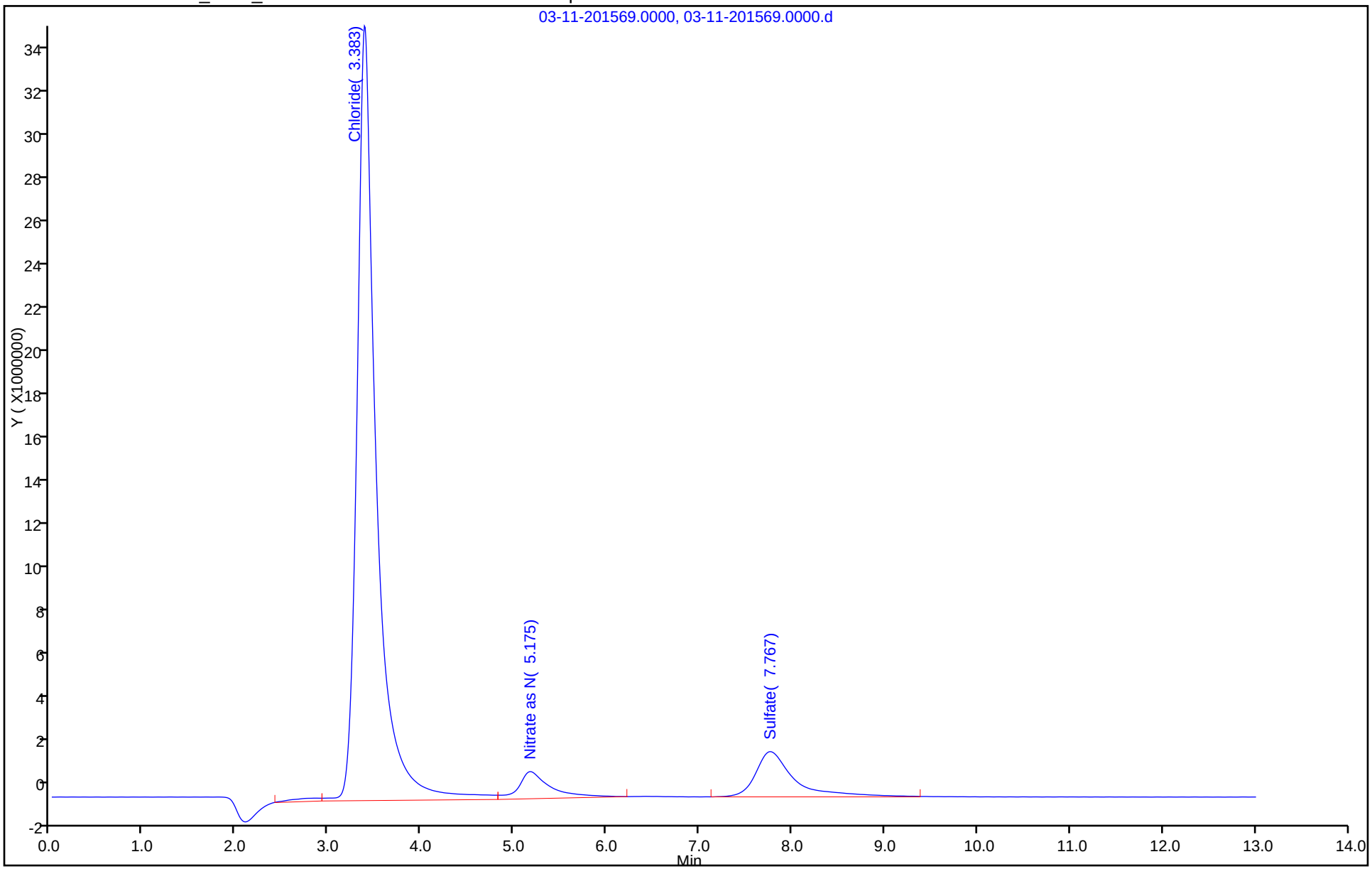
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201569.0000.d				
Lims ID:	180-41935-A-15	Lab Sample ID:	180-41935-15		
Client ID:	HD-COD-SW-28-0/1-0				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 05:07:00	ALS Bottle#:	0	Worklist Smp#:	69
Injection Vol:	25.0 ul	Dil. Factor:	5.0000		
Sample Info:	180-0005979-069				
Misc. Info.:	8735 180-41935-A-15 5				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:26	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.383	3.392	-0.009	504010903	20.5	
8 Nitrate as N	5.175	5.142	0.033	1214242H	0.5244	
3 Sulfate	7.767	7.725	0.042	59086070	3.62	

Report Date: 12-Mar-2015 10:46:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201569.0000.d				
Injection Date:	12-Mar-2015 05:07:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-15	Lab Sample ID:	180-41935-15	Worklist Smp#:	69
Client ID:	HD-COD-SW-28-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	5.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-41935-16

Matrix: Water Lab File ID: 03-11-201538.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 09:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 21:05

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.1		0.10	0.0062
16887-00-6	Chloride	59		1.0	0.20
14808-79-8	Sulfate	12		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

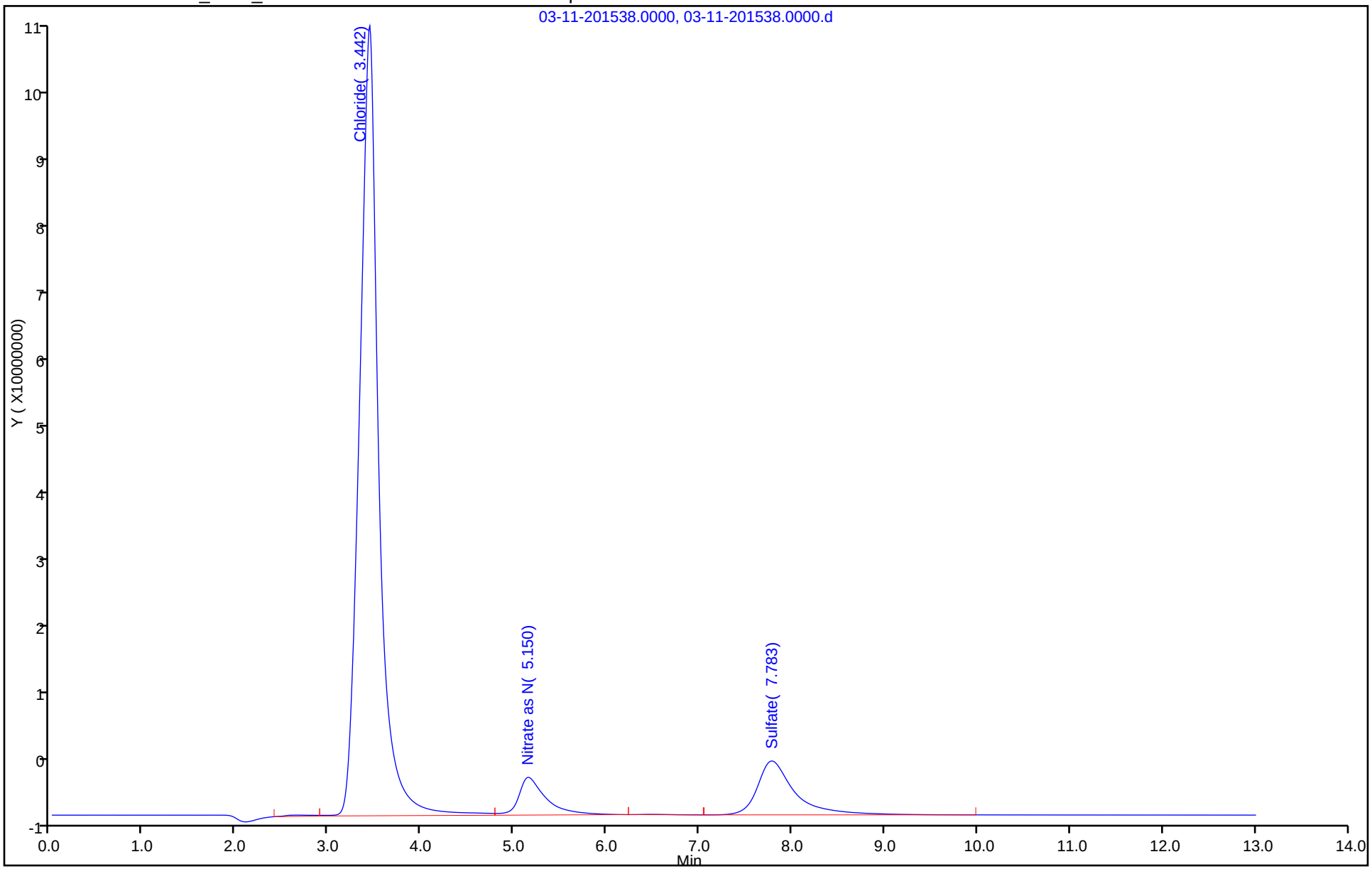
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201538.0000.d				
Lims ID:	180-41935-A-16	Lab Sample ID:	180-41935-16		
Client ID:	HD-COD-SW-29-0/1-0				
Sample Type:	Client				
Inject. Date:	11-Mar-2015 21:05:00	ALS Bottle#:	0	Worklist Smp#:	38
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-038				
Misc. Info.:	38 180-41935-A-16				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:36	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.442	3.392	0.050	1458609597	59.3	
8 Nitrate as N	5.150	5.133	0.017	4821208	2.08	H
3 Sulfate	7.783	7.742	0.041	193612041	11.9	

Report Date: 12-Mar-2015 10:46:36 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201538.0000.d				
Injection Date:	11-Mar-2015 21:05:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-16	Lab Sample ID:	180-41935-16	Worklist Smp#:	38
Client ID:	HD-COD-SW-29-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41935-17

Matrix: Water Lab File ID: 03-11-201549.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 08:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 23:56

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.8		0.10	0.0062
14808-79-8	Sulfate	29		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201549.0000.d				
Lims ID:	180-41935-A-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Sample Type:	Client				
Inject. Date:	11-Mar-2015 23:56:00	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Sample Info:	180-0005979-049				
Misc. Info.:	49 180-41935-A-17				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:32	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.558	3.392	0.166	3452123350	140.3	E
8 Nitrate as N	5.158	5.133	0.025	8762991H	3.77	
3 Sulfate	7.767	7.742	0.025	467330880	28.6	

QC Flag Legend

Processing Flags

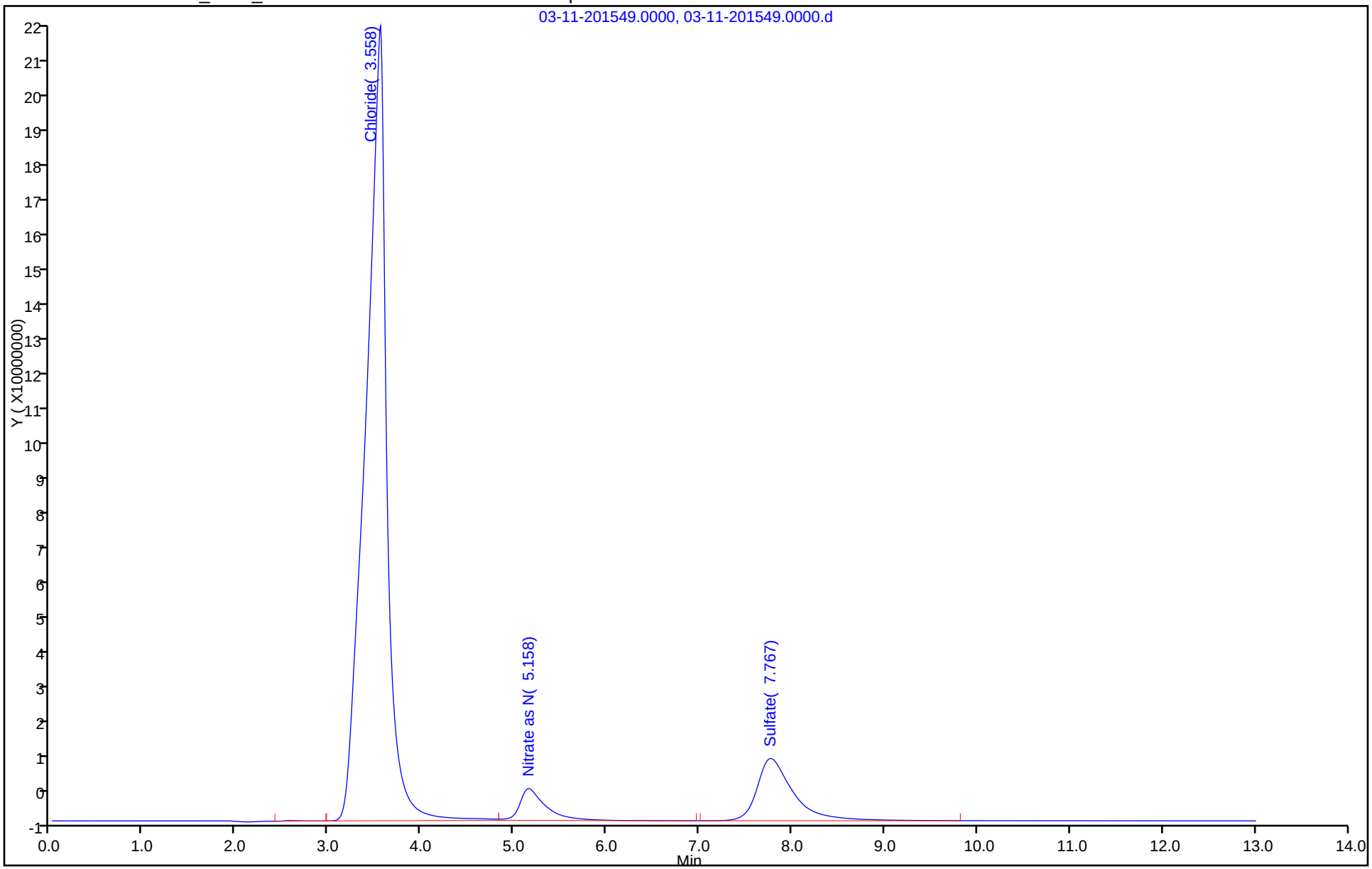
E - Exceeded Maximum Amount

H - Response Measured by Height

Report Date: 12-Mar-2015 10:46:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201549.0000.d				
Injection Date:	11-Mar-2015 23:56:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-17	Lab Sample ID:	180-41935-17	Worklist Smp#:	49
Client ID:	HD-QC1-0/1-1				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41935-17

Matrix: Water Lab File ID: 03-11-201550.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 08:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 00:12

Con. Extract Vol.: Dilution Factor: 10

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
16887-00-6	Chloride	110		10	2.0

TestAmerica Pittsburgh
Target Compound Quantitation Report

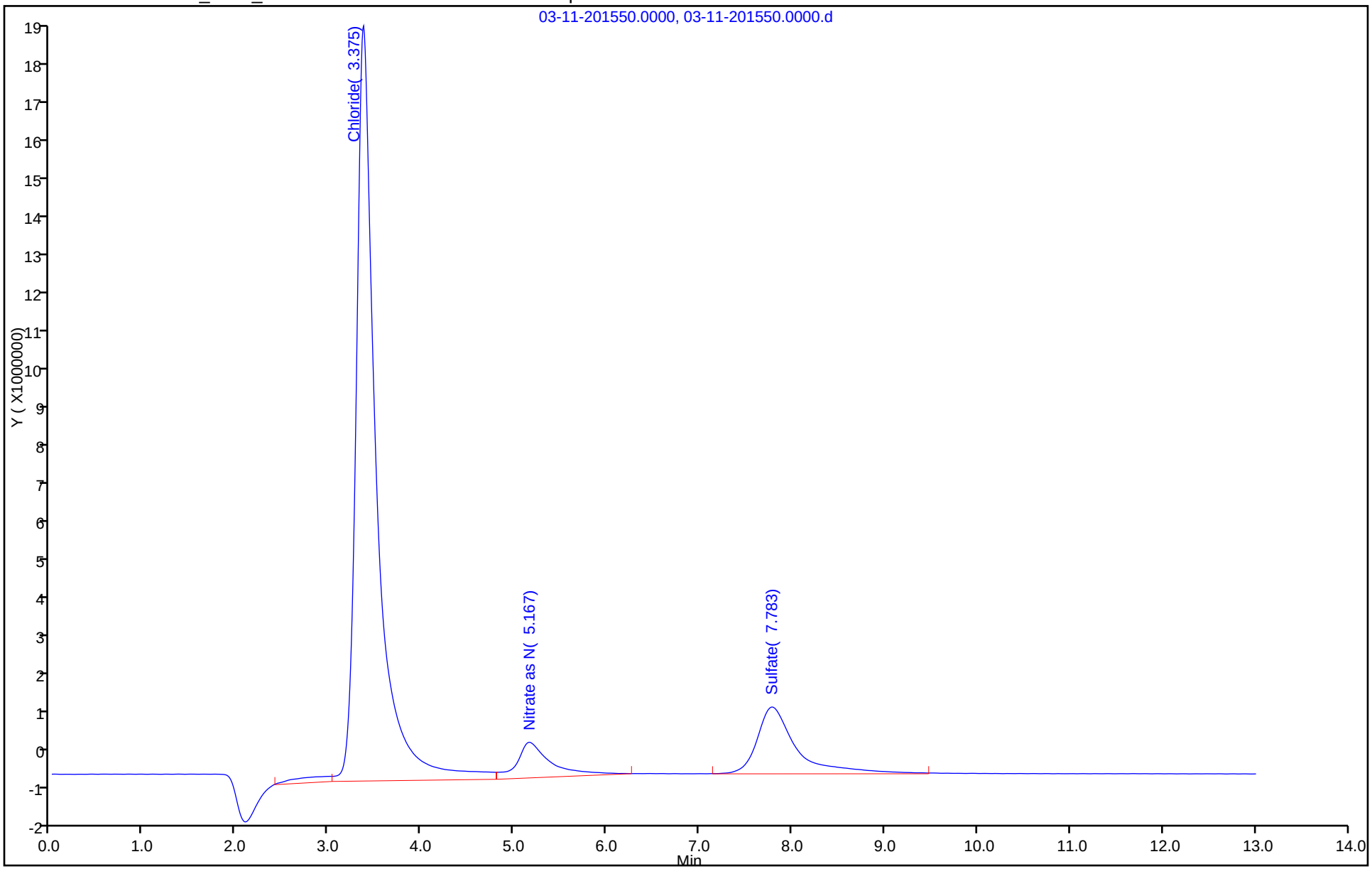
Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201550.0000.d				
Lims ID:	180-41935-A-17	Lab Sample ID:	180-41935-17		
Client ID:	HD-QC1-0/1-1				
Sample Type:	Client				
Inject. Date:	12-Mar-2015 00:12:00	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	25.0 ul	Dil. Factor:	10.0000		
Sample Info:	180-0005979-050				
Misc. Info.:	50 180-41935-A-17 10				
Operator ID:		Instrument ID:	CHIC25		
Method:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m				
Limit Group:	GC Anions ICAL				
Last Update:	12-Mar-2015 10:46:32	Calib Date:	17-Feb-2015 17:14:00		
Integrator:	Falcon				
Quant Method:	External Standard	Quant By:	Initial Calibration		
Last ICal File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d				
Column 1 :			Det: 0008		
Process Host:	XAWRK007				

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	OnCol Amt ug/ml	Flags
2 Chloride	3.375	3.392	-0.017	278468804	11.3	
8 Nitrate as N	5.167	5.133	0.034	860557H	0.3723	
3 Sulfate	7.783	7.742	0.041	47679084	2.92	

Report Date: 12-Mar-2015 10:46:33 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201550.0000.d				
Injection Date:	12-Mar-2015 00:12:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-17	Lab Sample ID:	180-41935-17	Worklist Smp#:	50
Client ID:	HD-QC1-0/1-1				
Injection Vol:	25.0 ul	Dil. Factor:	10.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 133669

SDG No.:

Instrument ID: CHIC25 GC Column: AS-14 ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/17/2015 15:57 Calibration End Date: 02/17/2015 17:14 Calibration ID: 21852

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133669/2	02-17A-201502.0000.d
Level 2	IC 180-133669/3	02-17A-201503.0000.d
Level 3	ICRT 180-133669/4	02-17A-201504.0000.d
Level 4	IC 180-133669/5	02-17A-201505.0000.d
Level 5	IC 180-133669/6	02-17A-201506.0000.d
Level 6	IC 180-133669/7	02-17A-201507.0000.d

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Fluoride	2.633	2.625	2.617	2.617	2.617	2.617					2.267 - 2.967	2.621
Chloride	3.442	3.442	3.450	3.458	3.500	3.542					3.100 - 3.800	3.472
Nitrite as N	3.925	3.925	3.925	3.933	3.942	3.950					3.825 - 4.025	3.933
Bromide	4.767	4.758	4.758	4.758	4.758	4.758					4.408 - 5.108	4.760
Nitrate as N	5.392	5.375	5.367	5.358	5.358	5.333					5.267 - 5.467	5.364
Orthophosphate as P	+++++	6.858	6.858	6.858	6.858	6.842					6.758 - 6.958	6.855
Sulfate	8.342	8.333	8.325	8.325	8.300	8.242					7.975 - 8.675	8.311

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 133669

SDG No.:

Instrument ID: CHIC25 GC Column: AS-14 ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/17/2015 15:57 Calibration End Date: 02/17/2015 17:14 Calibration ID: 21852

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133669/2	02-17A-201502.0000.d
Level 2	IC 180-133669/3	02-17A-201503.0000.d
Level 3	ICRT 180-133669/4	02-17A-201504.0000.d
Level 4	IC 180-133669/5	02-17A-201505.0000.d
Level 5	IC 180-133669/6	02-17A-201506.0000.d
Level 6	IC 180-133669/7	02-17A-201507.0000.d

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Fluoride	5304560 2238494	2538344 2282193	2298054	2248320	Lin2	158561.031	2088946.89							0.9960		0.9900
Chloride	18596683 23088033	18137647 25219768	18557585	20417317	LinF		24597918.5							0.9950		0.9900
Nitrite as N	3408660 3225612	3177728 3453994	3087104	3145810	Lin2	8463.15117	3210887.47							0.9980		0.9900
Bromide	398995 453171	441101 499236	428582	432930	Lin2	-12139.167	456295.918							0.9970		0.9900
Nitrate as N	2251020 2353116	2201612 2597854	2166248	2233035	Lin2	-5573.9326	2326120.89							0.9950		0.9900
Orthophosphate as P	+++++ 611440	563872 657554	576408	594536	Lin2	-19368.173	630201.583							0.9980		0.9900
Sulfate	15398664 15098636	13447201 16784766	13162576	13871021	LinF		16337363.0							0.9950		0.9900

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
HPLC/IC INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1 Analy Batch No.: 133669

SDG No.:

Instrument ID: CHIC25 GC Column: AS-14 ID: Heated Purge: (Y/N) N

Calibration Start Date: 02/17/2015 15:57 Calibration End Date: 02/17/2015 17:14 Calibration ID: 21852

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 180-133669/2	02-17A-201502.0000.d
Level 2	IC 180-133669/3	02-17A-201503.0000.d
Level 3	ICRT 180-133669/4	02-17A-201504.0000.d
Level 4	IC 180-133669/5	02-17A-201505.0000.d
Level 5	IC 180-133669/6	02-17A-201506.0000.d
Level 6	IC 180-133669/7	02-17A-201507.0000.d

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Fluoride	Lin2	265228 11410967	634586	1149027	2248320	5596236	0.0500 5.00	0.250	0.500	1.00	2.50
Chloride	LinF	18596683 2521976804	90688233	185575849	408346349	1154401664	1.00 100	5.00	10.0	20.0	50.0
Nitrite as N	Lin2	170433 17269971	794432	1543552	3145810	8064029	0.0500 5.00	0.250	0.500	1.00	2.50
Bromide	Lin2	79799 9984726	441101	857163	1731721	4531712	0.200 20.0	1.00	2.00	4.00	10.0
Nitrate as N	Lin2	112551 12989269	550403	1083124	2233035	5882790	0.0500 5.00	0.250	0.500	1.00	2.50
Orthophosphate as P	Lin2	+++++ 3287769	140968	288204	594536	1528600	+++++ 5.00	0.250	0.500	1.00	2.50
Sulfate	LinF	15398664 1678476551	67236006	131625756	277420415	754931819	1.00 100	5.00	10.0	20.0	50.0

Curve Type Legend:

Lin2 = Linear 1/conc^2 by height
LinF = Linear forced zero

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d
Lims ID: ic l2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 17-Feb-2015 15:57:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005732-002
Misc. Info.: 2 ic l2
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 17-Feb-2015 22:11:30 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK016

First Level Reviewer: hartmanm Date: 17-Feb-2015 17:09:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.633	2.617	0.016	265228H	0.0500	0.0511	
2 Chloride	3.442	3.450	-0.008	18596683	1.00	0.7560	M
10 Nitrite as N	3.925	3.925	0.000	170433H	0.0500	0.0504	M
4 Bromide	4.767	4.758	0.009	79799H	0.2000	0.2015	M
8 Nitrate as N	5.392	5.367	0.025	112551H	0.0500	0.0508	M
9 Orthophosphate as P	6.867	6.858	0.009	26160H	0.0500	0.0722	M
3 Sulfate	8.342	8.325	0.017	15398664	1.00	0.9425	M

QC Flag Legend

Review Flags
M - Manually Integrated

Reagents:

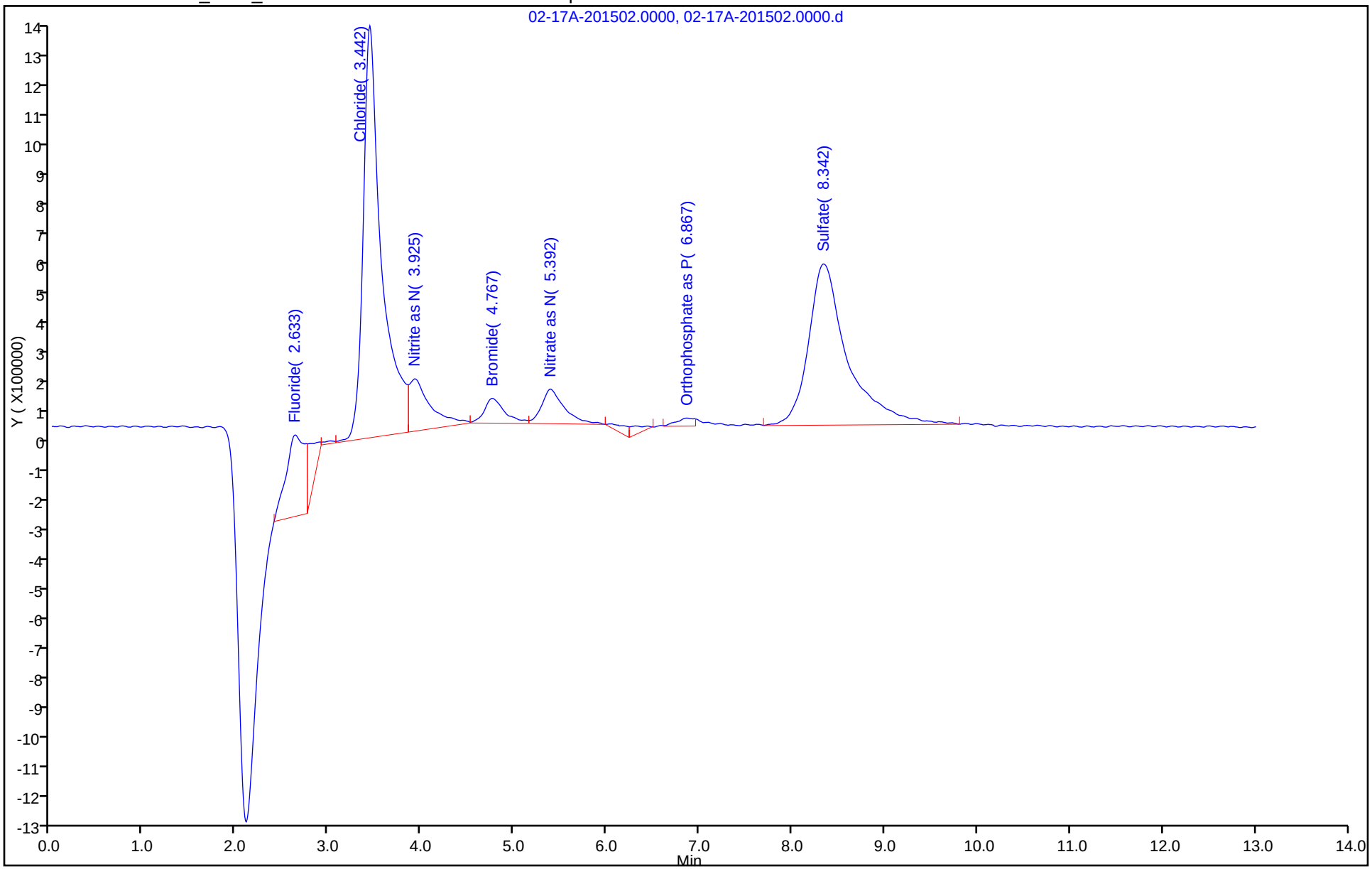
ICSTDL2_00155 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2015 22:11:30 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d

Injection Date:	17-Feb-2015 15:57:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	ic l2			Worklist Smp#:	2
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

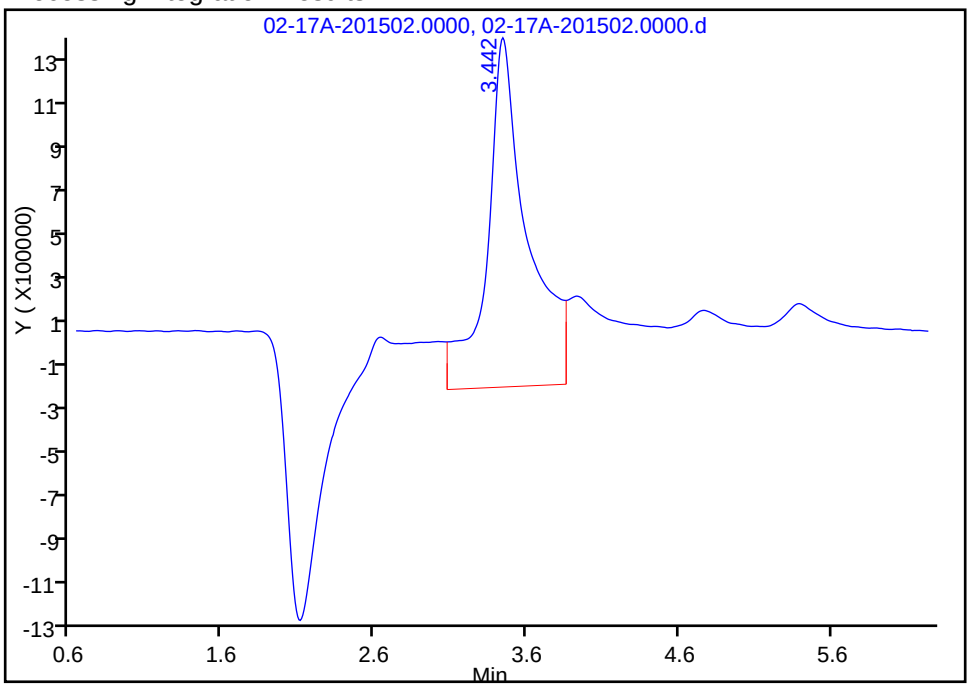
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d				
Injection Date:	17-Feb-2015 15:57:00	Instrument ID:	CHIC25		
Lims ID:	ic l2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		
Column:		Detector	0008		

2 Chloride, CAS: 16887-00-6

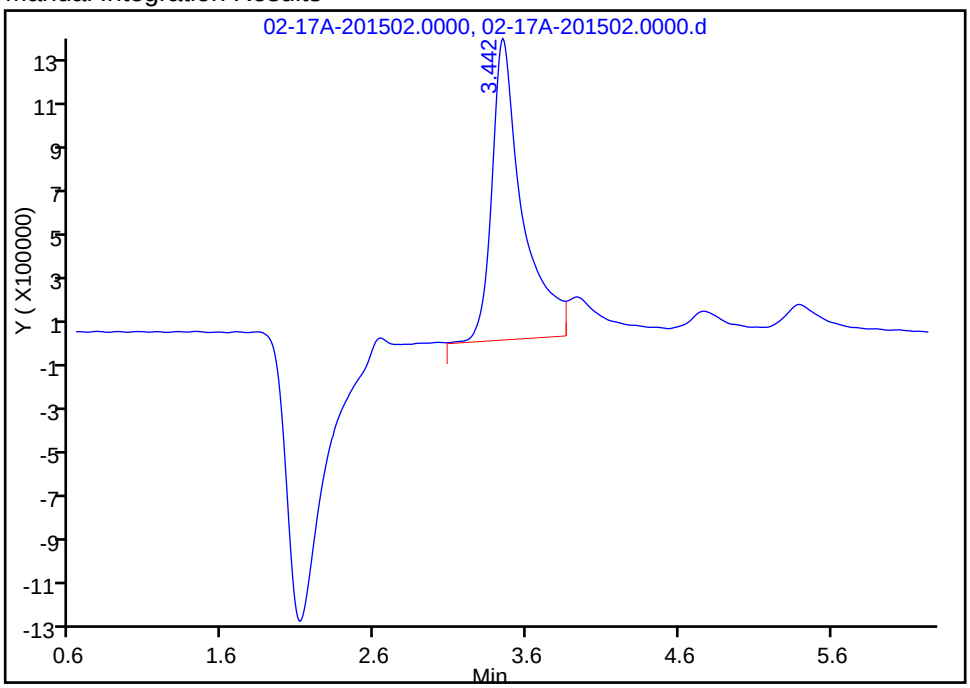
Processing Integration Results

RT: 3.44
Area: 28610104
Amount: 1.071666
Amount Units: ug/ml



Manual Integration Results

RT: 3.44
Area: 18596683
Amount: 0.756027
Amount Units: ug/ml



Reviewer: hartmanm, 17-Feb-2015 17:10:52
Audit Action: Assigned New Baseline
Audit Reason: Baseline

Manual Integration/User Assign Peak Report

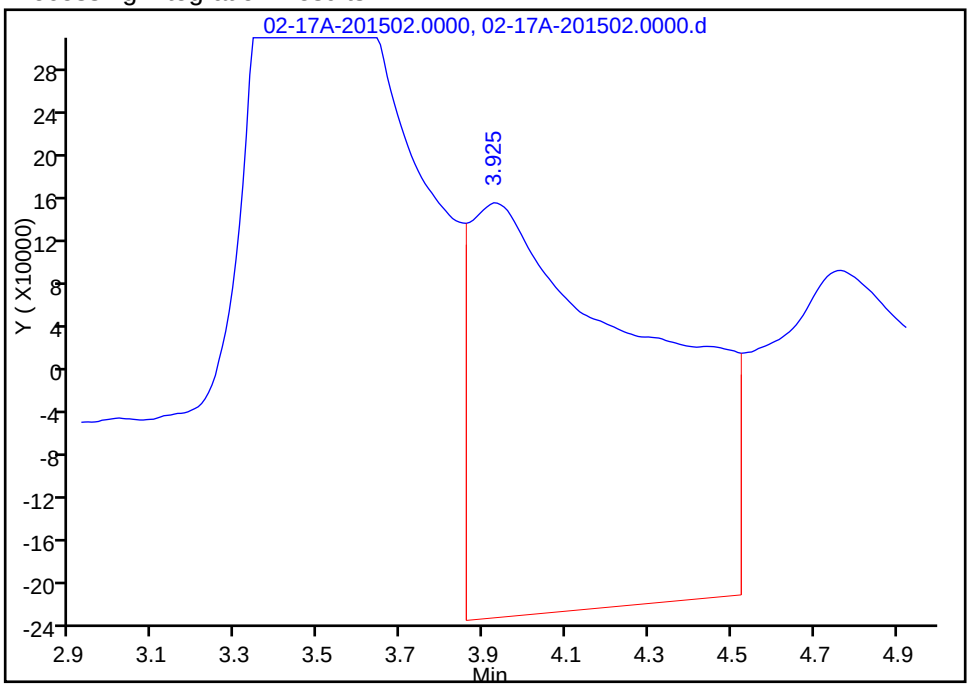
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d
Injection Date: 17-Feb-2015 15:57:00 Instrument ID: CHIC25
Lims ID: ic l2
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

10 Nitrite as N, CAS: 14797-65-0

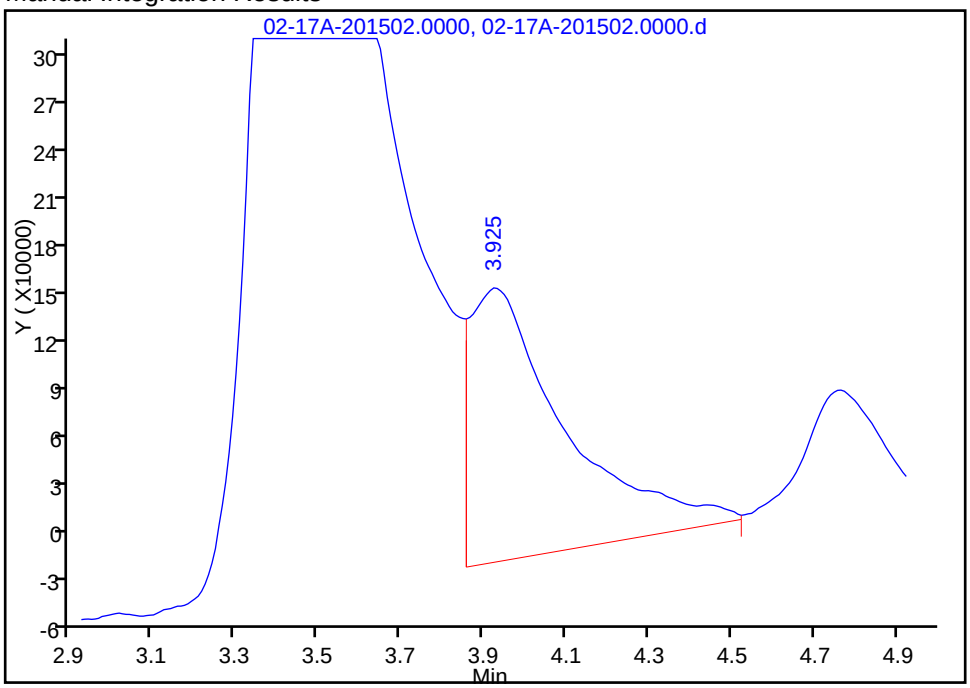
Processing Integration Results

RT: 3.93
Height: 389524
Amount: 0.050571
Amount Units: ug/ml



Manual Integration Results

RT: 3.93
Height: 170433
Amount: 0.050444
Amount Units: ug/ml



Reviewer: hartmanm, 17-Feb-2015 17:10:52
Audit Action: Assigned New Baseline
Audit Reason: Baseline

Manual Integration/User Assign Peak Report

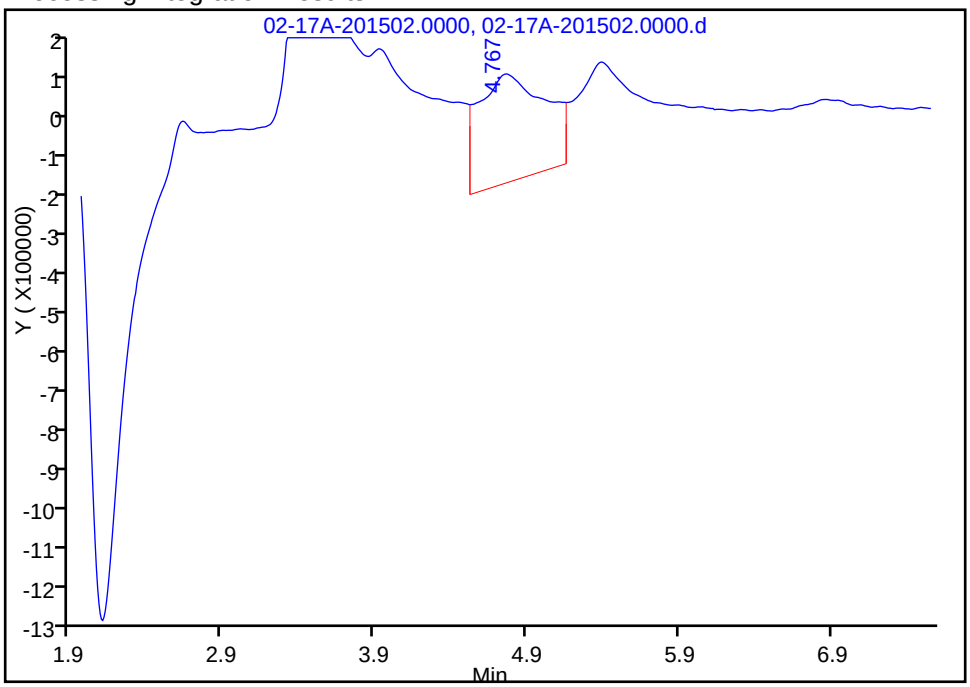
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d				
Injection Date:	17-Feb-2015 15:57:00	Instrument ID:	CHIC25		
Lims ID:	ic l2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		
Column:		Detector	0008		

4 Bromide, CAS: 24959-67-9

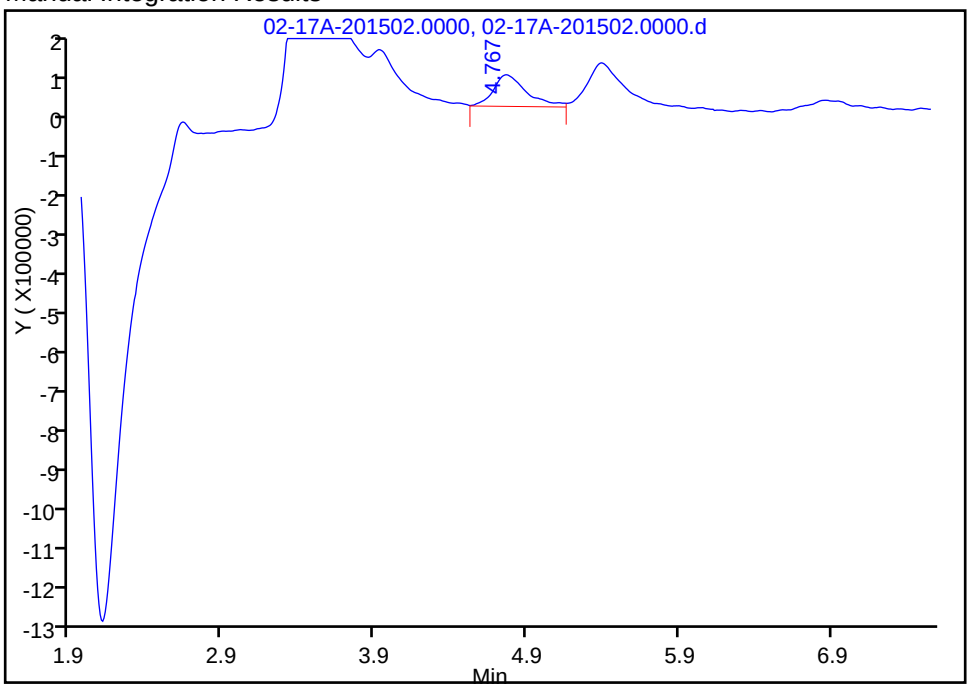
Processing Integration Results

RT: 4.77
Height: 274728
Amount: 0.204169
Amount Units: ug/ml



Manual Integration Results

RT: 4.77
Height: 79799
Amount: 0.201488
Amount Units: ug/ml



Reviewer: hartmanm, 17-Feb-2015 17:09:48
Audit Action: Assigned New Baseline
Audit Reason: Baseline

Manual Integration/User Assign Peak Report

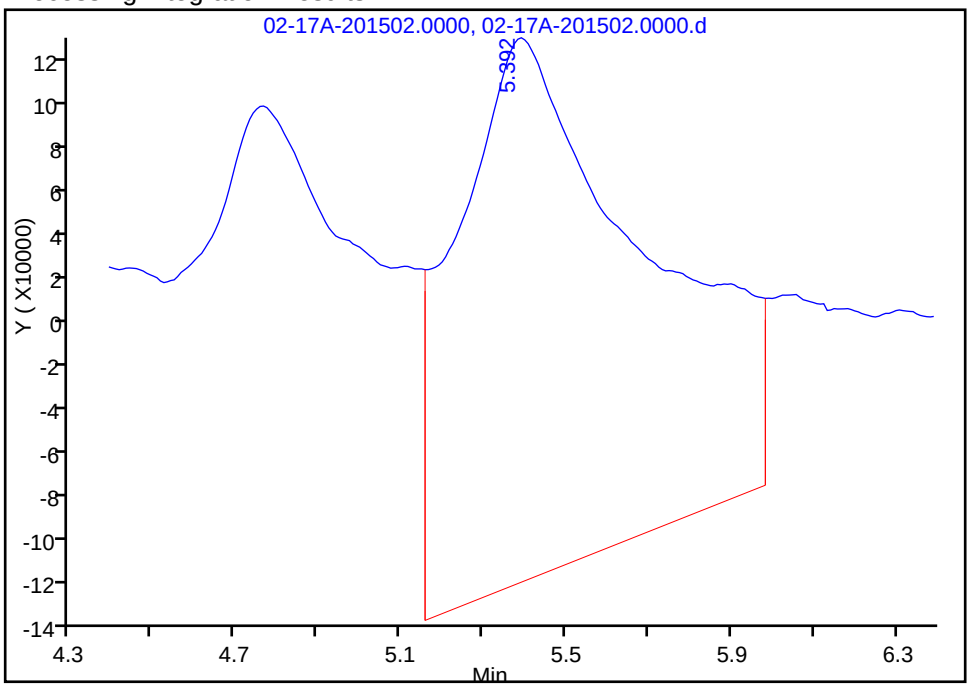
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d				
Injection Date:	17-Feb-2015 15:57:00	Instrument ID:	CHIC25		
Lims ID:	ic l2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		
Column:		Detector	0008		

8 Nitrate as N, CAS: 14797-55-8

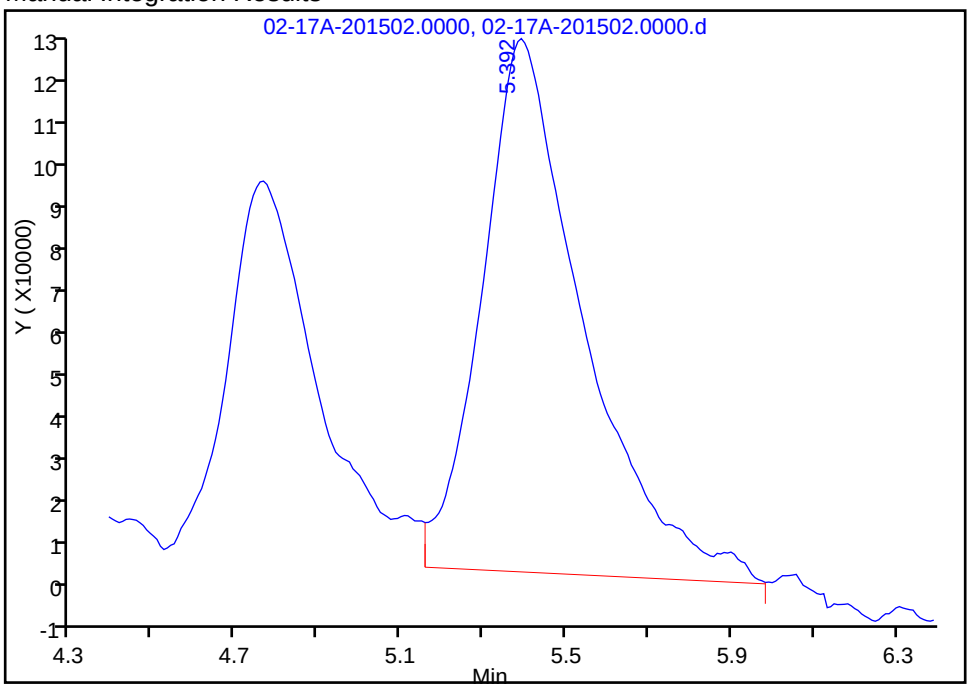
Processing Integration Results

RT: 5.39
Height: 239762
Amount: 0.050456
Amount Units: ug/ml



Manual Integration Results

RT: 5.39
Height: 112551
Amount: 0.050782
Amount Units: ug/ml



Reviewer: hartmanm, 17-Feb-2015 17:09:48
Audit Action: Assigned New Baseline
Audit Reason: Baseline

Manual Integration/User Assign Peak Report

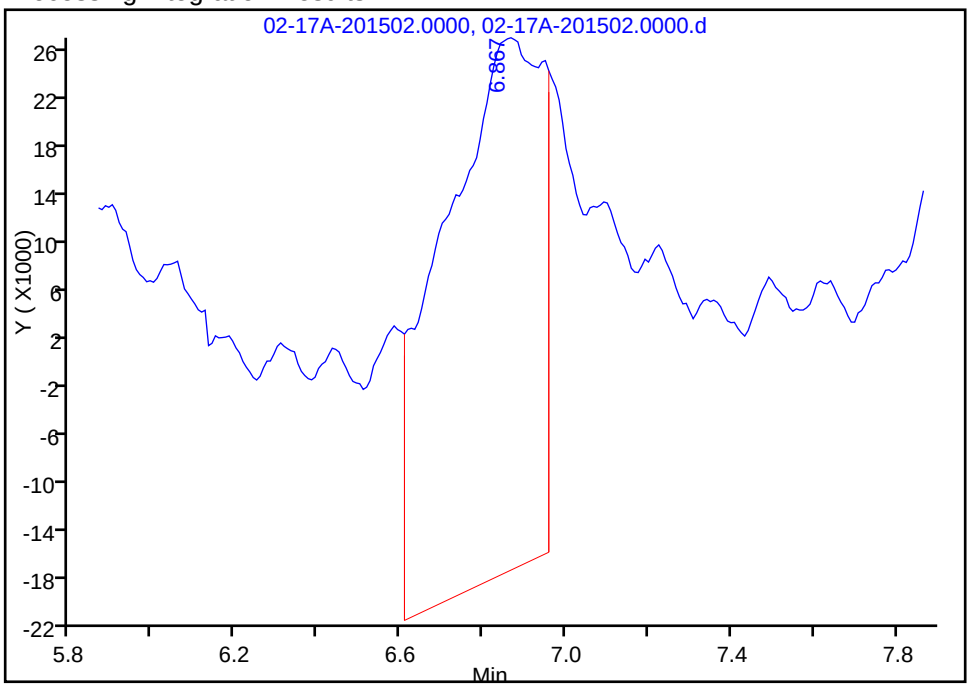
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d				
Injection Date:	17-Feb-2015 15:57:00	Instrument ID:	CHIC25		
Lims ID:	ic l2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		
Column:		Detector	0008		

9 Orthophosphate as P, CAS: STL00599

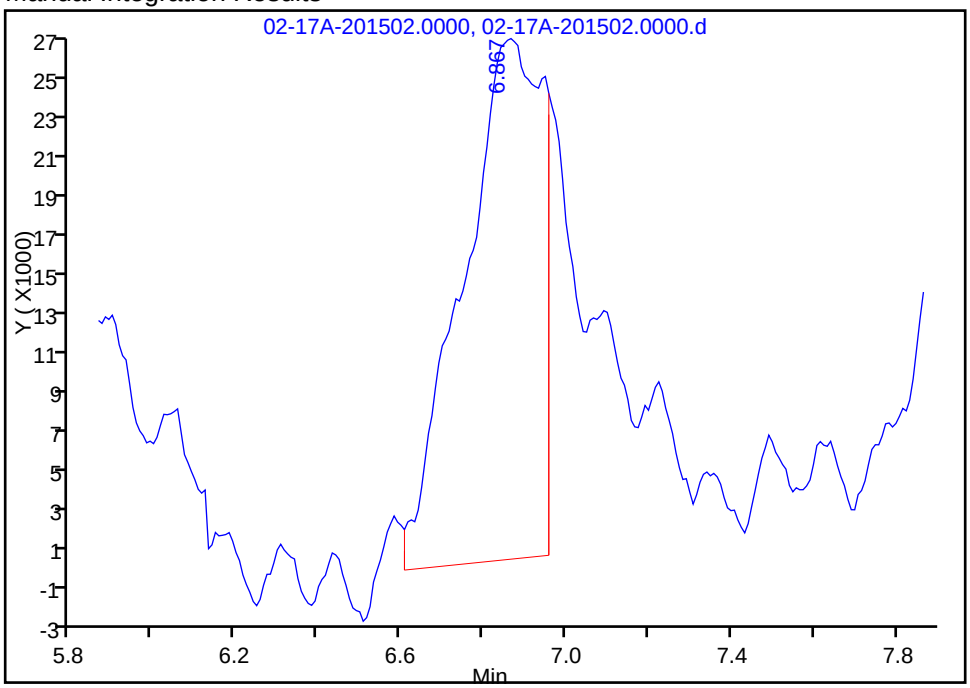
Processing Integration Results

RT: 6.87
Height: 44321
Amount: 0.085898
Amount Units: ug/ml



Manual Integration Results

RT: 6.87
Height: 26160
Amount: 0.072244
Amount Units: ug/ml



Reviewer: hartmanm, 17-Feb-2015 17:09:48
Audit Action: Assigned New Baseline
Audit Reason: Baseline

Manual Integration/User Assign Peak Report

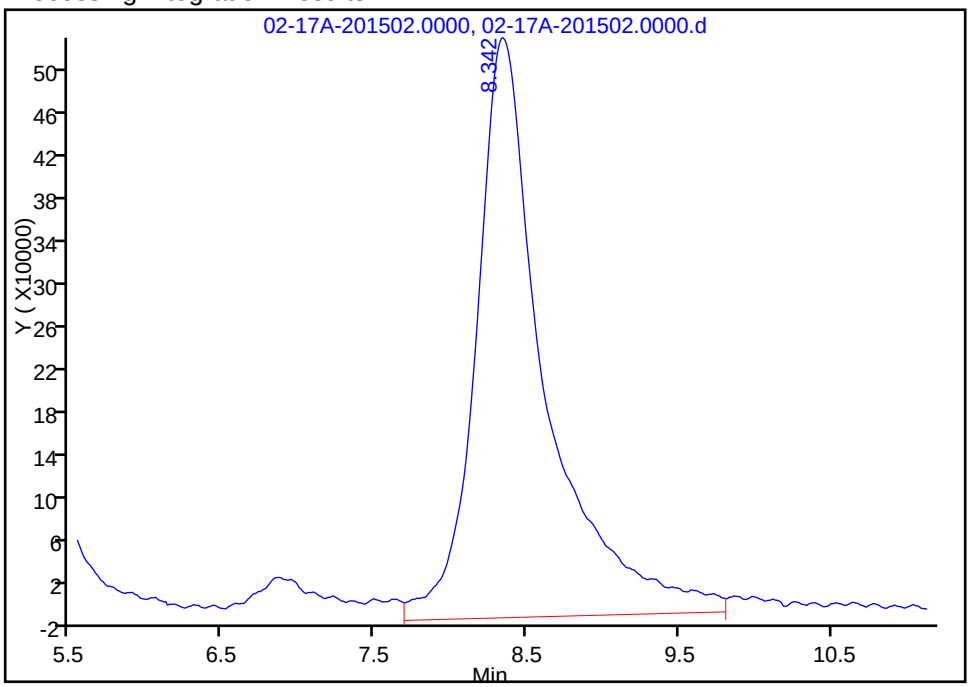
TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201502.0000.d				
Injection Date:	17-Feb-2015 15:57:00	Instrument ID:	CHIC25		
Lims ID:	ic l2				
Client ID:					
Operator ID:		ALS Bottle#:	0	Worklist Smp#:	2
Injection Vol:	25.0 ul	Dil. Factor:	1.0000		
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		
Column:		Detector	0008		

3 Sulfate, CAS: 14808-79-8

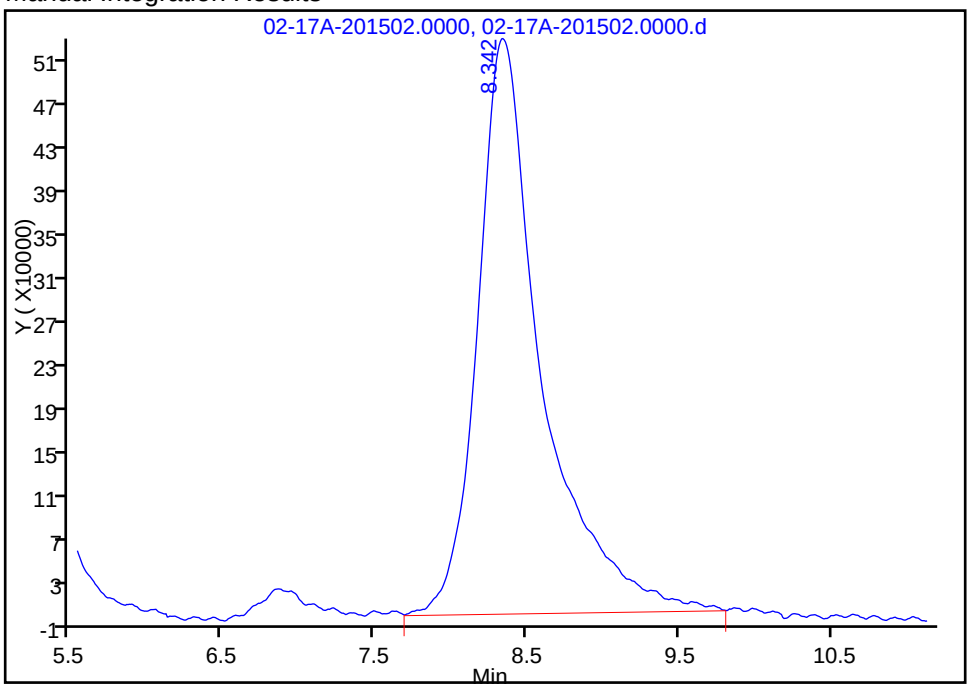
Processing Integration Results

RT: 8.34
Area: 17153994
Amount: 1.000775
Amount Units: ug/ml



Manual Integration Results

RT: 8.34
Area: 15398664
Amount: 0.942543
Amount Units: ug/ml



Reviewer: hartmanm, 17-Feb-2015 17:09:48
Audit Action: Assigned New Baseline
Audit Reason: Baseline

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201503.0000.d
Lims ID: ic l3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 17-Feb-2015 16:12:00 ALS Bottle#: 0 Worklist Smp#: 3
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005732-003
Misc. Info.: 3 ic l3
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 17-Feb-2015 22:11:28 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK016

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.625	2.617	0.008	634586H	0.2500	0.2279	
2 Chloride	3.442	3.450	-0.008	90688233	5.00	3.69	
10 Nitrite as N	3.925	3.925	0.000	794432H	0.2500	0.2448	
4 Bromide	4.758	4.758	0.000	441101H	1.00	0.99	
8 Nitrate as N	5.375	5.367	0.008	550403H	0.2500	0.2390	
9 Orthophosphate as P	6.858	6.858	0.000	140968H	0.2500	0.2544	
3 Sulfate	8.333	8.325	0.008	67236006	5.00	4.12	

Reagents:

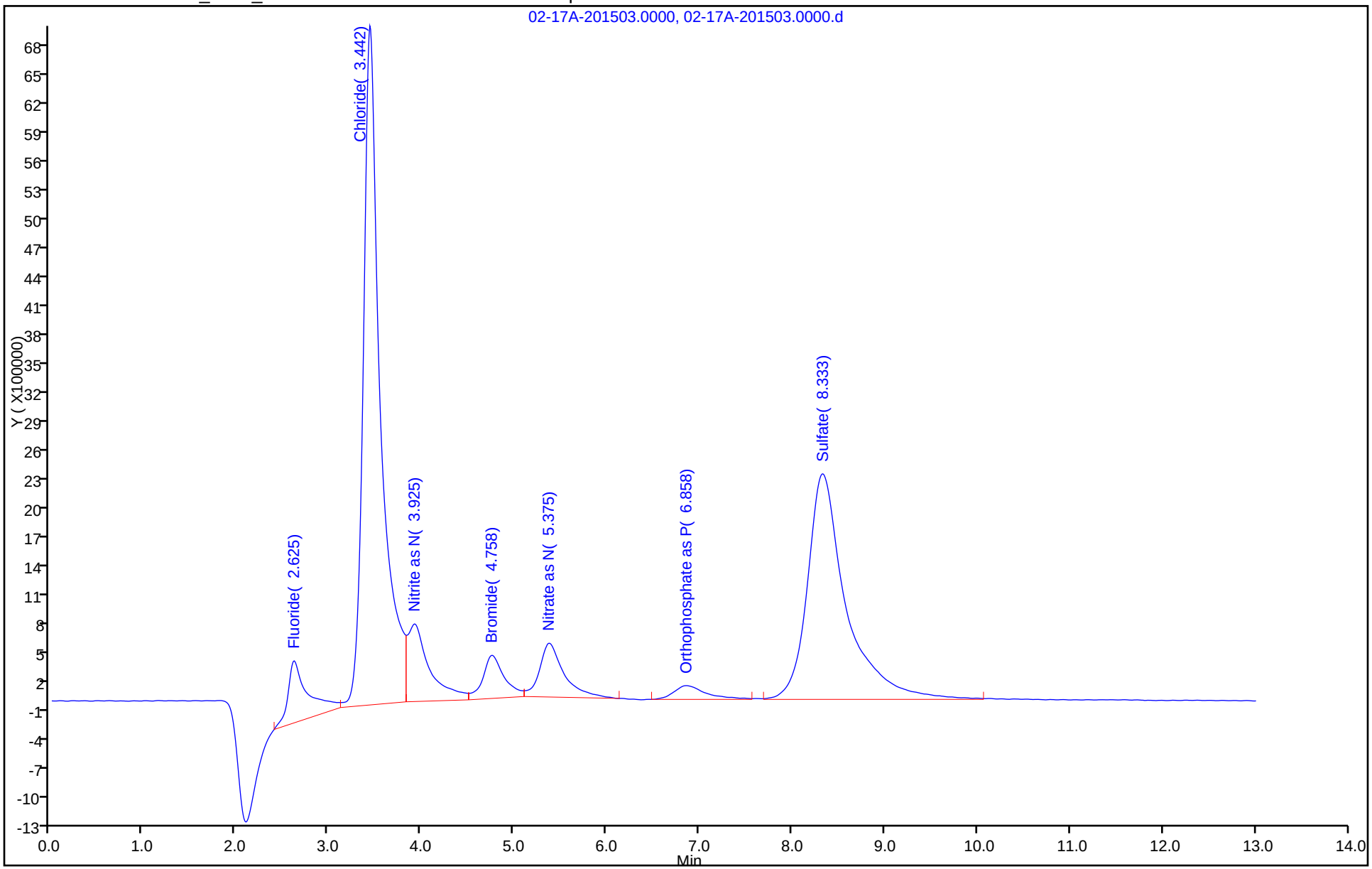
ICSTDL3_00194 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2015 22:11:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201503.0000.d

Injection Date:	17-Feb-2015 16:12:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	ic l3			Worklist Smp#:	3
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201504.0000.d
Lims ID: icrt l4
Client ID:
Sample Type: ICRT Calib Level: 4
Inject. Date: 17-Feb-2015 16:28:00 ALS Bottle#: 0 Worklist Smp#: 4
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005732-004
Misc. Info.: 4 icrt l4
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 17-Feb-2015 22:11:27 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK016

First Level Reviewer: hartmanm Date: 17-Feb-2015 17:08:16

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.617	2.617	0.000	1149027H	0.5000	0.4741	
2 Chloride	3.450	3.450	0.000	185575849	10.0	7.54	
10 Nitrite as N	3.925	3.925	0.000	1543552H	0.5000	0.4781	
4 Bromide	4.758	4.758	0.000	857163H	2.00	1.91	
8 Nitrate as N	5.367	5.367	0.000	1083124H	0.5000	0.4680	
9 Orthophosphate as P	6.858	6.858	0.000	288204H	0.5000	0.4881	
3 Sulfate	8.325	8.325	0.000	131625756	10.0	8.06	

Reagents:

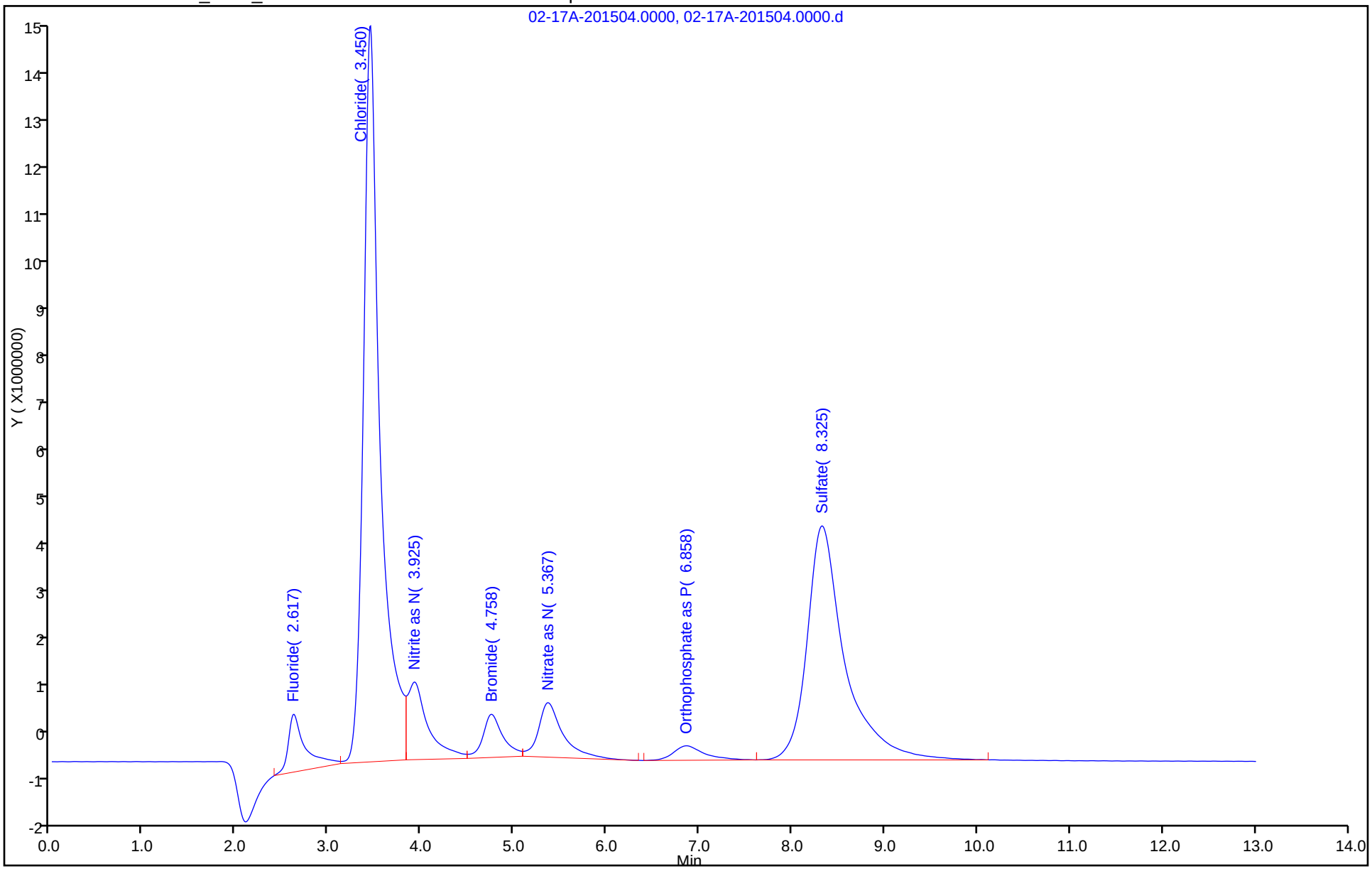
ICSTDL4_00131 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2015 22:11:27 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201504.0000.d

Injection Date:	17-Feb-2015 16:28:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	icrt l4			Worklist Smp#:	4
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Report Date: 17-Feb-2015 22:11:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201505.0000.d
Lims ID: ic l5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 17-Feb-2015 16:43:00 ALS Bottle#: 0 Worklist Smp#: 5
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005732-005
Misc. Info.: 5 ic l5
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 17-Feb-2015 22:11:26 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK016

First Level Reviewer: hartmanm Date: 17-Feb-2015 17:58:08

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.617	2.617	0.000	2248320H	1.00	1.00	
2 Chloride	3.458	3.492	-0.034	408346349	20.0	16.6	
10 Nitrite as N	3.933	3.933	0.000	3145810H	1.00	0.9771	
4 Bromide	4.758	4.750	0.008	1731721H	4.00	3.82	
8 Nitrate as N	5.358	5.350	0.008	2233035H	1.00	0.9624	
9 Orthophosphate as P	6.858	6.842	0.016	594536H	1.00	0.9741	
3 Sulfate	8.325	8.275	0.050	277420415	20.0	17.0	

Reagents:

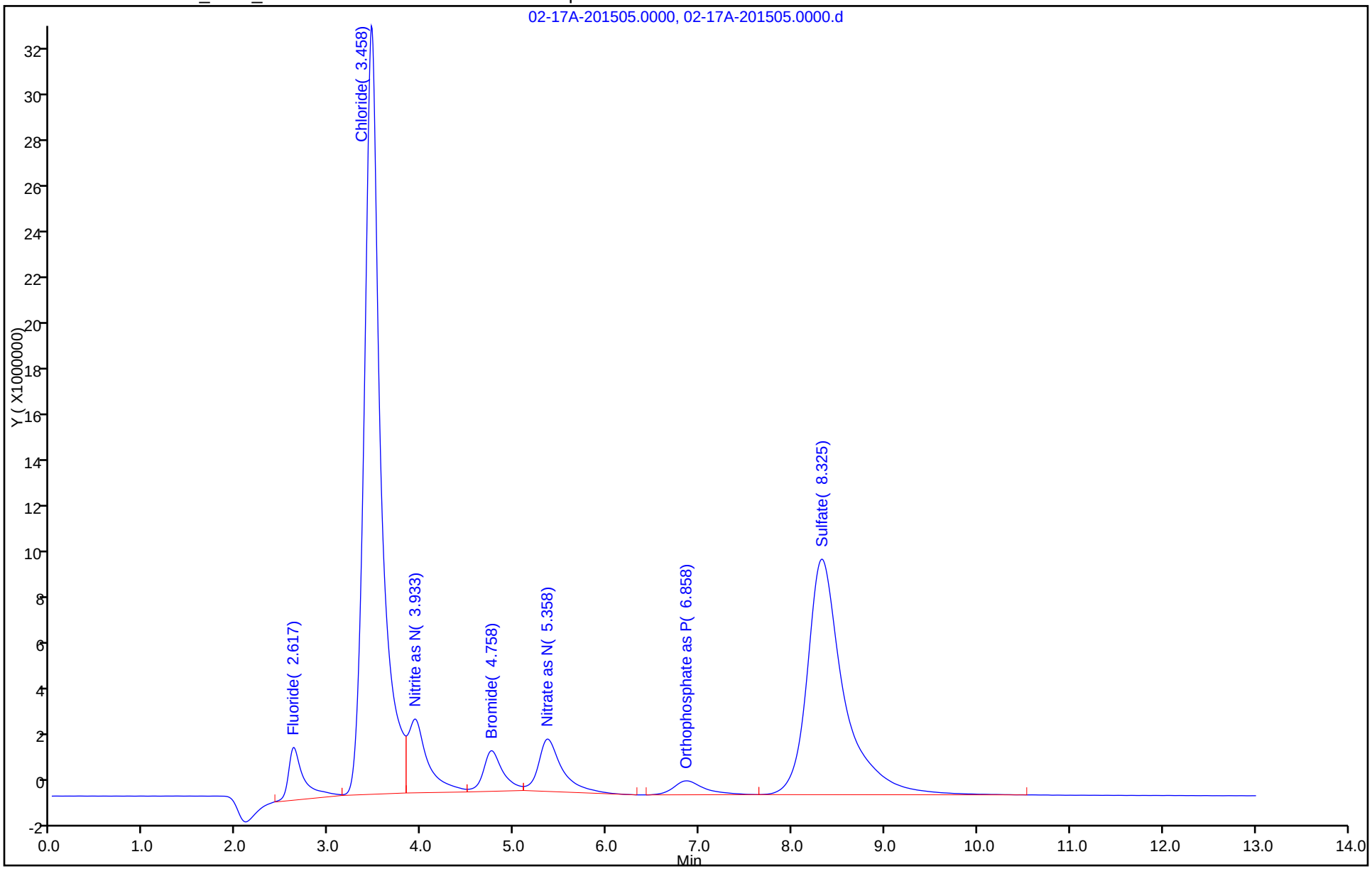
ICSTDL5_00132 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2015 22:11:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201505.0000.d

Injection Date:	17-Feb-2015 16:43:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	ic l5			Worklist Smp#:	5
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Report Date: 17-Feb-2015 22:11:25 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201506.0000.d
Lims ID: ic l6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 17-Feb-2015 16:59:00 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005732-006
Misc. Info.: 6 ic l6
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 17-Feb-2015 22:11:24 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK016

First Level Reviewer: hartmanm Date: 17-Feb-2015 22:04:09

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.617	2.617	0.000	5596236H	2.50	2.60	
2 Chloride	3.500	3.492	0.008	1154401664	50.0	46.9	
10 Nitrite as N	3.942	3.933	0.009	8064029H	2.50	2.51	
4 Bromide	4.758	4.750	0.008	4531712H	10.0	9.96	
8 Nitrate as N	5.358	5.350	0.008	5882790H	2.50	2.53	
9 Orthophosphate as P	6.858	6.842	0.016	1528600H	2.50	2.46	
3 Sulfate	8.300	8.275	0.025	754931819	50.0	46.2	

Reagents:

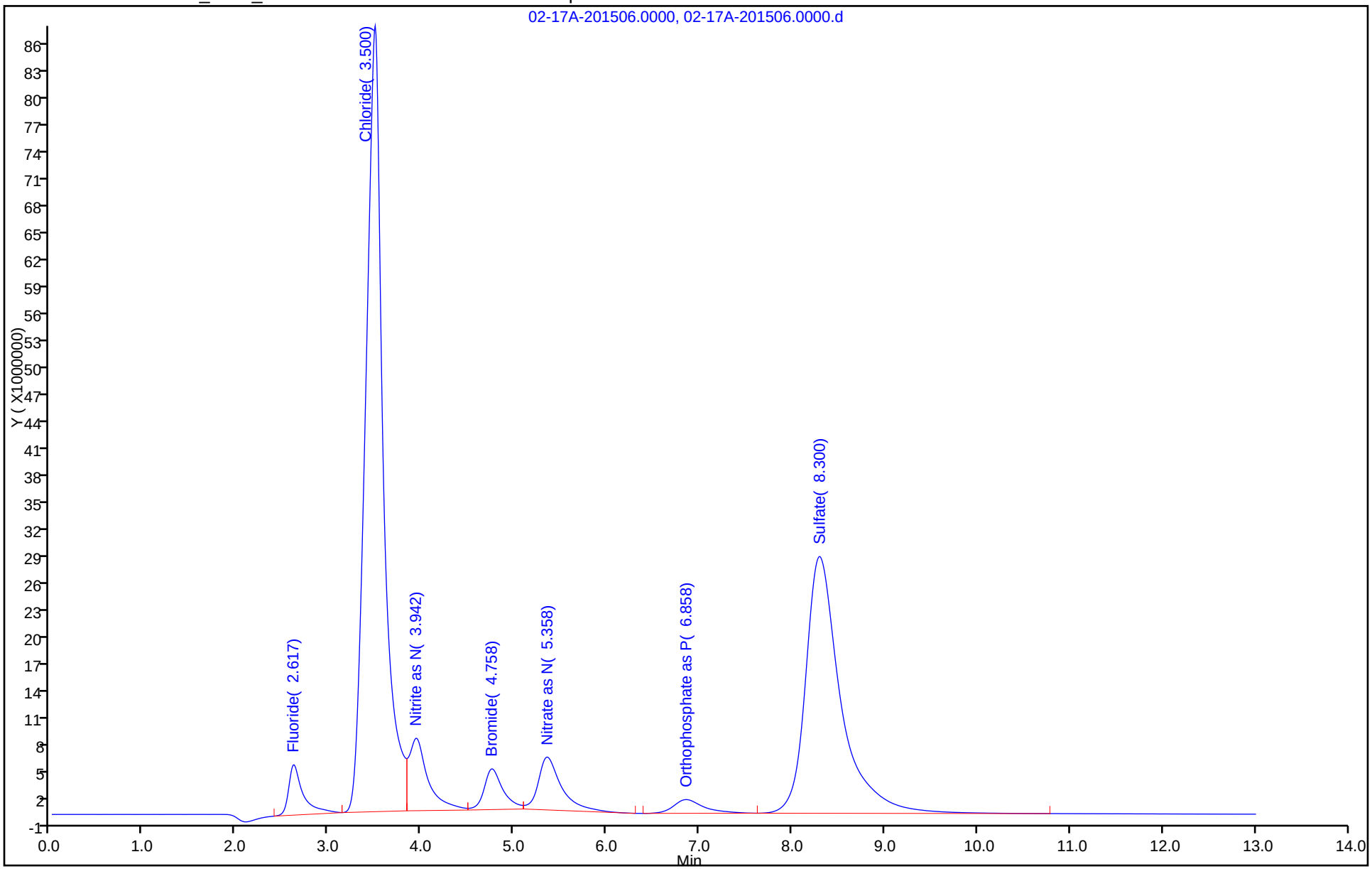
ICSTDL6_00200 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2015 22:11:25 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201506.0000.d

Injection Date:	17-Feb-2015 16:59:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	ic l6			Worklist Smp#:	6
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d
Lims ID: ic l7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 17-Feb-2015 17:14:00 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005732-007
Misc. Info.: 7 ic l7
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 17-Feb-2015 22:11:24 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK016

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.617	2.617	0.000	11410967H	5.00	5.39	
2 Chloride	3.542	3.492	0.050	2521976804	100.0	102.5	
10 Nitrite as N	3.950	3.933	0.017	17269971H	5.00	5.38	
4 Bromide	4.758	4.750	0.008	9984726H	20.0	21.9	
8 Nitrate as N	5.333	5.350	-0.017	12989269H	5.00	5.59	
9 Orthophosphate as P	6.842	6.842	0.000	3287769H	5.00	5.25	
3 Sulfate	8.242	8.275	-0.033	1678476551	100.0	102.7	

Reagents:

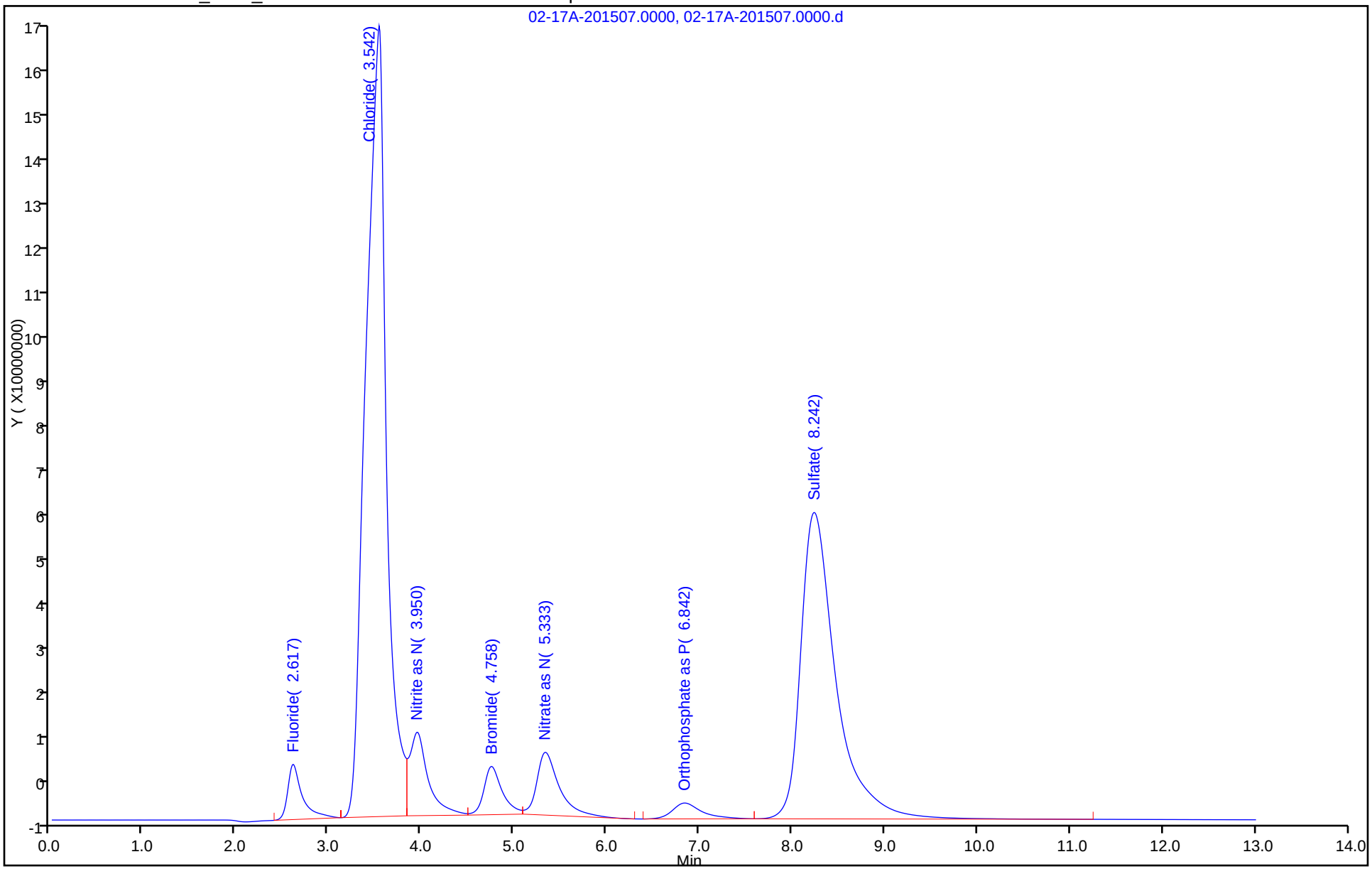
ICSTDL7_00131 Amount Added: 1.00 Units: mL

Report Date: 17-Feb-2015 22:11:24 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Injection Date:	17-Feb-2015 17:14:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	ic l7			Worklist Smp#:	7
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: ICV 180-135268/2 Calibration Date: 03/11/2015 11:04

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201502.0000.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		2009330		2.81	3.00	-6.3	10.0
Chloride	LinF		23109465		56.4	60.0	-6.1	10.0
Nitrite as N	Lin2		3058674		2.86	3.00	-4.8	10.0
Bromide	Lin2		420933		11.1	12.0	-7.5	10.0
Nitrate as N	Lin2		2193584		2.83	3.00	-5.6	10.0
Orthophosphate as P	Lin2		574981		2.77	3.00	-7.7	10.0
Sulfate	LinF		15252454		56.0	60.0	-6.6	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: ICV 180-135268/2 Calibration Date: 03/11/2015 11:04

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201502.0000.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.58	2.23	2.93
Chloride	3.45	3.04	3.74
Nitrite as N	3.85	3.72	3.92
Bromide	4.60	4.23	4.93
Nitrate as N	5.15	5.03	5.23
Orthophosphate as P	6.47	6.35	6.55
Sulfate	7.75	7.39	8.09

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201502.0000.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 11-Mar-2015 11:04:00 ALS Bottle#: 0 Worklist Smp#: 2
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-002
Misc. Info.: 2 icv
Operator ID: Instrument ID: CHIC25
Sublist:

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:48 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.583	2.575	0.008	6027989H	3.00	2.81	
2 Chloride	3.450	3.392	0.058	1386567910	60.0	56.4	
10 Nitrite as N	3.850	3.817	0.033	9179693H	3.00	2.86	
4 Bromide	4.600	4.575	0.025	5051201H	12.0	11.1	
8 Nitrate as N	5.150	5.133	0.017	6580751H	3.00	2.83	
9 Orthophosphate as P	6.467	6.450	0.017	1724943H	3.00	2.77	
3 Sulfate	7.750	7.742	0.008	915147237	60.0	56.0	

Reagents:

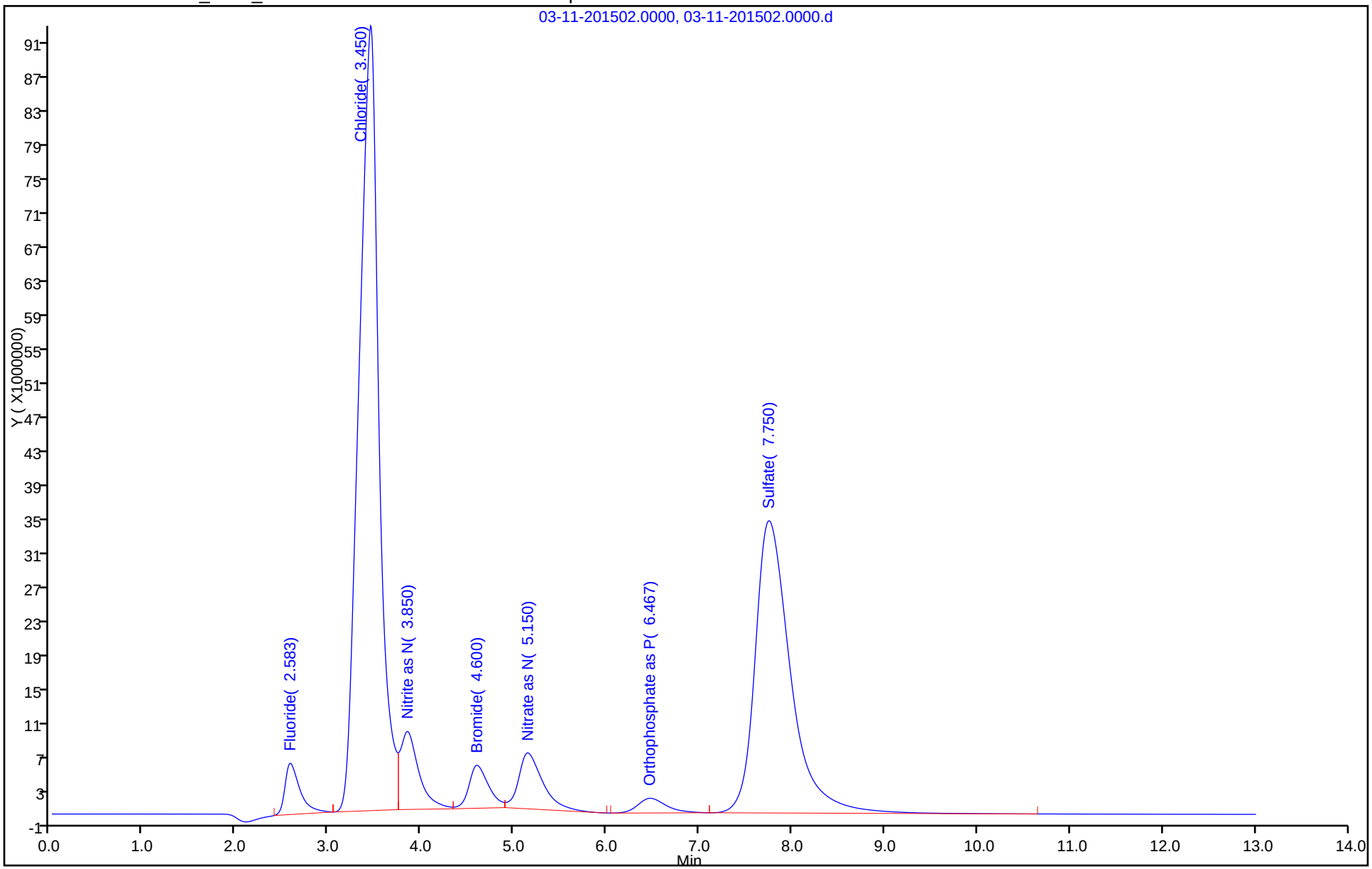
icicv_01221 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:49 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201502.0000.d

Injection Date:	11-Mar-2015 11:04:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	2
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/27 Calibration Date: 03/11/2015 18:14

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201527.0000.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		2056463		2.39	2.50	-4.6	10.0
Chloride	LinF		23464719		47.7	50.0	-4.6	10.0
Nitrite as N	Lin2		3099561		2.41	2.50	-3.6	10.0
Bromide	Lin2		422716		9.29	10.0	-7.1	10.0
Nitrate as N	Lin2		2259032		2.43	2.50	-2.8	10.0
Orthophosphate as P	Lin2		619710		2.49	2.50	-0.4	10.0
Sulfate	LinF		15247685		46.7	50.0	-6.7	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/27 Calibration Date: 03/11/2015 18:14

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201527.0000.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.58	2.23	2.93
Chloride	3.40	3.05	3.75
Nitrite as N	3.83	3.73	3.93
Bromide	4.59	4.24	4.94
Nitrate as N	5.14	5.04	5.24
Orthophosphate as P	6.46	6.36	6.56
Sulfate	7.76	7.41	8.11

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201527.0000.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Mar-2015 18:14:00 ALS Bottle#: 0 Worklist Smp#: 27
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-027
Misc. Info.: 27 CCV
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:39 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.583	2.583	0.000	5141157H	2.50	2.39	
2 Chloride	3.400	3.400	0.000	1173235956	50.0	47.7	
10 Nitrite as N	3.825	3.825	0.000	7748902H	2.50	2.41	
4 Bromide	4.592	4.592	0.000	4227157H	10.0	9.29	
8 Nitrate as N	5.142	5.142	0.000	5647581H	2.50	2.43	
9 Orthophosphate as P	6.458	6.458	0.000	1549275H	2.50	2.49	
3 Sulfate	7.758	7.758	0.000	762384257	50.0	46.7	

Reagents:

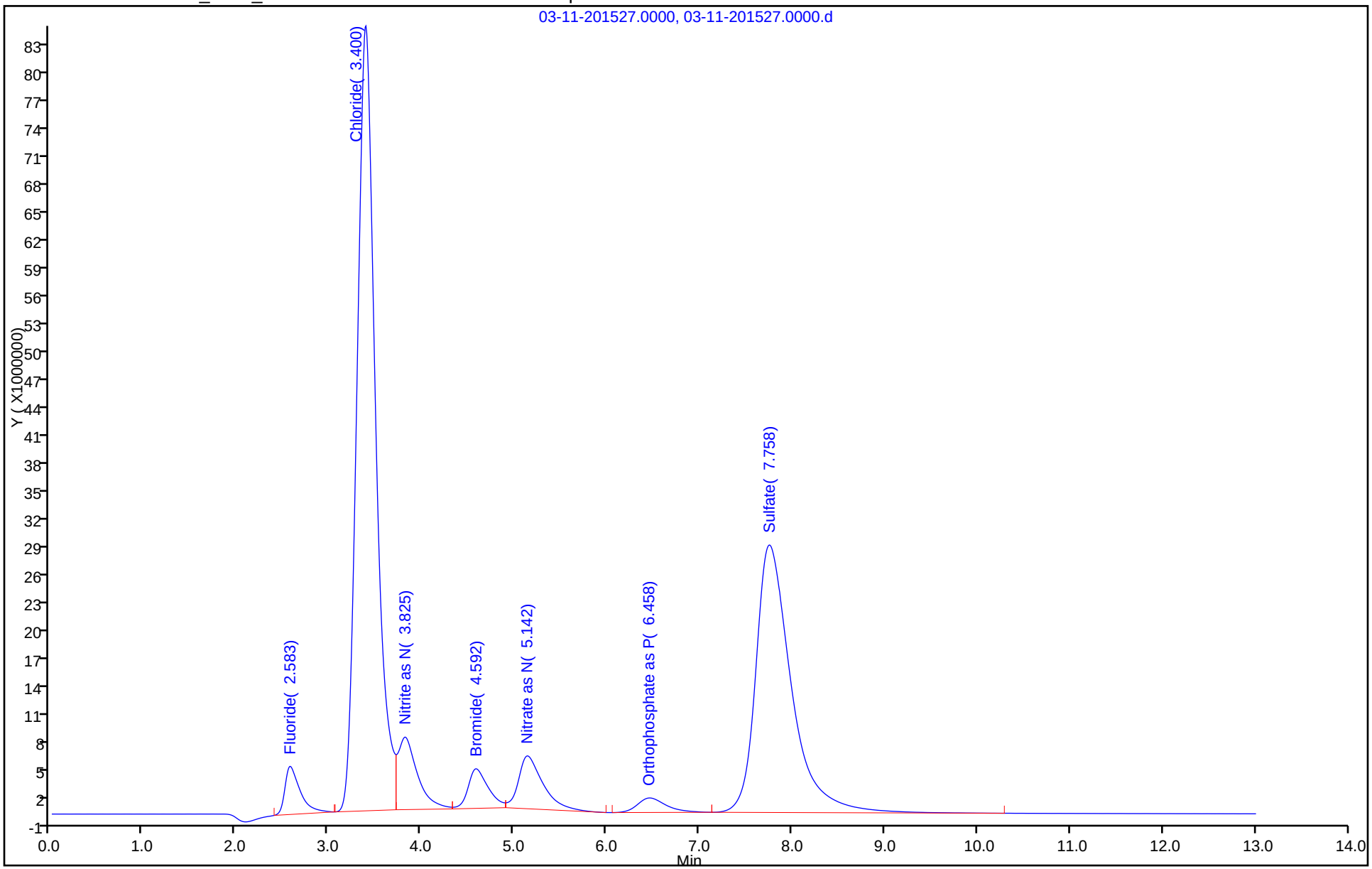
icccv_01188 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201527.0000.d

Injection Date:	11-Mar-2015 18:14:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	27
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/39 Calibration Date: 03/11/2015 21:21

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201539.0000.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		2034343		2.36	2.50	-5.7	10.0
Chloride	LinF		23082142		46.9	50.0	-6.2	10.0
Nitrite as N	Lin2		3055000		2.38	2.50	-5.0	10.0
Bromide	Lin2		417318		9.17	10.0	-8.3	10.0
Nitrate as N	Lin2		2233977		2.40	2.50	-3.9	10.0
Orthophosphate as P	Lin2		604530		2.43	2.50	-2.8	10.0
Sulfate	LinF		15006183		45.9	50.0	-8.1	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/39 Calibration Date: 03/11/2015 21:21

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201539.0000.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.58	2.23	2.93
Chloride	3.39	3.04	3.74
Nitrite as N	3.82	3.72	3.92
Bromide	4.58	4.23	4.93
Nitrate as N	5.13	5.03	5.23
Orthophosphate as P	6.45	6.35	6.55
Sulfate	7.74	7.39	8.09

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201539.0000.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 11-Mar-2015 21:21:00 ALS Bottle#: 0 Worklist Smp#: 39
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-039
Misc. Info.: 39 CCV
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:36 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	5085857H	2.50	2.36	
2 Chloride	3.392	3.392	0.000	1154107089	50.0	46.9	
10 Nitrite as N	3.817	3.817	0.000	7637499H	2.50	2.38	
4 Bromide	4.575	4.575	0.000	4173176H	10.0	9.17	
8 Nitrate as N	5.133	5.133	0.000	5584942H	2.50	2.40	
9 Orthophosphate as P	6.450	6.450	0.000	1511326H	2.50	2.43	
3 Sulfate	7.742	7.742	0.000	750309159	50.0	45.9	

Reagents:

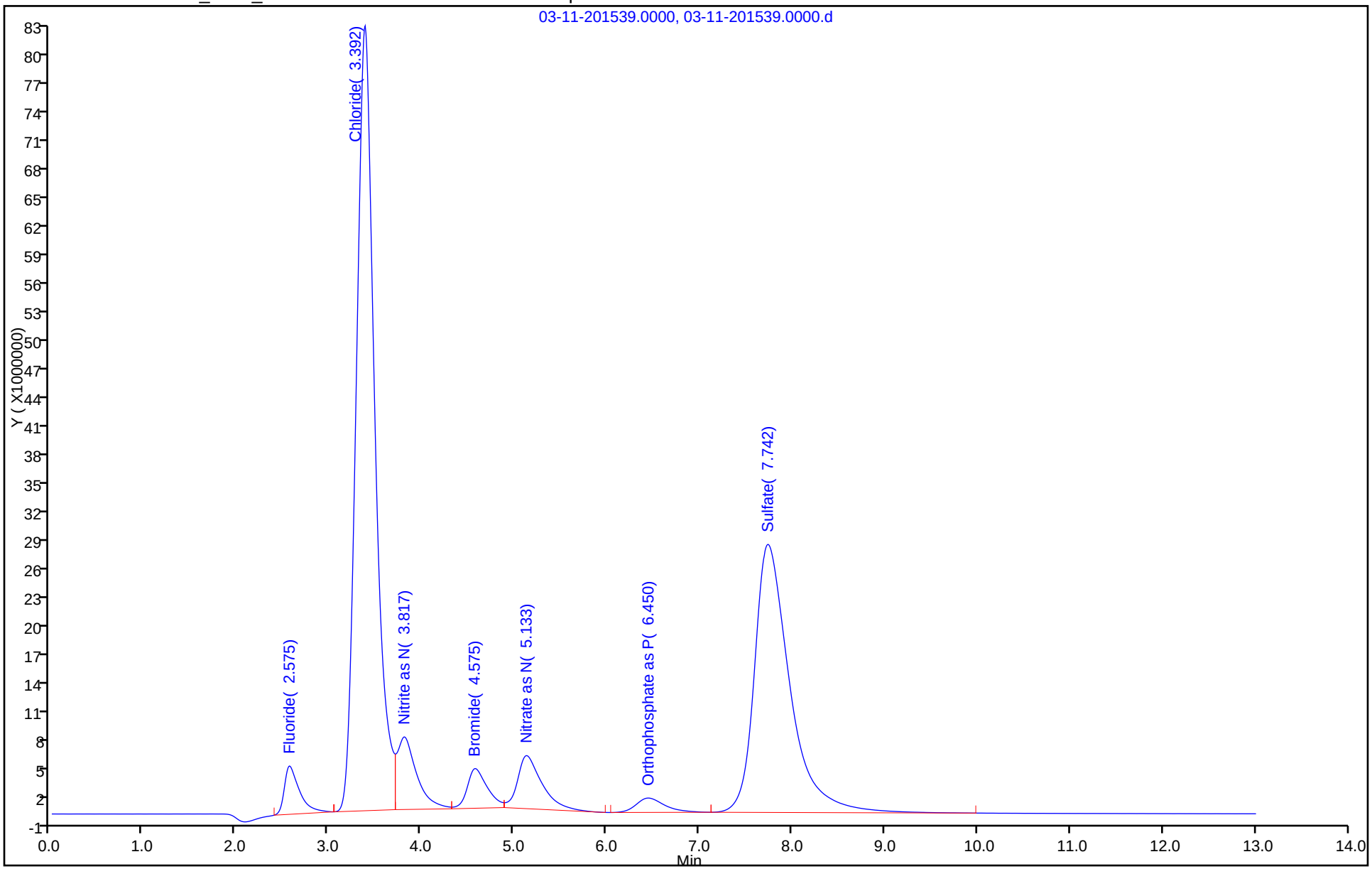
icccv_01188 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:36 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201539.0000.d

Injection Date:	11-Mar-2015 21:21:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	39
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/51 Calibration Date: 03/12/2015 00:27

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201551.0000.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		2075318		2.41	2.50	-3.7	10.0
Chloride	LinF		23346461		47.5	50.0	-5.1	10.0
Nitrite as N	Lin2		3126636		2.43	2.50	-2.7	10.0
Bromide	Lin2		425897		9.36	10.0	-6.4	10.0
Nitrate as N	Lin2		2270462		2.44	2.50	-2.3	10.0
Orthophosphate as P	Lin2		610552		2.45	2.50	-1.9	10.0
Sulfate	LinF		15195695		46.5	50.0	-7.0	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/51 Calibration Date: 03/12/2015 00:27

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201551.0000.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.58	2.23	2.93
Chloride	3.39	3.04	3.74
Nitrite as N	3.82	3.72	3.92
Bromide	4.58	4.23	4.93
Nitrate as N	5.13	5.03	5.23
Orthophosphate as P	6.44	6.34	6.54
Sulfate	7.74	7.39	8.09

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201551.0000.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Mar-2015 00:27:00 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-051
Misc. Info.: 51 CCV
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	5188294H	2.50	2.41	
2 Chloride	3.392	3.392	0.000	1167323071	50.0	47.5	
10 Nitrite as N	3.817	3.817	0.000	7816589H	2.50	2.43	
4 Bromide	4.575	4.575	0.000	4258973H	10.0	9.36	
8 Nitrate as N	5.133	5.133	0.000	5676154H	2.50	2.44	
9 Orthophosphate as P	6.442	6.442	0.000	1526381H	2.50	2.45	
3 Sulfate	7.742	7.742	0.000	759784726	50.0	46.5	

Reagents:

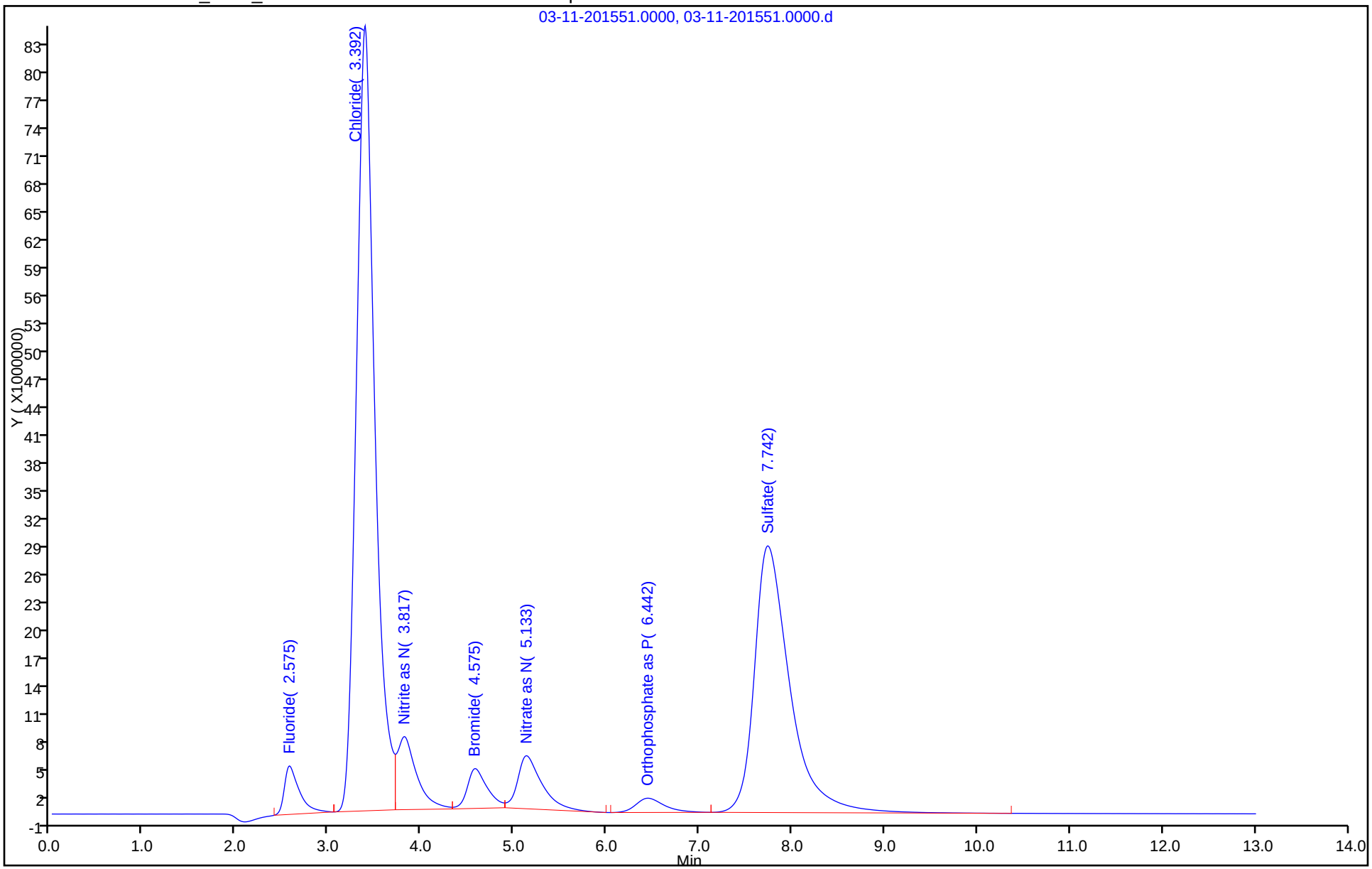
icccv_01188 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:32 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201551.0000.d

Injection Date:	12-Mar-2015 00:27:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	51
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/63 Calibration Date: 03/12/2015 03:34

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201563.0000.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		2074384		2.41	2.50	-3.7	10.0
Chloride	LinF		23304309		47.4	50.0	-5.3	10.0
Nitrite as N	Lin2		3113252		2.42	2.50	-3.1	10.0
Bromide	Lin2		423200		9.30	10.0	-7.0	10.0
Nitrate as N	Lin2		2256932		2.43	2.50	-2.9	10.0
Orthophosphate as P	Lin2		606004		2.43	2.50	-2.6	10.0
Sulfate	LinF		15134414		46.3	50.0	-7.4	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/63 Calibration Date: 03/12/2015 03:34

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201563.0000.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.58	2.23	2.93
Chloride	3.39	3.04	3.74
Nitrite as N	3.83	3.73	3.93
Bromide	4.59	4.24	4.94
Nitrate as N	5.15	5.05	5.25
Orthophosphate as P	6.43	6.33	6.53
Sulfate	7.73	7.38	8.08

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201563.0000.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Mar-2015 03:34:00 ALS Bottle#: 0 Worklist Smp#: 63
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-062
Misc. Info.: 18622 CCV
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:28 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	5185961H	2.50	2.41	
2 Chloride	3.392	3.392	0.000	1165215445	50.0	47.4	
10 Nitrite as N	3.825	3.825	0.000	7783131H	2.50	2.42	
4 Bromide	4.592	4.592	0.000	4231999H	10.0	9.30	
8 Nitrate as N	5.150	5.150	0.000	5642331H	2.50	2.43	
9 Orthophosphate as P	6.433	6.433	0.000	1515010H	2.50	2.43	
3 Sulfate	7.733	7.733	0.000	756720700	50.0	46.3	

Reagents:

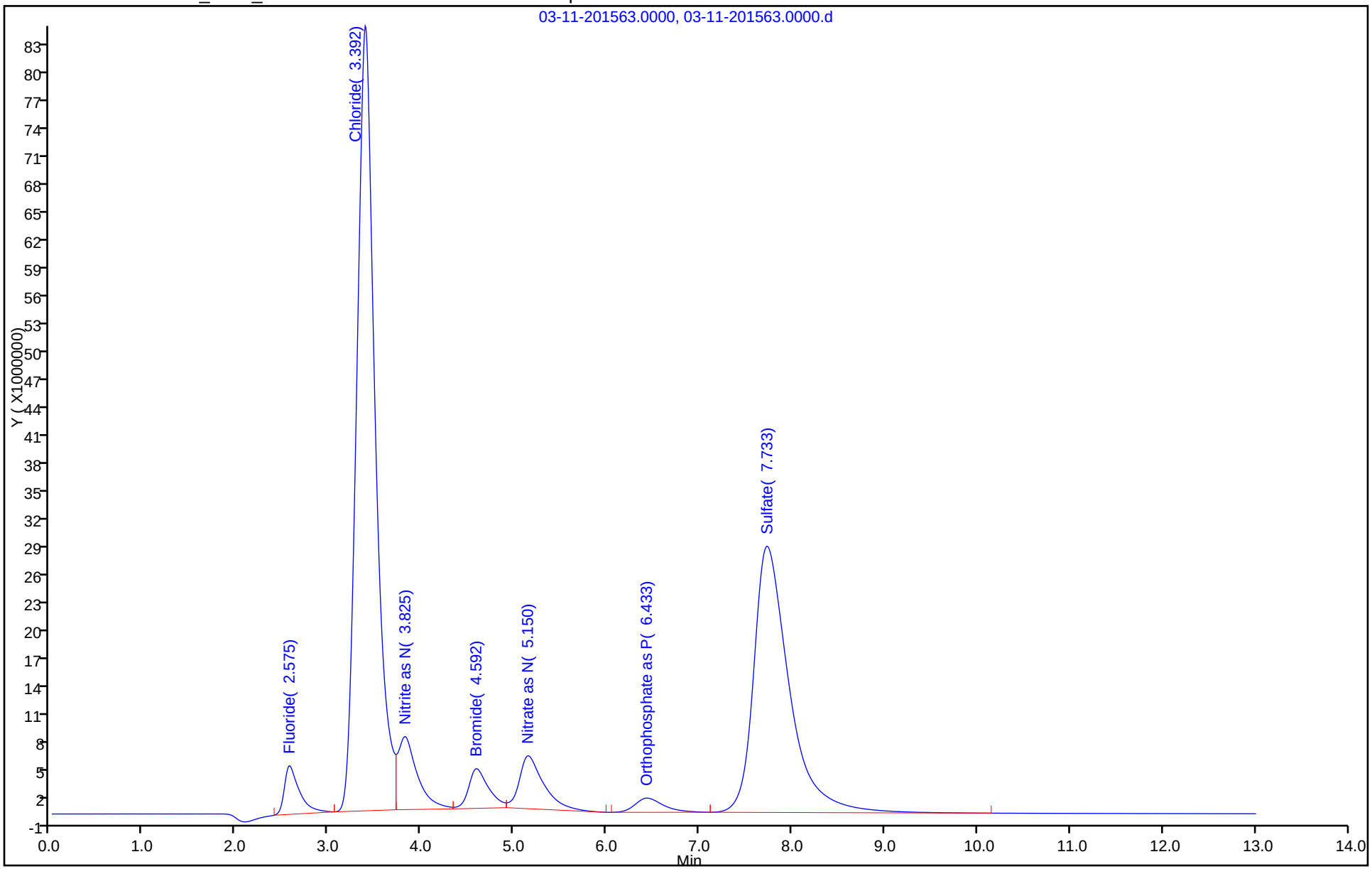
icccv_01188 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201563.0000.d

Injection Date:	12-Mar-2015 03:34:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	63
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM VII
HPLC/IC CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/70 Calibration Date: 03/12/2015 05:23

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201570.0000.d Conc. Units: mg/L

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Fluoride	Lin2		2051062		2.38	2.50	-4.8	10.0
Chloride	LinF		23132220		47.0	50.0	-6.0	10.0
Nitrite as N	Lin2		3111490		2.42	2.50	-3.2	10.0
Bromide	Lin2		417593		9.18	10.0	-8.2	10.0
Nitrate as N	Lin2		2231876		2.40	2.50	-4.0	10.0
Orthophosphate as P	Lin2		599131		2.41	2.50	-3.7	10.0
Sulfate	LinF		15057489		46.1	50.0	-7.8	10.0

FORM VII
HPLC/IC CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: CCV 180-135268/70 Calibration Date: 03/12/2015 05:23

Instrument ID: CHIC25 Calib Start Date: 02/17/2015 15:57

GC Column: AS-14 ID: Calib End Date: 02/17/2015 17:14

Lab File ID: 03-11-201570.0000.d

Analyte	RT	RT WINDOW	
		FROM	TO
Fluoride	2.58	2.23	2.93
Chloride	3.39	3.04	3.74
Nitrite as N	3.82	3.72	3.92
Bromide	4.59	4.24	4.94
Nitrate as N	5.14	5.04	5.24
Orthophosphate as P	6.43	6.33	6.53
Sulfate	7.73	7.38	8.08

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201570.0000.d
Lims ID: CCV
Client ID:
Sample Type: CCV
Inject. Date: 12-Mar-2015 05:23:00 ALS Bottle#: 0 Worklist Smp#: 70
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-070
Misc. Info.: 63 CCV
Operator ID: Instrument ID: CHIC25
Sublist: chrom-300_9056_CHIC25*sub1

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:26 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	5127656H	2.50	2.38	
2 Chloride	3.392	3.392	0.000	1156610999	50.0	47.0	
10 Nitrite as N	3.817	3.817	0.000	7778725H	2.50	2.42	
4 Bromide	4.592	4.592	0.000	4175929H	10.0	9.18	
8 Nitrate as N	5.142	5.142	0.000	5579691H	2.50	2.40	
9 Orthophosphate as P	6.425	6.425	0.000	1497828H	2.50	2.41	
3 Sulfate	7.725	7.725	0.000	752874472	50.0	46.1	

Reagents:

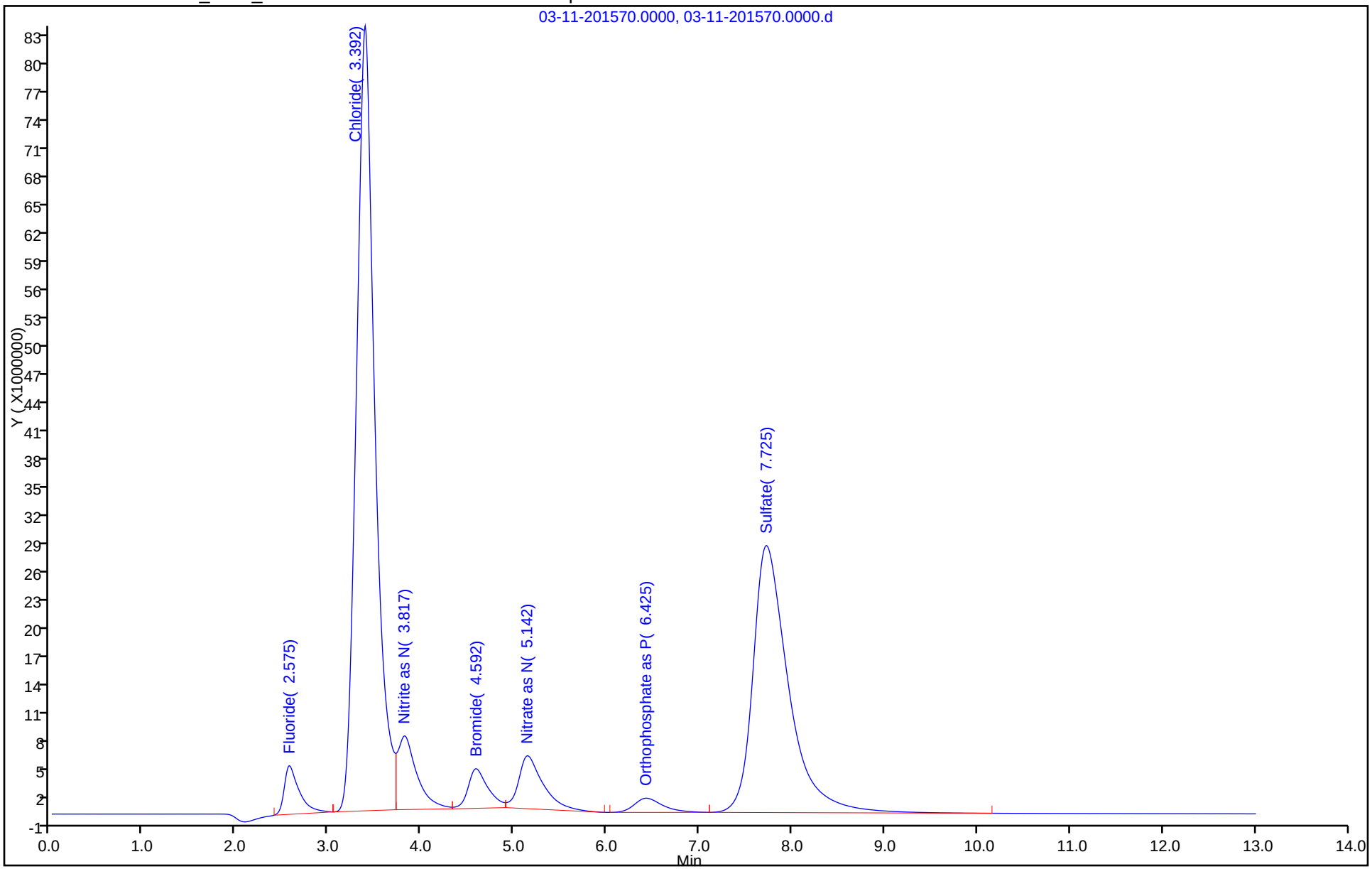
icccv_01188 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:26 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201570.0000.d

Injection Date:	12-Mar-2015 05:23:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCV			Worklist Smp#:	70
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 180-135268/33

Matrix: Water Lab File ID: 03-11-201533.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 19:47

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201533.0000.d
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 11-Mar-2015 19:47:00 ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-033
Misc. Info.: 31836 mb
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:36 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

First Level Reviewer: oravecj Date: 12-Mar-2015 10:43:11

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.575				ND	M
2 Chloride	3.517	3.392	0.125	903492		0.0367	M
10 Nitrite as N		3.817				ND	
4 Bromide		4.575				ND	M
8 Nitrate as N		5.133				ND	M
9 Orthophosphate as P		6.450				ND	
3 Sulfate	7.775	7.742	0.033	3075418		0.1882	

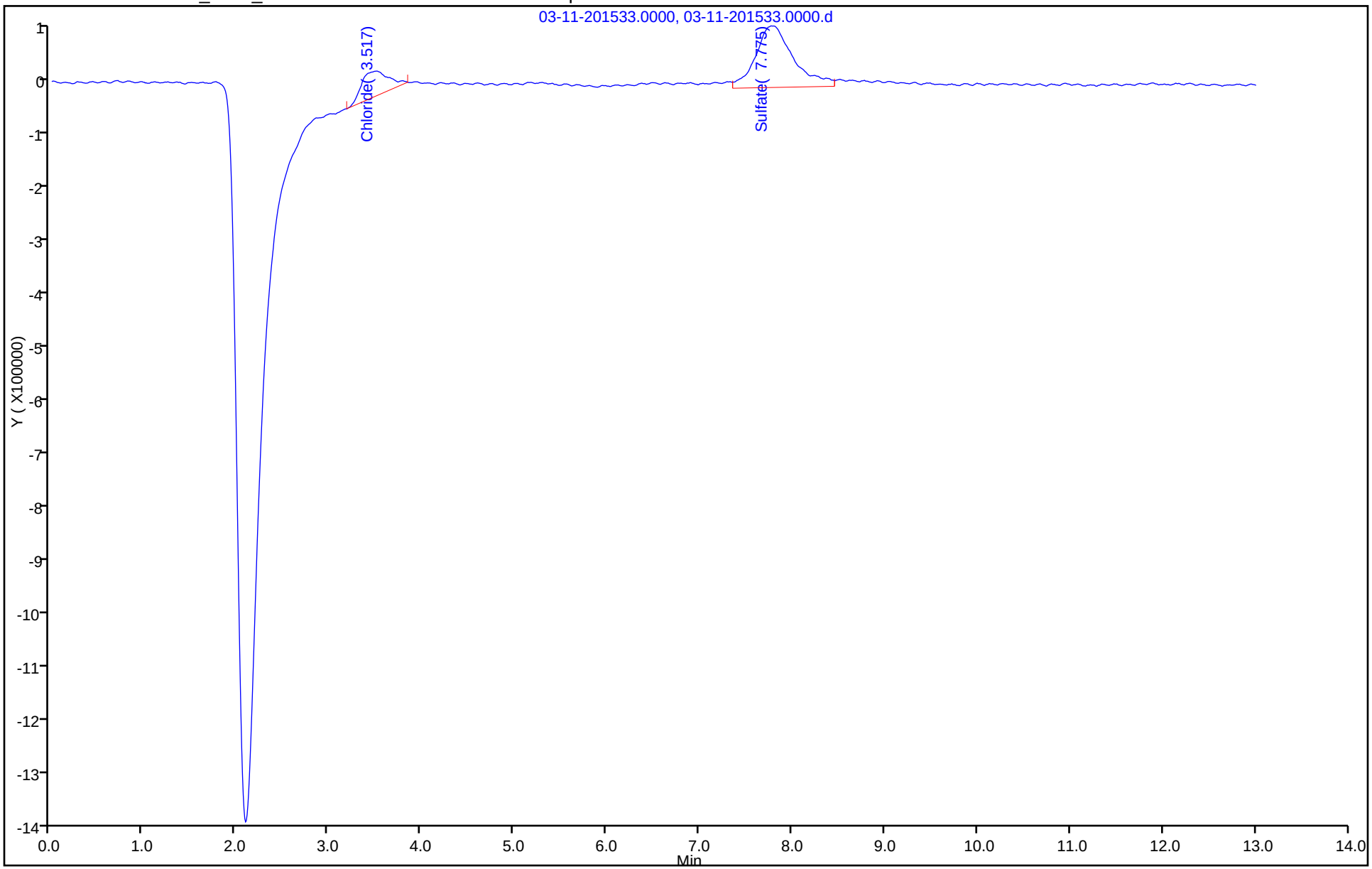
QC Flag Legend

Review Flags
M - Manually Integrated

Report Date: 12-Mar-2015 10:46:37 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201533.0000.d				
Injection Date:	11-Mar-2015 19:47:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	mb			Worklist Smp#:	33
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

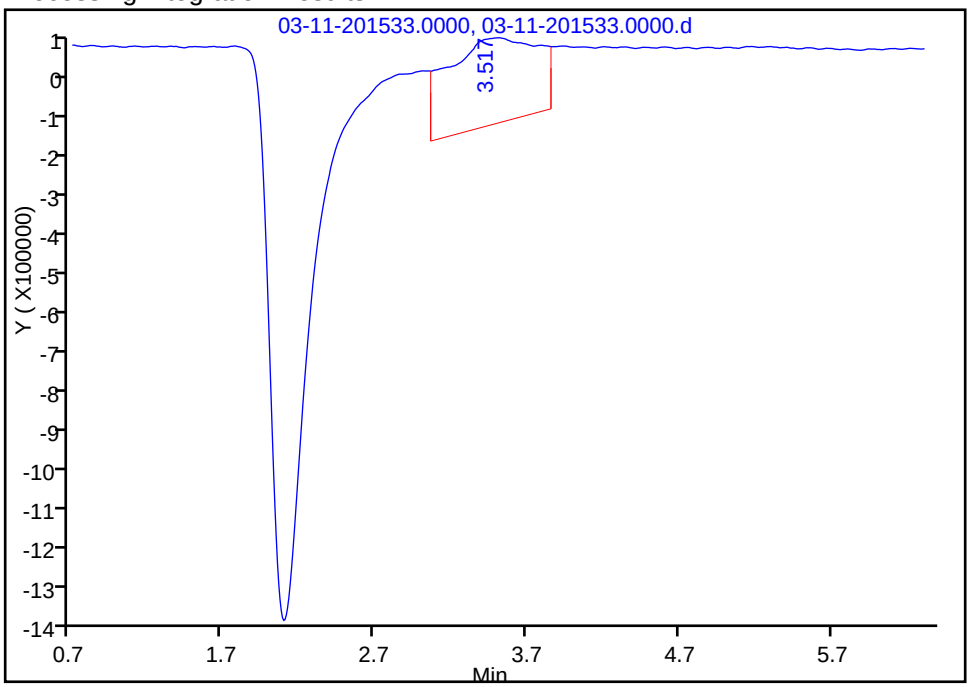
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201533.0000.d
Injection Date: 11-Mar-2015 19:47:00 Instrument ID: CHIC25
Lims ID: mb
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 33
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

2 Chloride, CAS: 16887-00-6

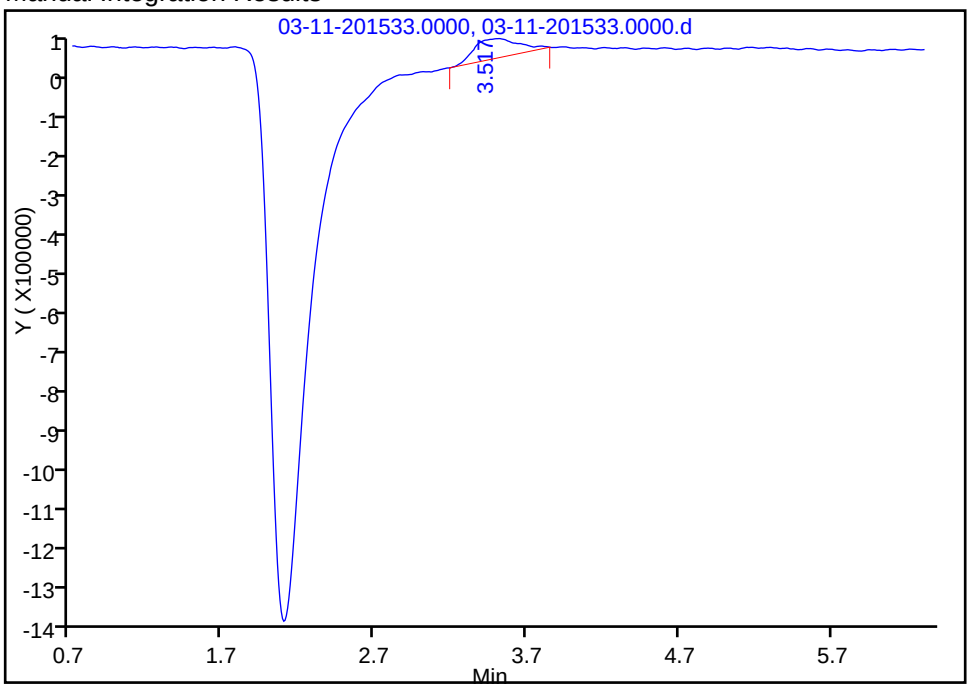
Processing Integration Results

RT: 3.52
Area: 8030952
Amount: 0.326489
Amount Units: ug/ml



Manual Integration Results

RT: 3.52
Area: 903492
Amount: 0.036730
Amount Units: ug/ml



Reviewer: oravecj, 12-Mar-2015 10:43:11
Audit Action: Manually Integrated/Assigned Compound ID
Audit Reason: Instrument noise

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-135268/28

Matrix: Water Lab File ID: 03-11-201528.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 18:29

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201528.0000.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Mar-2015 18:29:00 ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-028
Misc. Info.: 28 CCB
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:36 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

First Level Reviewer: oravecj Date: 12-Mar-2015 10:42:03

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.575				ND	
2 Chloride	3.533	3.392	0.141	609234		0.0248	M
10 Nitrite as N		3.817				ND	M
4 Bromide		4.575				ND	M
8 Nitrate as N		5.133				ND	
9 Orthophosphate as P		6.450				ND	
3 Sulfate		7.742				ND	

QC Flag Legend

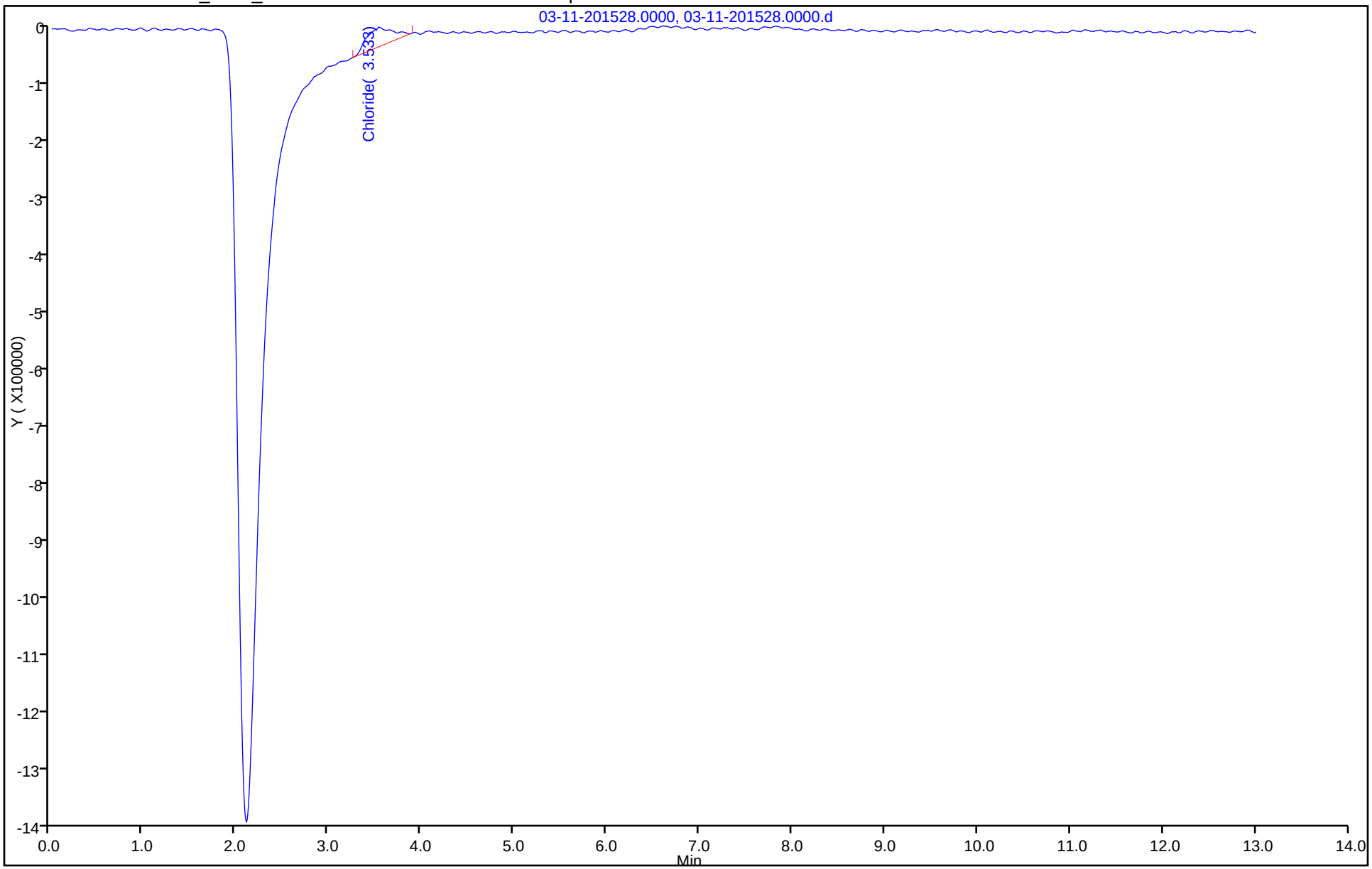
Review Flags
M - Manually Integrated

Report Date: 12-Mar-2015 10:46:39 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201528.0000.d

Injection Date:	11-Mar-2015 18:29:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	28
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

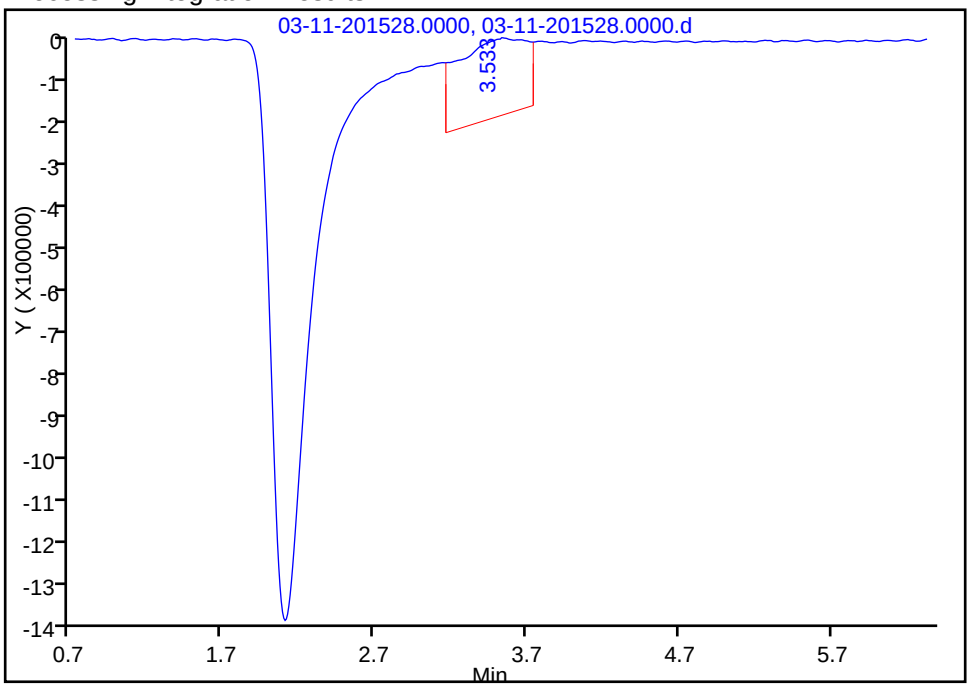
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201528.0000.d
Injection Date: 11-Mar-2015 18:29:00 Instrument ID: CHIC25
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 28
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

2 Chloride, CAS: 16887-00-6

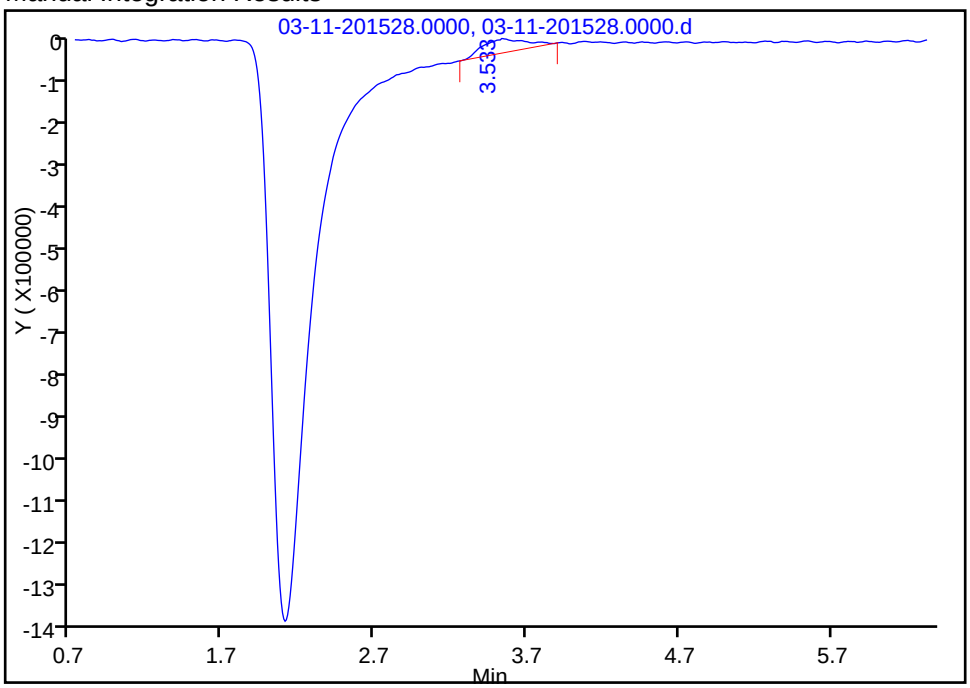
Processing Integration Results

RT: 3.53
Area: 5559108
Amount: 0.225999
Amount Units: ug/ml



Manual Integration Results

RT: 3.53
Area: 609234
Amount: 0.024768
Amount Units: ug/ml



Reviewer: oravecj, 12-Mar-2015 10:42:03
Audit Action: Manually Integrated/Assigned Compound ID
Audit Reason: Split Peak

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-135268/40

Matrix: Water Lab File ID: 03-11-201540.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 21:36

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201540.0000.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 11-Mar-2015 21:36:00 ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-040
Misc. Info.: 40 CCB
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

First Level Reviewer: oravecj Date: 12-Mar-2015 10:43:48

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.575				ND	M
2 Chloride	3.450	3.392	0.058	808766		0.0329	M
10 Nitrite as N		3.817				ND	
4 Bromide		4.575				ND	M
8 Nitrate as N		5.133				ND	
9 Orthophosphate as P		6.442				ND	
3 Sulfate	7.792	7.742	0.050	3191274		0.1953	

QC Flag Legend

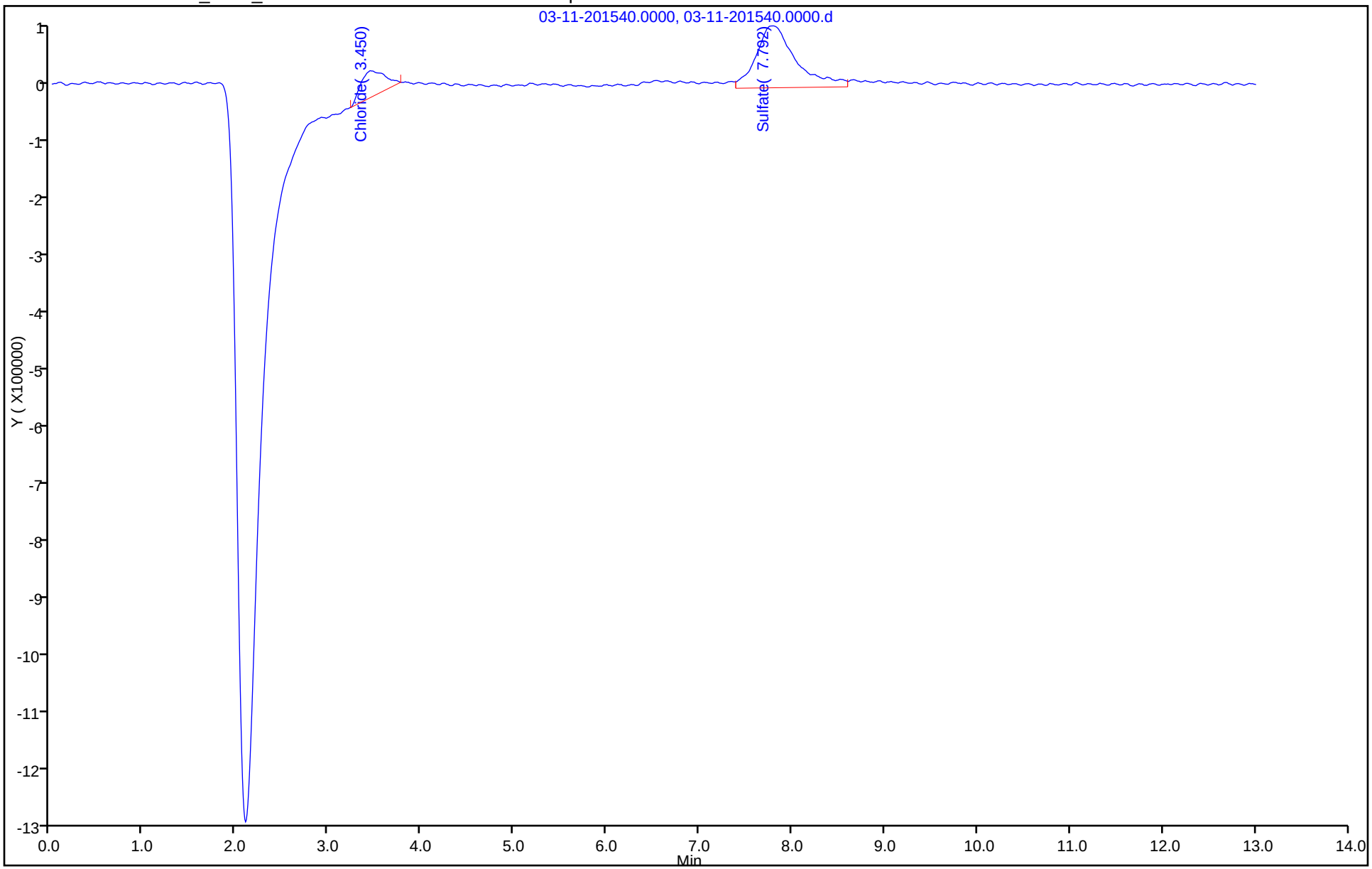
Review Flags
M - Manually Integrated

Report Date: 12-Mar-2015 10:46:35 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201540.0000.d

Injection Date:	11-Mar-2015 21:36:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	40
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

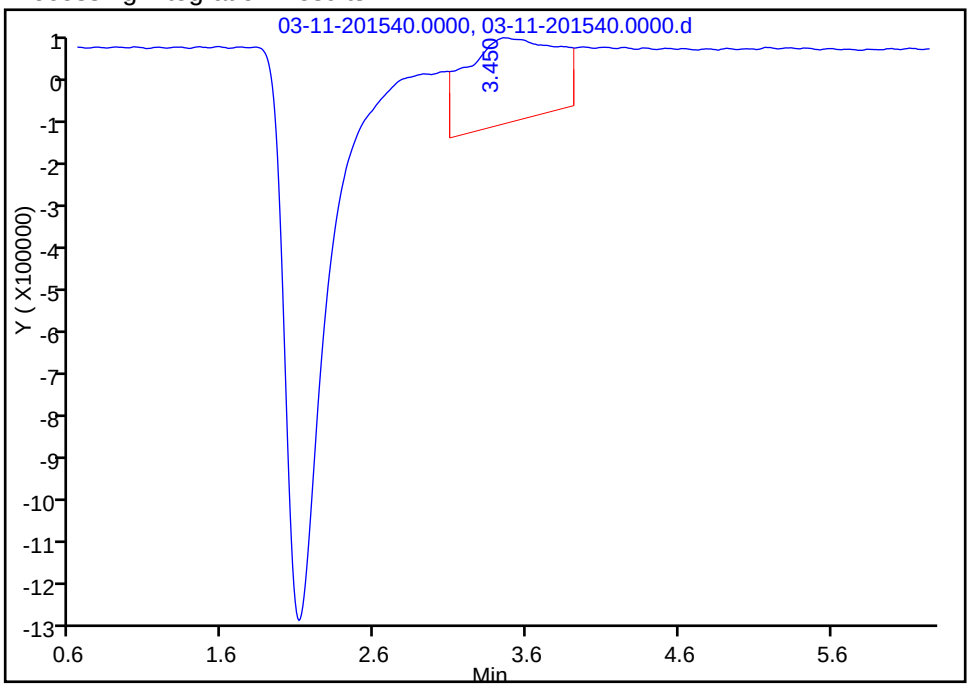
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201540.0000.d
Injection Date: 11-Mar-2015 21:36:00 Instrument ID: CHIC25
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 40
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

2 Chloride, CAS: 16887-00-6

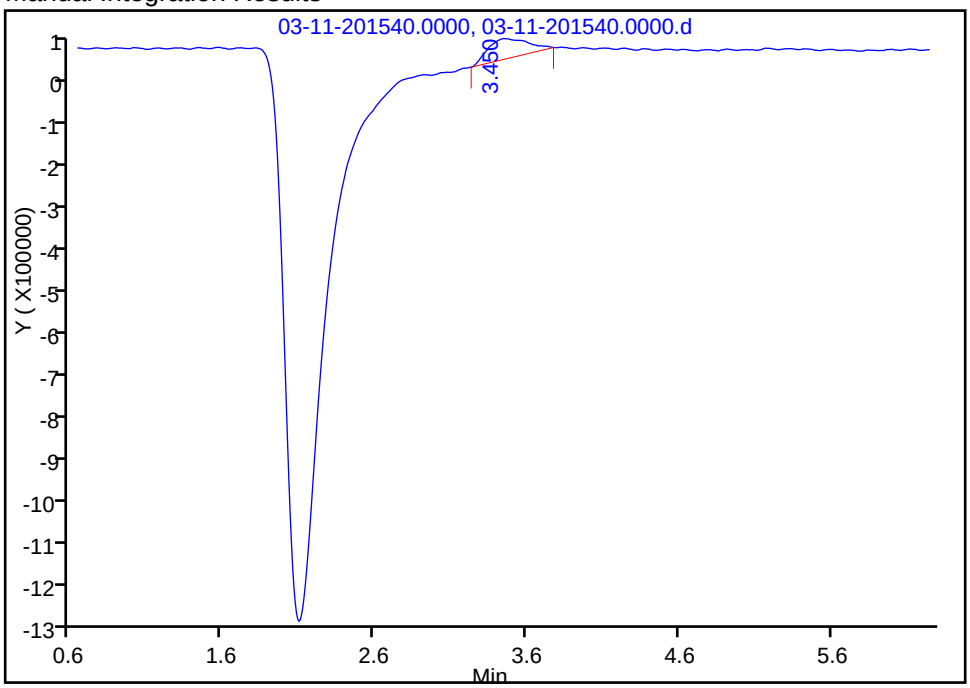
Processing Integration Results

RT: 3.45
Area: 7843541
Amount: 0.318870
Amount Units: ug/ml



Manual Integration Results

RT: 3.45
Area: 808766
Amount: 0.032879
Amount Units: ug/ml



Reviewer: oravecj, 12-Mar-2015 10:43:48
Audit Action: Manually Integrated/Assigned Compound ID
Audit Reason: Split Peak

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-135268/52

Matrix: Water Lab File ID: 03-11-201552.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 00:43

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201552.0000.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 12-Mar-2015 00:43:00 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-052
Misc. Info.: 52 CCB
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:28 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

First Level Reviewer: oravecj Date: 12-Mar-2015 10:44:37

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.575				ND	
2 Chloride	3.458	3.392	0.066	814792		0.0331	M
10 Nitrite as N		3.825				ND	
4 Bromide		4.592				ND	M
8 Nitrate as N		5.150				ND	
9 Orthophosphate as P		6.433				ND	
3 Sulfate	7.775	7.733	0.042	3048571		0.1866	

QC Flag Legend

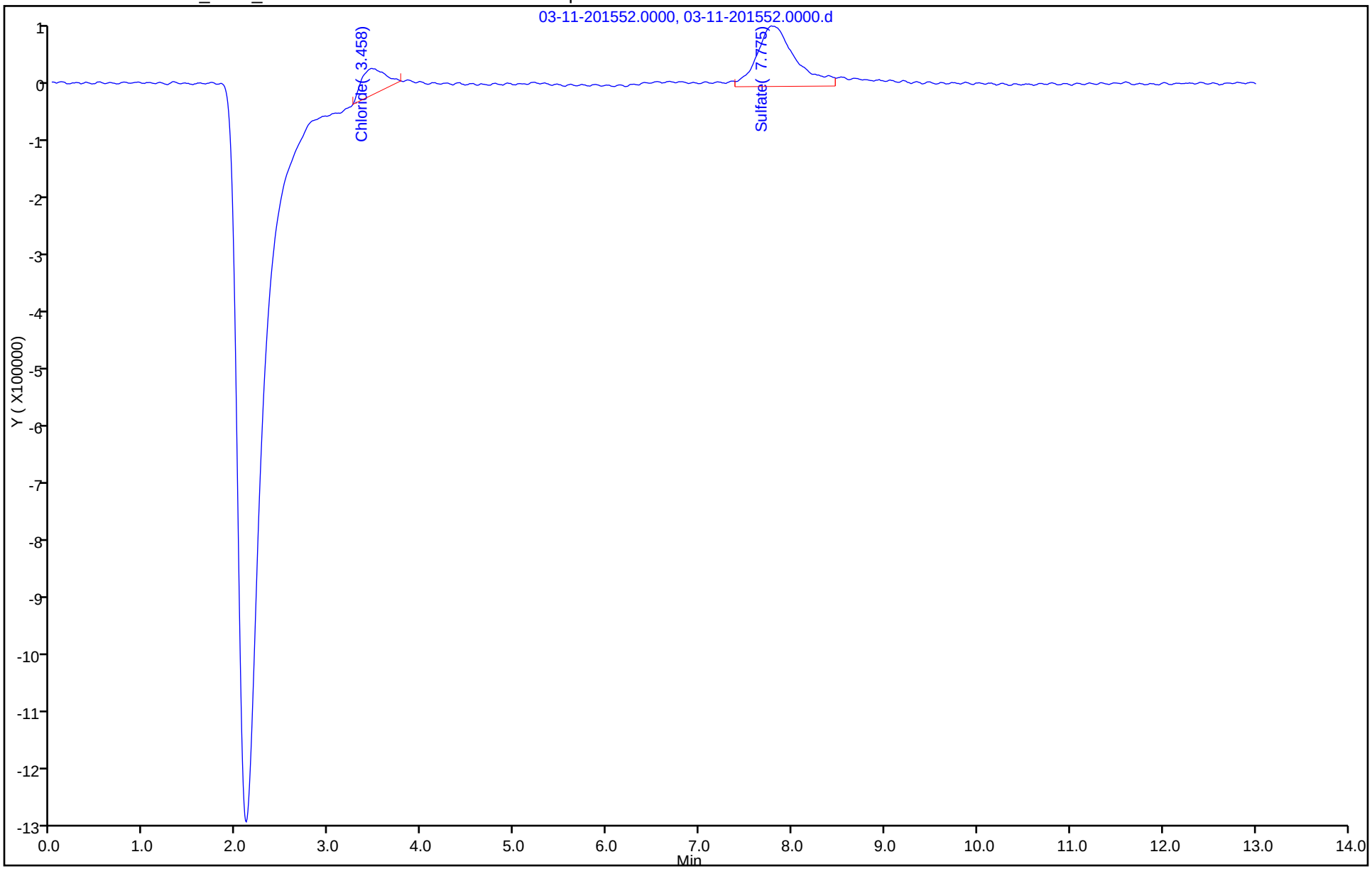
Review Flags
M - Manually Integrated

Report Date: 12-Mar-2015 10:46:32 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201552.0000.d

Injection Date:	12-Mar-2015 00:43:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	52
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

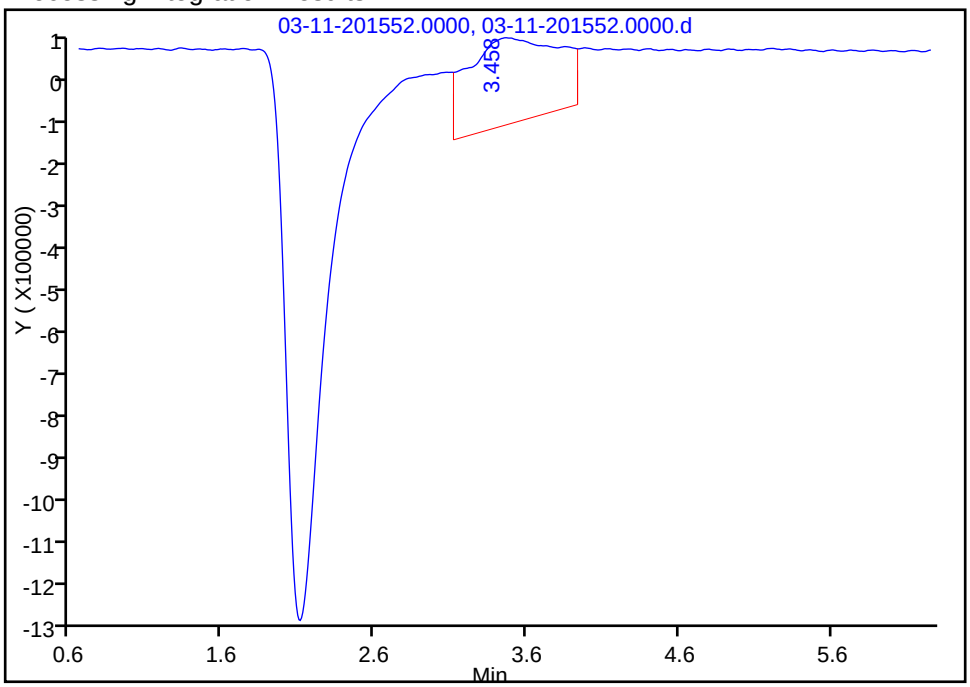
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201552.0000.d
Injection Date: 12-Mar-2015 00:43:00 Instrument ID: CHIC25
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

2 Chloride, CAS: 16887-00-6

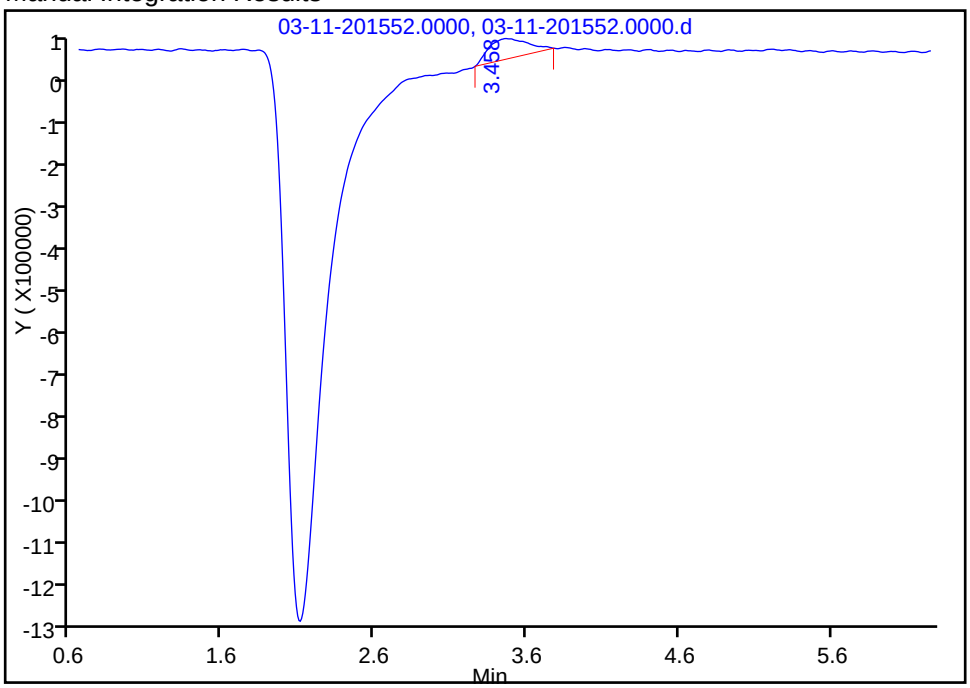
Processing Integration Results

RT: 3.46
Area: 8017811
Amount: 0.325955
Amount Units: ug/ml



Manual Integration Results

RT: 3.46
Area: 814792
Amount: 0.033124
Amount Units: ug/ml



Reviewer: oravecj, 12-Mar-2015 10:44:37
Audit Action: Manually Integrated
Audit Reason: Instrument noise

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-135268/64

Matrix: Water Lab File ID: 03-11-201564.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 03:50

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201564.0000.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 12-Mar-2015 03:50:00 ALS Bottle#: 0 Worklist Smp#: 64
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-064
Misc. Info.: 29935 CCB
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:26 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

First Level Reviewer: oravecj Date: 12-Mar-2015 10:45:22

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.575				ND	M
2 Chloride	3.458	3.392	0.066	1034339		0.0420	M
10 Nitrite as N		3.817				ND	
4 Bromide		4.592				ND	M
8 Nitrate as N		5.142				ND	M
9 Orthophosphate as P		6.425				ND	
3 Sulfate	7.792	7.725	0.067	3067931		0.1878	

QC Flag Legend

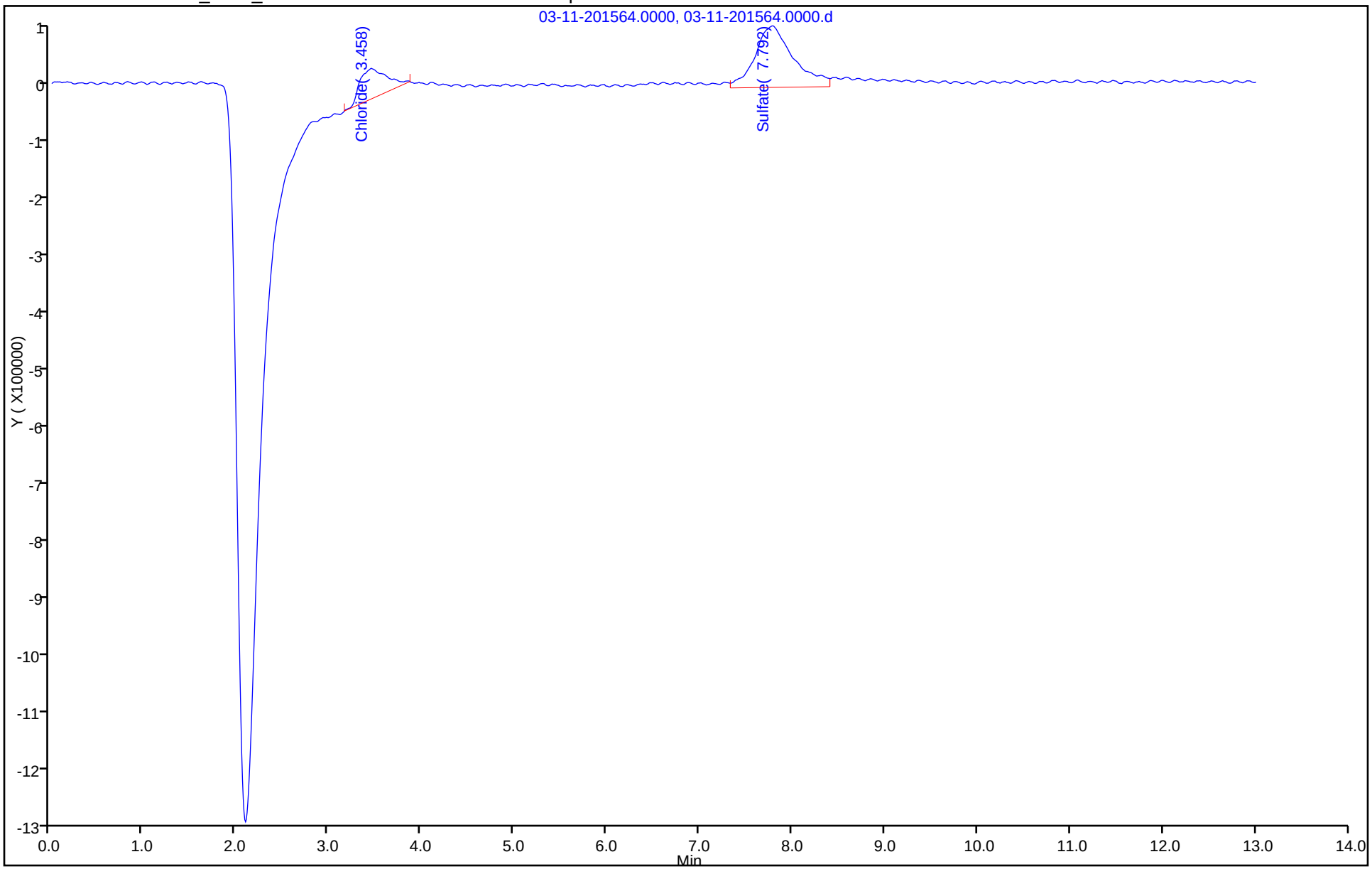
Review Flags
M - Manually Integrated

Report Date: 12-Mar-2015 10:46:28 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201564.0000.d

Injection Date:	12-Mar-2015 03:50:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	64
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

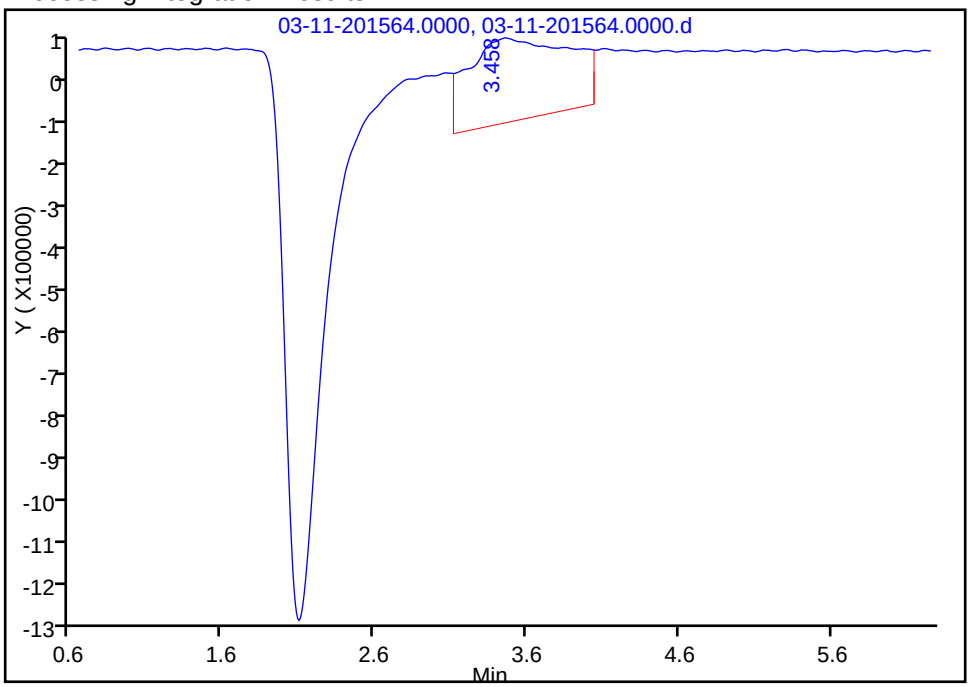
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201564.0000.d
Injection Date: 12-Mar-2015 03:50:00 Instrument ID: CHIC25
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 64
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

2 Chloride, CAS: 16887-00-6

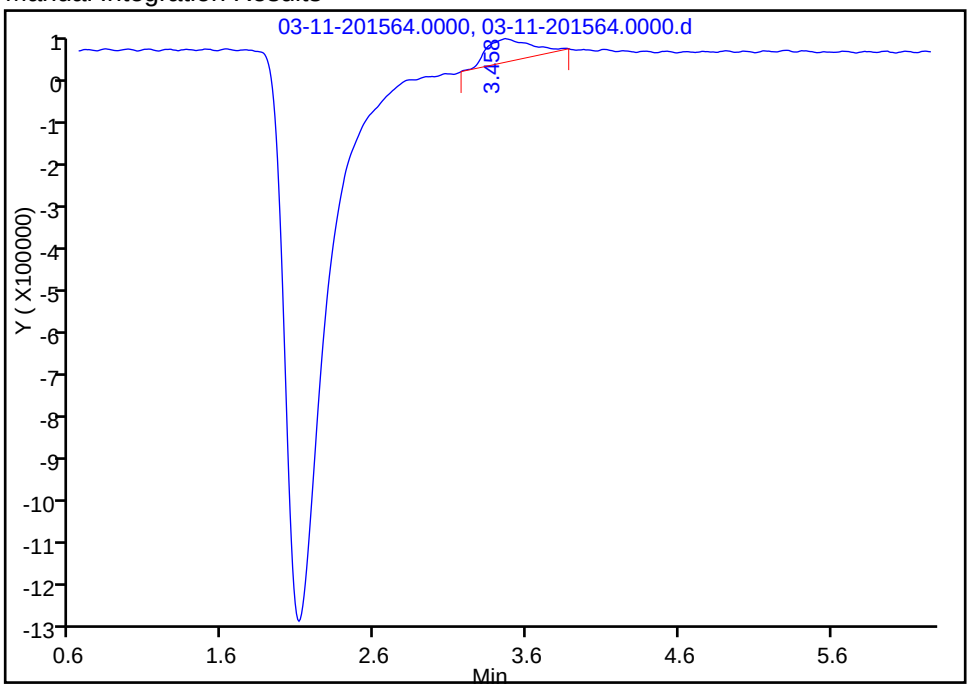
Processing Integration Results

RT: 3.46
Area: 8545386
Amount: 0.347403
Amount Units: ug/ml



Manual Integration Results

RT: 3.46
Area: 1034339
Amount: 0.042050
Amount Units: ug/ml



Reviewer: oravecj, 12-Mar-2015 10:45:22
Audit Action: Manually Integrated/Assigned Compound ID
Audit Reason: Instrument noise

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: CCB 180-135268/71

Matrix: Water Lab File ID: 03-11-201571.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/12/2015 05:38

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	0.10	U	0.10	0.0062
16887-00-6	Chloride	1.0	U	1.0	0.20
14808-79-8	Sulfate	1.0	U	1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201571.0000.d
Lims ID: CCB
Client ID:
Sample Type: CCB
Inject. Date: 12-Mar-2015 05:38:00 ALS Bottle#: 0 Worklist Smp#: 71
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-071
Misc. Info.: 64 CCB
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:48 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

First Level Reviewer: oravecj Date: 12-Mar-2015 10:46:26

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride		2.575				ND	
2 Chloride	3.467	3.392	0.075	2910460		0.1183	M
10 Nitrite as N		3.817				ND	
4 Bromide		4.575				ND	M
8 Nitrate as N		5.133				ND	
9 Orthophosphate as P		6.450				ND	
3 Sulfate	7.792	7.742	0.050	2761846		0.1691	

QC Flag Legend

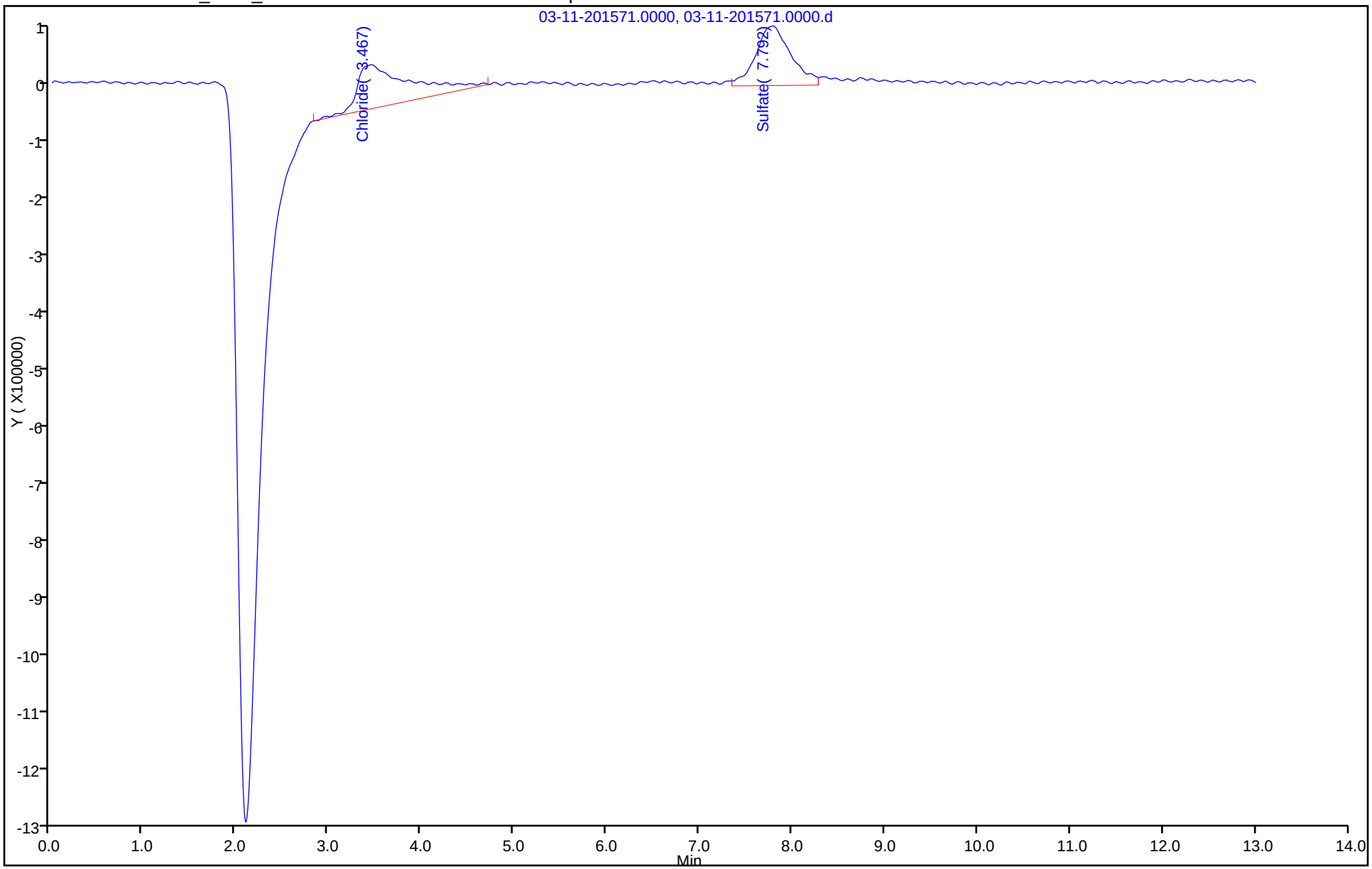
Review Flags
M - Manually Integrated

Report Date: 12-Mar-2015 12:05:35 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201571.0000.d

Injection Date:	12-Mar-2015 05:38:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	CCB			Worklist Smp#:	71
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



Manual Integration/User Assign Peak Report

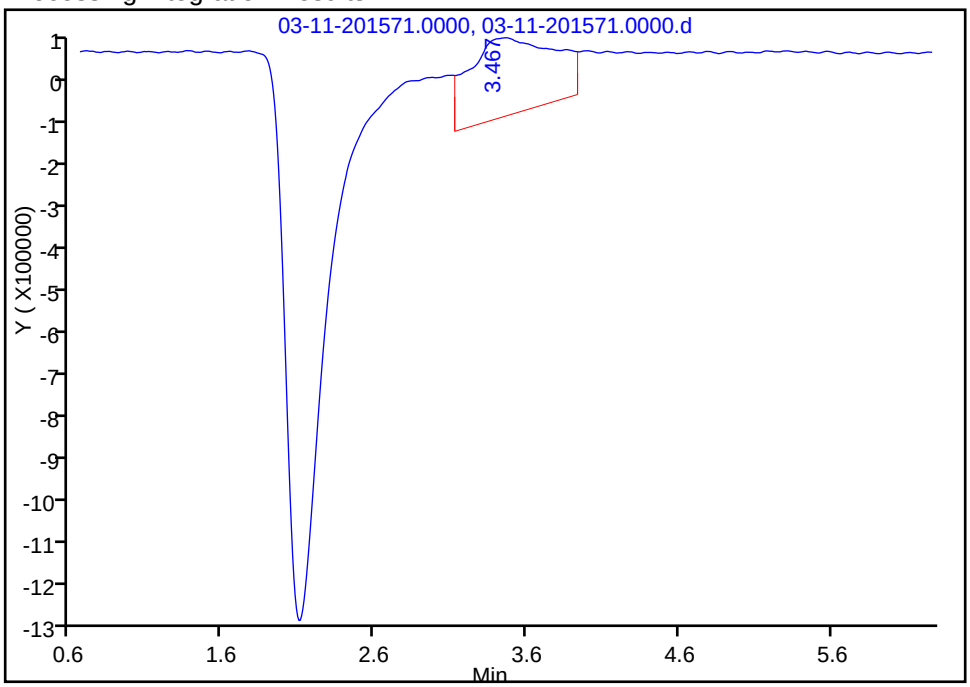
TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201571.0000.d
Injection Date: 12-Mar-2015 05:38:00 Instrument ID: CHIC25
Lims ID: CCB
Client ID:
Operator ID: ALS Bottle#: 0 Worklist Smp#: 71
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Method: 300_9056_CHIC25 Limit Group: GC Anions ICAL
Column: Detector 0008

2 Chloride, CAS: 16887-00-6

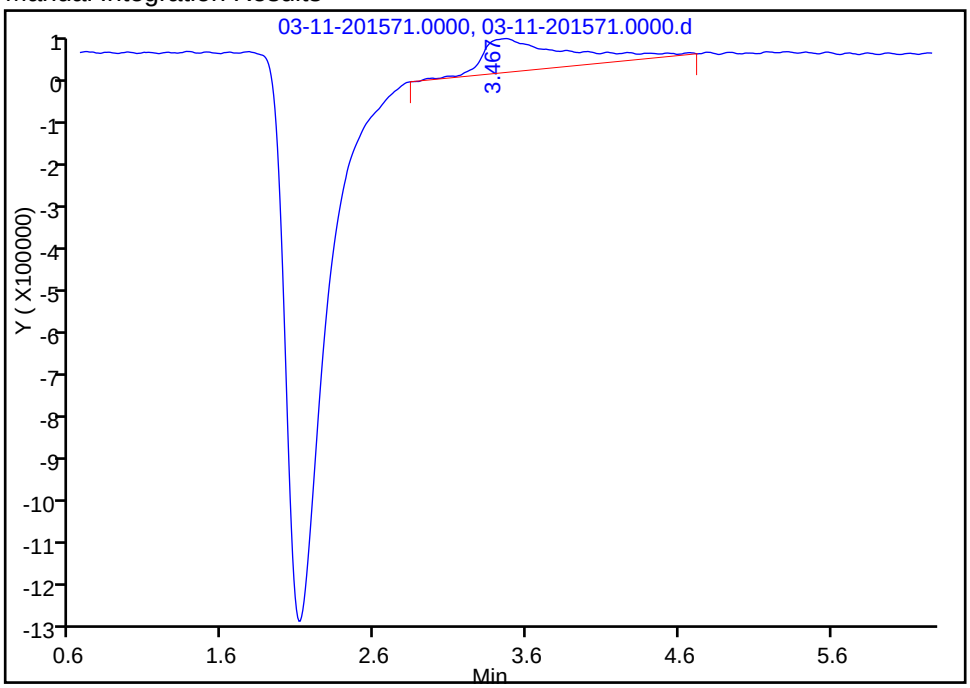
Processing Integration Results

RT: 3.47
Area: 6837507
Amount: 0.277971
Amount Units: ug/ml



Manual Integration Results

RT: 3.47
Area: 2910460
Amount: 0.118321
Amount Units: ug/ml



Reviewer: oravecj, 12-Mar-2015 10:46:26
Audit Action: Manually Integrated/Assigned Compound ID
Audit Reason: Instrument noise

FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 180-135268/32

Matrix: Water Lab File ID: 03-11-201532.0000.d

Analysis Method: 300.0 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 19:32

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	2.44		0.10	0.0062
16887-00-6	Chloride	47.4		1.0	0.20
14808-79-8	Sulfate	46.5		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201532.0000.d
Lims ID: lcs
Client ID:
Sample Type: LCS
Inject. Date: 11-Mar-2015 19:32:00 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-032
Misc. Info.: 7124 lcs
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:36 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	5160339H	2.50	2.39	
2 Chloride	3.392	3.392	0.000	1166836845	50.0	47.4	
10 Nitrite as N	3.817	3.817	0.000	7654084H	2.50	2.38	
4 Bromide	4.575	4.575	0.000	4247442H	10.0	9.34	
8 Nitrate as N	5.133	5.133	0.000	5672291H	2.50	2.44	
9 Orthophosphate as P	6.450	6.450	0.000	1526082H	2.50	2.45	
3 Sulfate	7.742	7.742	0.000	759463290	50.0	46.5	

Reagents:

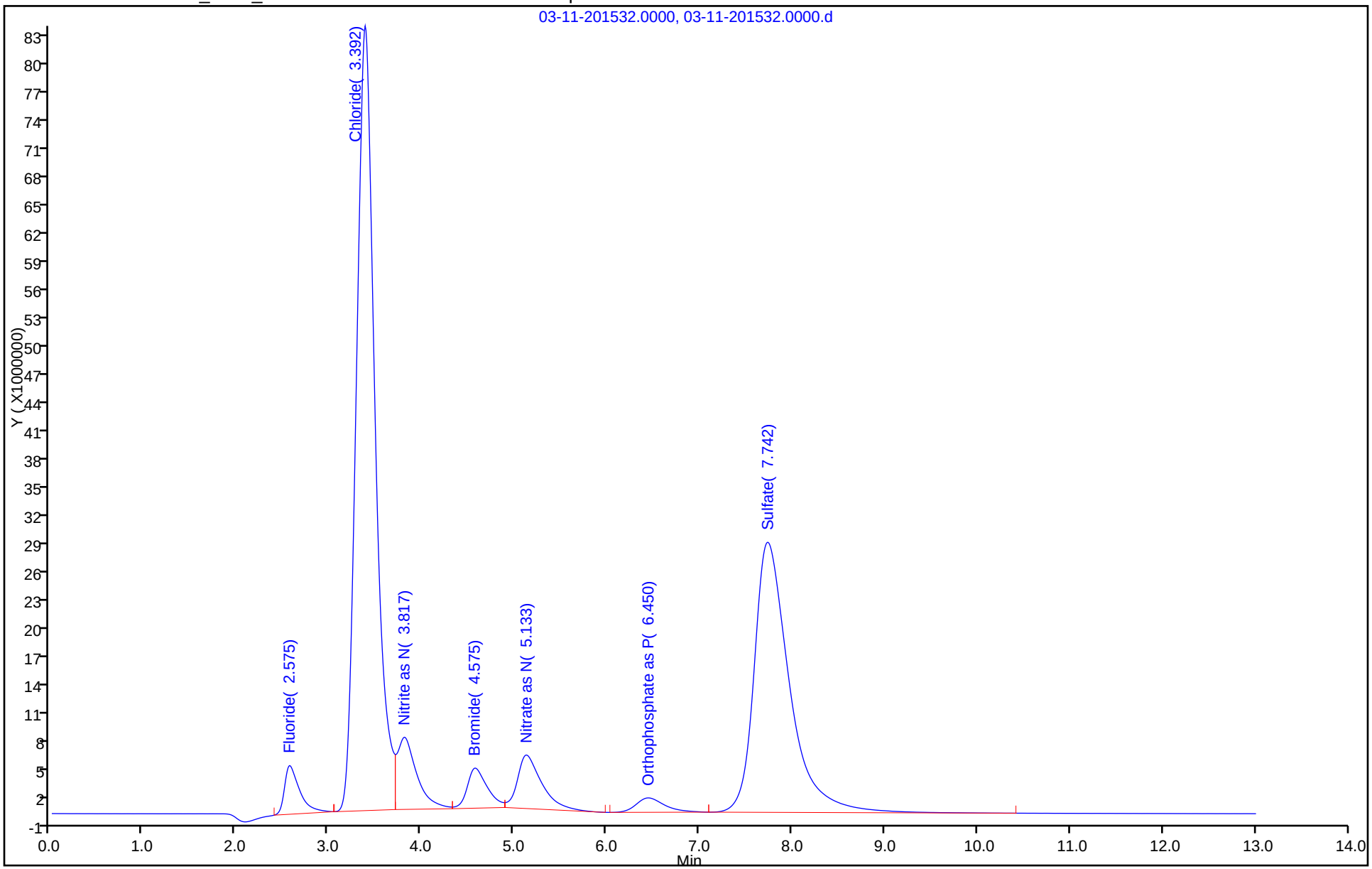
icccv_01188 Amount Added: 1.00 Units: mL

Report Date: 12-Mar-2015 10:46:38 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201532.0000.d

Injection Date:	11-Mar-2015 19:32:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	lcs			Worklist Smp#:	32
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 MS Lab Sample ID: 180-41935-2 MS

Matrix: Water Lab File ID: 03-11-201545.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 12:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 22:54

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.28		0.10	0.0062
16887-00-6	Chloride	82.1		1.0	0.20
14808-79-8	Sulfate	36.0		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201545.0000.d
Lims ID: 180-41935-A-2 MS
Client ID:
Sample Type: MS
Inject. Date: 11-Mar-2015 22:54:00 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-045
Misc. Info.: 45 180-41935-A-2 ms
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	2508257H	1.25	1.12	
2 Chloride	3.458	3.392	0.066	2019024304	25.0	82.1	
10 Nitrite as N		3.817				ND	
4 Bromide	4.592	4.575	0.017	2121099H	5.00	4.68	
8 Nitrate as N	5.142	5.133	0.009	7620449H	1.25	3.28	
9 Orthophosphate as P	6.483	6.442	0.041	683393H	1.25	1.12	
3 Sulfate	7.758	7.742	0.016	587825639	25.0	36.0	

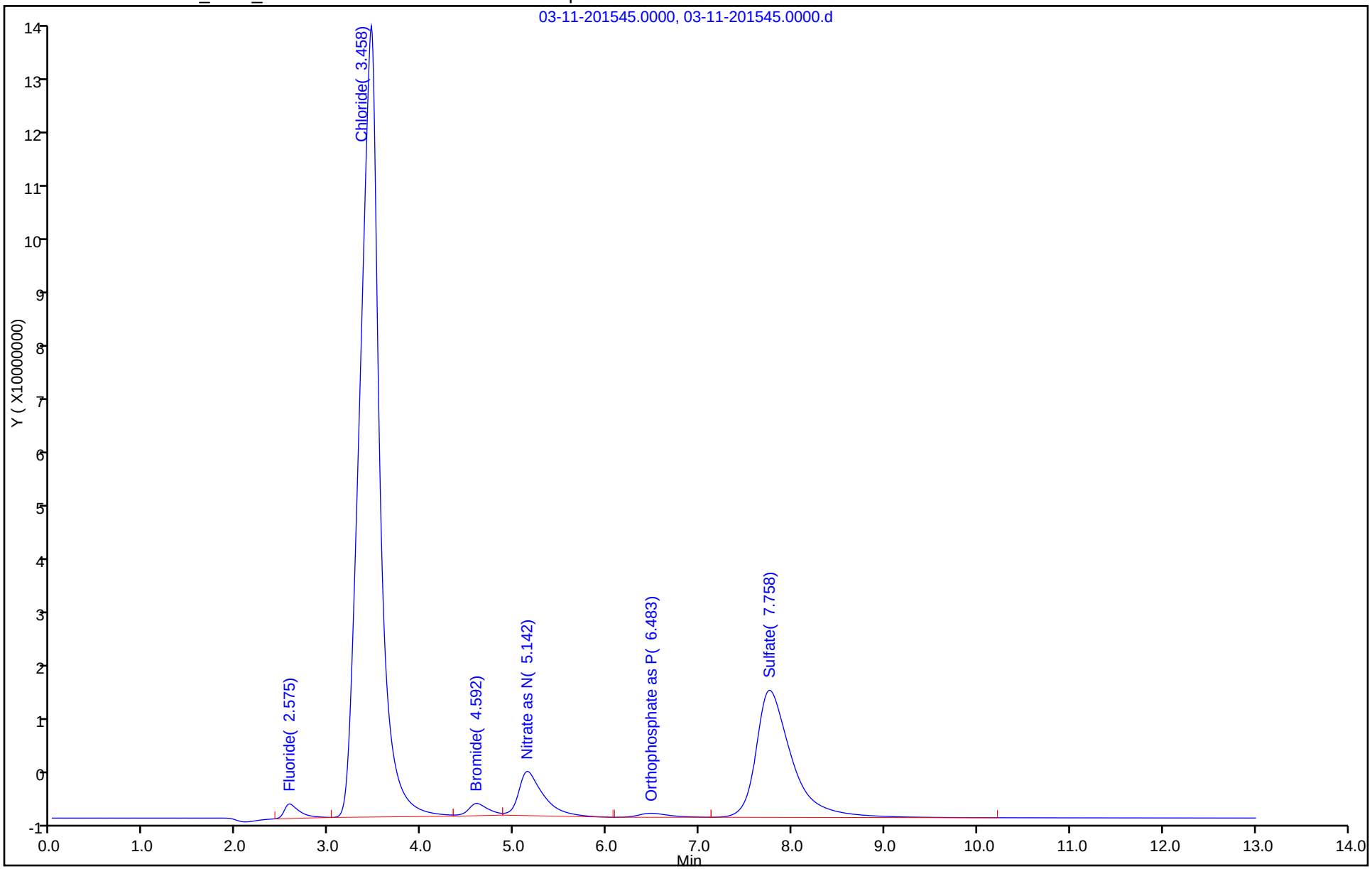
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 12-Mar-2015 10:46:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201545.0000.d				
Injection Date:	11-Mar-2015 22:54:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-2 MS			Worklist Smp#:	45
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MS Lab Sample ID: 180-41935-11 MS

Matrix: Water Lab File ID: 03-11-201542.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 22:07

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.39		0.10	0.0062
16887-00-6	Chloride	100		1.0	0.20
14808-79-8	Sulfate	35.5		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201542.0000.d
Lims ID: 180-41935-A-11 MS
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MS
Inject. Date: 11-Mar-2015 22:07:00 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-042
Misc. Info.: 42 180-41935-A-11 MS
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	2518057H	1.25	1.13	
2 Chloride	3.475	3.392	0.083	2472011153	25.0	100.5	E
10 Nitrite as N		3.817				ND	
4 Bromide	4.592	4.575	0.017	2175124H	5.00	4.79	
8 Nitrate as N	5.142	5.133	0.009	7876227H	1.25	3.39	
9 Orthophosphate as P	6.475	6.442	0.033	635639H	1.25	1.04	
3 Sulfate	7.758	7.742	0.016	579360126	25.0	35.5	

QC Flag Legend

Processing Flags
E - Exceeded Maximum Amount
H - Response Measured by Height

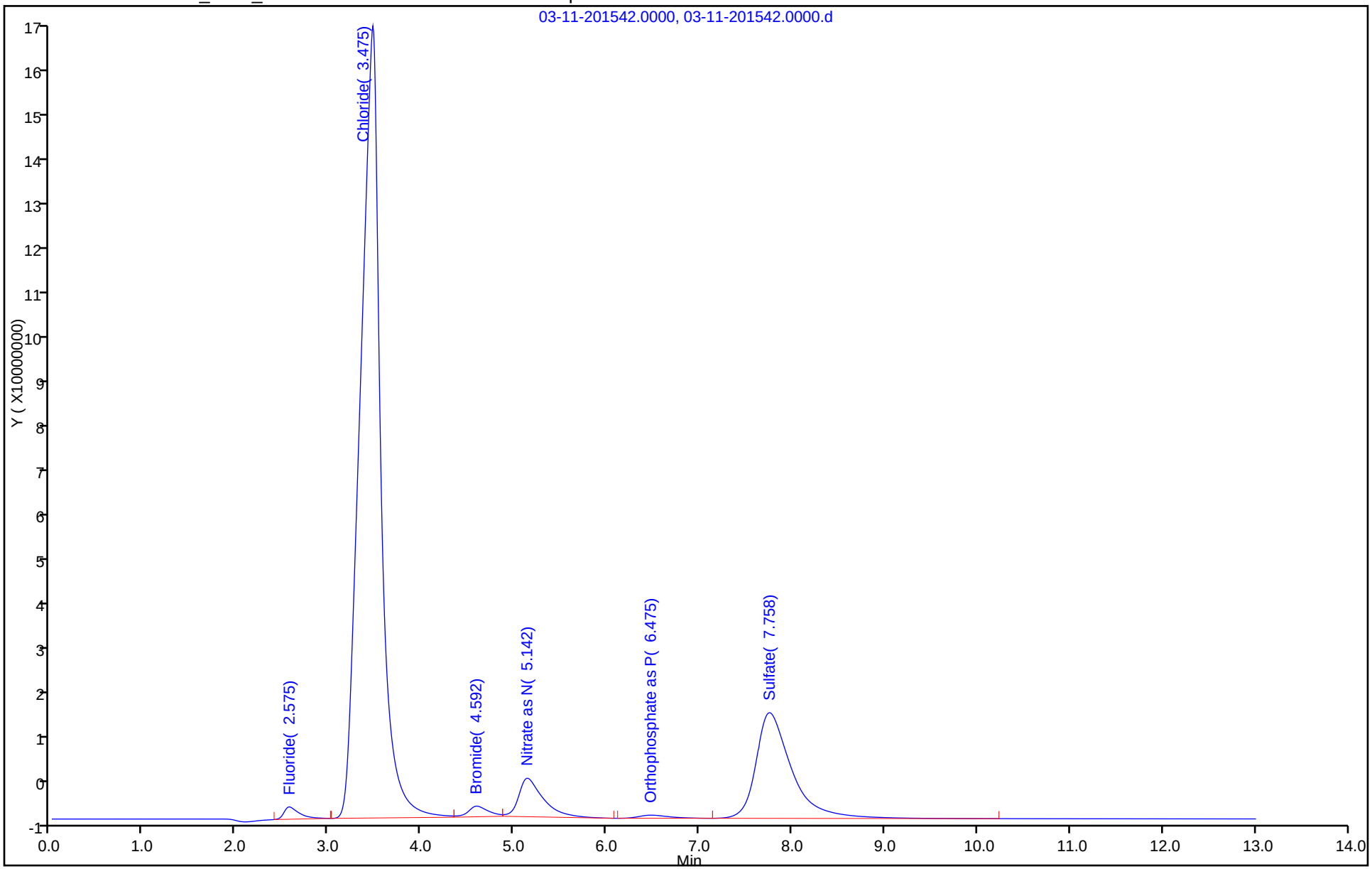
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 12-Mar-2015 10:46:35 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201542.0000.d				
Injection Date:	11-Mar-2015 22:07:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-11 MS			Worklist Smp#:	42
Client ID:	HD-COD-SW-17-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-7-0/1-0 MSD Lab Sample ID: 180-41935-2 MSD

Matrix: Water Lab File ID: 03-11-201546.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 12:25

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 23:09

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.25		0.10	0.0062
16887-00-6	Chloride	81.7		1.0	0.20
14808-79-8	Sulfate	35.9		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201546.0000.d
Lims ID: 180-41935-A-2 MSD
Client ID:
Sample Type: MSD
Inject. Date: 11-Mar-2015 23:09:00 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-046
Misc. Info.: 46 180-41935-A-2 msd
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	2492817H	1.25	1.12	
2 Chloride	3.458	3.392	0.066	2009040545	25.0	81.7	
10 Nitrite as N		3.817				ND	
4 Bromide	4.600	4.575	0.025	2101099H	5.00	4.63	
8 Nitrate as N	5.142	5.133	0.009	7565210H	1.25	3.25	
9 Orthophosphate as P	6.483	6.442	0.041	683991H	1.25	1.12	
3 Sulfate	7.758	7.742	0.016	585824918	25.0	35.9	

Reagents:

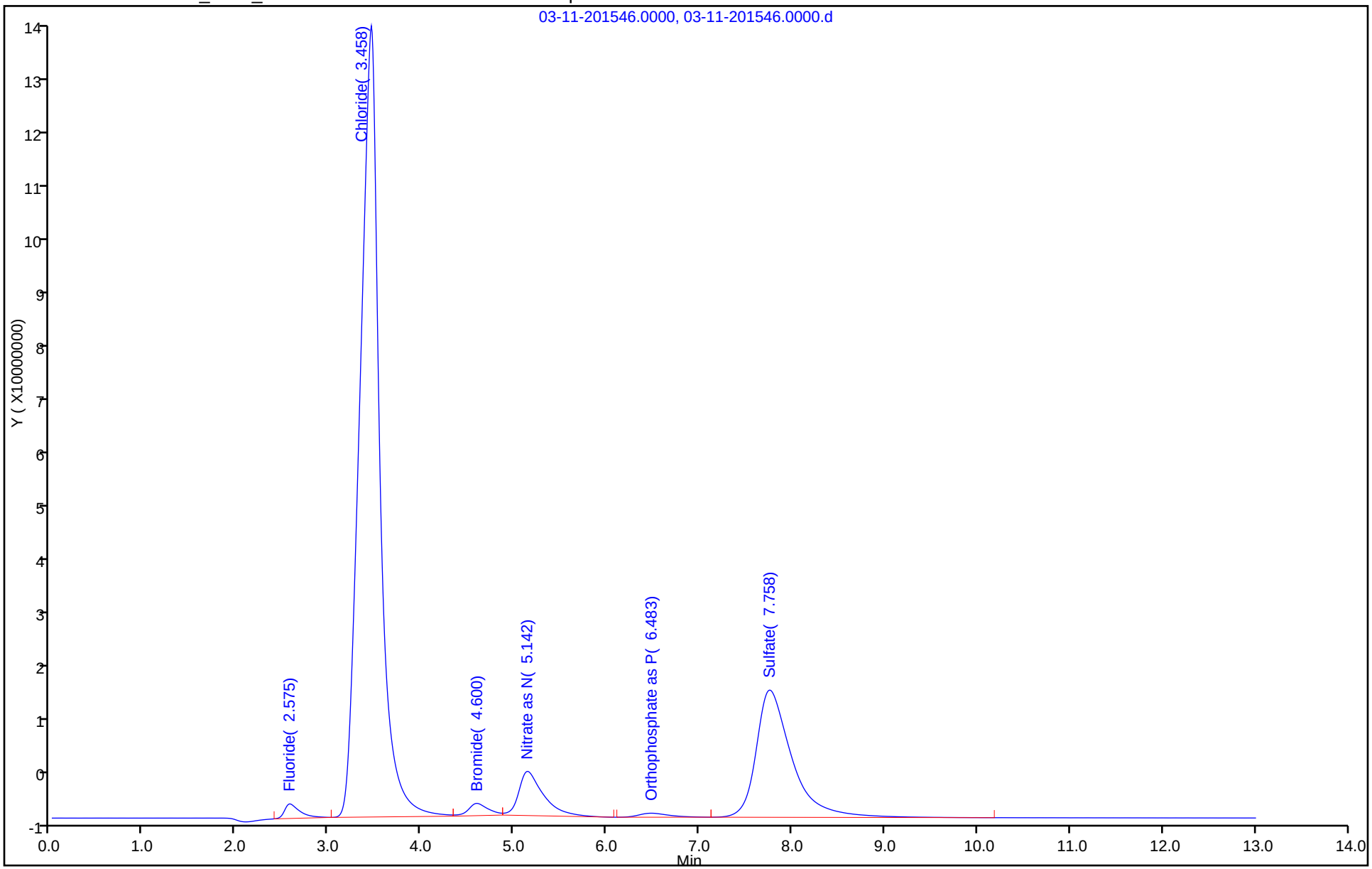
ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 12-Mar-2015 10:46:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201546.0000.d

Injection Date:	11-Mar-2015 23:09:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-2 MSD			Worklist Smp#:	46
Client ID:					
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



FORM I
HPLC/IC ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Client Sample ID: HD-COD-SW-17-0/1-0 MSD Lab Sample ID: 180-41935-11 MSD

Matrix: Water Lab File ID: 03-11-201543.0000.d

Analysis Method: 300.0 Date Collected: 03/10/2015 11:00

Extraction Method: Date Extracted:

Sample wt/vol: 1(mL) Date Analyzed: 03/11/2015 22:23

Con. Extract Vol.: Dilution Factor: 1

Injection Volume: 25(uL) GC Column: AS-14 ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 135268 Units: mg/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
14797-55-8	Nitrate as N	3.36		0.10	0.0062
16887-00-6	Chloride	99.0		1.0	0.20
14808-79-8	Sulfate	34.8		1.0	0.21

TestAmerica Pittsburgh
Target Compound Quantitation Report

Data File: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201543.0000.d
Lims ID: 180-41935-A-11 MSD
Client ID: HD-COD-SW-17-0/1-0
Sample Type: MSD
Inject. Date: 11-Mar-2015 22:23:00 ALS Bottle#: 0 Worklist Smp#: 43
Injection Vol: 25.0 ul Dil. Factor: 1.0000
Sample Info: 180-0005979-043
Misc. Info.: 43 180-41935-A-11 MSD
Operator ID: Instrument ID: CHIC25

Method: \\PITCHROM\ChromData\CHIC25\20150311-5979.b\300_9056_CHIC25.m
Limit Group: GC Anions ICAL
Last Update: 12-Mar-2015 10:46:32 Calib Date: 17-Feb-2015 17:14:00
Integrator: Falcon
Quant Method: External Standard Quant By: Initial Calibration
Last ICal File: \\PITCHROM\ChromData\CHIC25\20150217-5732.b\02-17A-201507.0000.d

Column 1 : Det: 0008
Process Host: XAWRK007

Compound	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
1 Fluoride	2.575	2.575	0.000	2499227H	1.25	1.12	
2 Chloride	3.475	3.392	0.083	2435224029	25.0	99.0	
10 Nitrite as N		3.817				ND	
4 Bromide	4.592	4.575	0.017	2152692H	5.00	4.74	
8 Nitrate as N	5.142	5.133	0.009	7817205H	1.25	3.36	
9 Orthophosphate as P	6.475	6.442	0.033	638728H	1.25	1.04	
3 Sulfate	7.758	7.742	0.016	568093722	25.0	34.8	

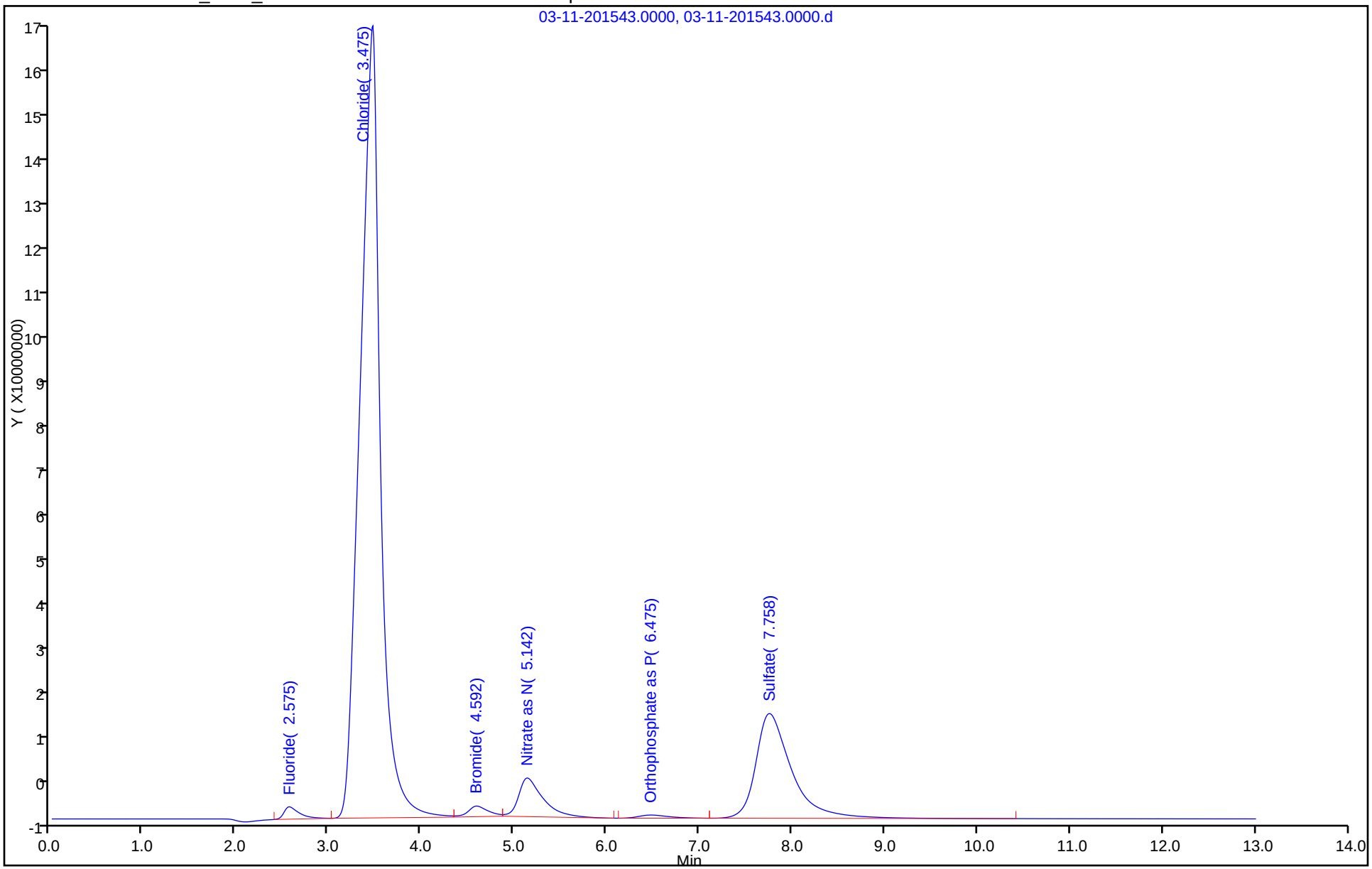
Reagents:

ICPRIMARYSTA_00006 Amount Added: 0.15 Units: mL

Report Date: 12-Mar-2015 10:46:34 Chrom Revision: 2.2 15-Jan-2015 13:05:58

TestAmerica Pittsburgh

Data File:	\\PITCHROM\ChromData\CHIC25\20150311-5979.b\03-11-201543.0000.d				
Injection Date:	11-Mar-2015 22:23:00	Instrument ID:	CHIC25	Operator ID:	
Lims ID:	180-41935-A-11 MSD			Worklist Smp#:	43
Client ID:	HD-COD-SW-17-0/1-0				
Injection Vol:	25.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	0
Method:	300_9056_CHIC25	Limit Group:	GC Anions ICAL		



HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Start Date: 02/17/2015 15:41

Analysis Batch Number: 133669 End Date: 02/18/2015 03:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
RINSE 180-133669/1		02/17/2015 15:41	1		AS-14
IC 180-133669/2		02/17/2015 15:57	1	02-17A-201502.0 000.d	AS-14
IC 180-133669/3		02/17/2015 16:12	1	02-17A-201503.0 000.d	AS-14
ICRT 180-133669/4		02/17/2015 16:28	1	02-17A-201504.0 000.d	AS-14
IC 180-133669/5		02/17/2015 16:43	1	02-17A-201505.0 000.d	AS-14
IC 180-133669/6		02/17/2015 16:59	1	02-17A-201506.0 000.d	AS-14
IC 180-133669/7		02/17/2015 17:14	1	02-17A-201507.0 000.d	AS-14
ZZZZZ		02/17/2015 17:30	1		AS-14
ZZZZZ		02/17/2015 17:46	1		AS-14
ZZZZZ		02/17/2015 18:01	1		AS-14
ICV 180-133669/11		02/17/2015 18:17	1		AS-14
CCV 180-133669/12		02/17/2015 18:32	1		AS-14
CCB 180-133669/13		02/17/2015 18:48	1		AS-14
ZZZZZ		02/17/2015 19:03	1		AS-14
ZZZZZ		02/17/2015 19:19	1		AS-14
ZZZZZ		02/17/2015 19:34	25		AS-14
ZZZZZ		02/17/2015 19:50	25		AS-14
ZZZZZ		02/17/2015 20:06	25		AS-14
ZZZZZ		02/17/2015 20:21	25		AS-14
ZZZZZ		02/17/2015 20:37	25		AS-14
ZZZZZ		02/17/2015 20:52	250		AS-14
ZZZZZ		02/17/2015 21:08	50		AS-14
ZZZZZ		02/17/2015 21:23	500		AS-14
CCV 180-133669/24		02/17/2015 21:39	1		AS-14
CCB 180-133669/25		02/17/2015 21:54	1		AS-14
ZZZZZ		02/17/2015 22:10	25		AS-14
ZZZZZ		02/17/2015 22:26	25		AS-14
ZZZZZ		02/17/2015 22:41	25		AS-14
ZZZZZ		02/17/2015 22:57	25		AS-14
ZZZZZ		02/17/2015 23:12	100		AS-14
ZZZZZ		02/17/2015 23:28	1000		AS-14
ZZZZZ		02/17/2015 23:43	250		AS-14
ZZZZZ		02/17/2015 23:59	2500		AS-14
ZZZZZ		02/18/2015 00:14	50		AS-14
ZZZZZ		02/18/2015 00:30	50		AS-14
CCV 180-133669/36		02/18/2015 00:46	1		AS-14
CCB 180-133669/37		02/18/2015 01:01	1		AS-14
ZZZZZ		02/18/2015 01:17	1		AS-14
ZZZZZ		02/18/2015 01:32	1		AS-14
ZZZZZ		02/18/2015 01:48	1		AS-14
ZZZZZ		02/18/2015 02:03	25		AS-14
ZZZZZ		02/18/2015 02:19	25		AS-14

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Start Date: 02/17/2015 15:41

Analysis Batch Number: 133669 End Date: 02/18/2015 03:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/18/2015 02:34	25		AS-14
ZZZZZ		02/18/2015 02:50	25		AS-14
CCV 180-133669/45		02/18/2015 03:06	1		AS-14
CCB 180-133669/46		02/18/2015 03:21	1		AS-14

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Start Date: 03/11/2015 10:48

Analysis Batch Number: 135268 End Date: 03/12/2015 05:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
RINSE 180-135268/1		03/11/2015 10:48	1		AS-14
ICV 180-135268/2		03/11/2015 11:04	1	03-11-201502.0000.d	AS-14
CCV 180-135268/3		03/11/2015 11:19	1		AS-14
CCB 180-135268/4		03/11/2015 11:35	1		AS-14
ZZZZZ		03/11/2015 11:50	1		AS-14
ZZZZZ		03/11/2015 12:06	1		AS-14
ZZZZZ		03/11/2015 13:03	250		AS-14
ZZZZZ		03/11/2015 13:18	250		AS-14
ZZZZZ		03/11/2015 13:34	250		AS-14
ZZZZZ		03/11/2015 13:49	2500		AS-14
ZZZZZ		03/11/2015 14:05	2.5		AS-14
ZZZZZ		03/11/2015 14:20	25		AS-14
ZZZZZ		03/11/2015 14:36	100		AS-14
ZZZZZ		03/11/2015 14:52	1000		AS-14
CCV 180-135268/15		03/11/2015 15:07	1		AS-14
CCB 180-135268/16		03/11/2015 15:23	1		AS-14
ZZZZZ		03/11/2015 15:38	10		AS-14
ZZZZZ		03/11/2015 15:54	10		AS-14
ZZZZZ		03/11/2015 16:09	10		AS-14
ZZZZZ		03/11/2015 16:25	100		AS-14
ZZZZZ		03/11/2015 16:40	100		AS-14
ZZZZZ		03/11/2015 16:56	100		AS-14
ZZZZZ		03/11/2015 17:12	50		AS-14
ZZZZZ		03/11/2015 17:27	500		AS-14
ZZZZZ		03/11/2015 17:43	10		AS-14
ZZZZZ		03/11/2015 17:58	100		AS-14
CCV 180-135268/27		03/11/2015 18:14	1	03-11-201527.0000.d	AS-14
CCB 180-135268/28		03/11/2015 18:29	1	03-11-201528.0000.d	AS-14
ZZZZZ		03/11/2015 18:45	25		AS-14
ZZZZZ		03/11/2015 19:00	250		AS-14
ZZZZZ		03/11/2015 19:16	1		AS-14
LCS 180-135268/32		03/11/2015 19:32	1	03-11-201532.0000.d	AS-14
MB 180-135268/33		03/11/2015 19:47	1	03-11-201533.0000.d	AS-14
180-41935-3	HD-COD-SW-8-0/1-0	03/11/2015 20:03	1	03-11-201534.0000.d	AS-14
180-41935-10	HD-COD-SW-16-0/1-0	03/11/2015 20:18	1	03-11-201535.0000.d	AS-14
180-41935-13	HD-COD-SW-26-0/1-0	03/11/2015 20:34	1	03-11-201536.0000.d	AS-14
180-41935-14	HD-COD-SW-27-0/1-0	03/11/2015 20:49	1	03-11-201537.0000.d	AS-14
180-41935-16	HD-COD-SW-29-0/1-0	03/11/2015 21:05	1	03-11-201538.0000.d	AS-14
CCV 180-135268/39		03/11/2015 21:21	1	03-11-201539.0000.d	AS-14
CCB 180-135268/40		03/11/2015 21:36	1	03-11-201540.0000.d	AS-14

300.0

HPLC/IC ANALYSIS RUN LOG

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: CHIC25 Start Date: 03/11/2015 10:48

Analysis Batch Number: 135268 End Date: 03/12/2015 05:38

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
180-41935-11	HD-COD-SW-17-0/1-0	03/11/2015 21:52	1	03-11-201541.0000.d	AS-14
180-41935-11 MS	HD-COD-SW-17-0/1-0 MS	03/11/2015 22:07	1	03-11-201542.0000.d	AS-14
180-41935-11 MSD	HD-COD-SW-17-0/1-0 MSD	03/11/2015 22:23	1	03-11-201543.0000.d	AS-14
180-41935-2	HD-COD-SW-7-0/1-0	03/11/2015 22:38	1	03-11-201544.0000.d	AS-14
180-41935-2 MS	HD-COD-SW-7-0/1-0 MS	03/11/2015 22:54	1	03-11-201545.0000.d	AS-14
180-41935-2 MSD	HD-COD-SW-7-0/1-0 MSD	03/11/2015 23:09	1	03-11-201546.0000.d	AS-14
180-41935-1	HD-COD-SW-6-0/1-0	03/11/2015 23:25	1	03-11-201547.0000.d	AS-14
180-41935-1	HD-COD-SW-6-0/1-0	03/11/2015 23:41	10	03-11-201548.0000.d	AS-14
180-41935-17	HD-QC1-0/1-1	03/11/2015 23:56	1	03-11-201549.0000.d	AS-14
180-41935-17	HD-QC1-0/1-1	03/12/2015 00:12	10	03-11-201550.0000.d	AS-14
CCV 180-135268/51		03/12/2015 00:27	1	03-11-201551.0000.d	AS-14
CCB 180-135268/52		03/12/2015 00:43	1	03-11-201552.0000.d	AS-14
180-41935-5	HD-COD-SW-10-0/1-0	03/12/2015 00:58	1	03-11-201553.0000.d	AS-14
180-41935-5	HD-COD-SW-10-0/1-0	03/12/2015 01:14	10	03-11-201554.0000.d	AS-14
180-41935-6	HD-COD-SW-11-0/1-0	03/12/2015 01:29	1	03-11-201555.0000.d	AS-14
180-41935-6	HD-COD-SW-11-0/1-0	03/12/2015 01:45	10	03-11-201556.0000.d	AS-14
180-41935-7	HD-COD-SW-12-0/1-0	03/12/2015 02:01	1	03-11-201557.0000.d	AS-14
180-41935-7	HD-COD-SW-12-0/1-0	03/12/2015 02:16	10	03-11-201558.0000.d	AS-14
180-41935-9	HD-COD-SW-15-0/1-0	03/12/2015 02:32	1	03-11-201559.0000.d	AS-14
180-41935-9	HD-COD-SW-15-0/1-0	03/12/2015 02:47	10	03-11-201560.0000.d	AS-14
180-41935-12	HD-COD-SW-20-0/1-0	03/12/2015 03:03	1	03-11-201561.0000.d	AS-14
180-41935-12	HD-COD-SW-20-0/1-0	03/12/2015 03:18	10	03-11-201562.0000.d	AS-14
CCV 180-135268/63		03/12/2015 03:34	1	03-11-201563.0000.d	AS-14
CCB 180-135268/64		03/12/2015 03:50	1	03-11-201564.0000.d	AS-14
180-41935-8	HD-COD-SW-13-0/1-0	03/12/2015 04:05	1	03-11-201565.0000.d	AS-14
180-41935-4	HD-COD-SW-9-0/1-0	03/12/2015 04:21	1	03-11-201566.0000.d	AS-14
180-41935-4	HD-COD-SW-9-0/1-0	03/12/2015 04:36	5	03-11-201567.0000.d	AS-14
180-41935-15	HD-COD-SW-28-0/1-0	03/12/2015 04:52	1	03-11-201568.0000.d	AS-14
180-41935-15	HD-COD-SW-28-0/1-0	03/12/2015 05:07	5	03-11-201569.0000.d	AS-14
CCV 180-135268/70		03/12/2015 05:23	1	03-11-201570.0000.d	AS-14
CCB 180-135268/71		03/12/2015 05:38	1	03-11-201571.0000.d	AS-14

300.0

METALS

COVER PAGE
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41935-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-COD-SW-6-0/1-0	180-41935-1
HD-COD-SW-7-0/1-0	180-41935-2
HD-COD-SW-8-0/1-0	180-41935-3
HD-COD-SW-9-0/1-0	180-41935-4
HD-COD-SW-10-0/1-0	180-41935-5
HD-COD-SW-11-0/1-0	180-41935-6
HD-COD-SW-12-0/1-0	180-41935-7
HD-COD-SW-13-0/1-0	180-41935-8
HD-COD-SW-15-0/1-0	180-41935-9
HD-COD-SW-16-0/1-0	180-41935-10
HD-COD-SW-17-0/1-0	180-41935-11
HD-COD-SW-20-0/1-0	180-41935-12
HD-COD-SW-26-0/1-0	180-41935-13
HD-COD-SW-27-0/1-0	180-41935-14
HD-COD-SW-28-0/1-0	180-41935-15
HD-COD-SW-29-0/1-0	180-41935-16
HD-QC1-0/1-1	180-41935-17

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-41935-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:25

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	34000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3500	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	6800	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	87000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-41935-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 12:25

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	21000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6700	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	6000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	29000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-41935-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 08:50

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	20000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	5500	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	33000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-41935-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 12:50

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	32000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	7000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	7600	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	51000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-41935-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 10:05

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	65000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6600	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	11000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	100000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-41935-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 13:15

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	65000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	2700	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	15000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	60000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-41935-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 13:40

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	63000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	11000	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	11000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	130000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-41935-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 10:15

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	21000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5800	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	5300	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	35000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-41935-9

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 14:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	74000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5400	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	15000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	56000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-41935-10

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 10:40

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	35000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6100	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	8400	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	37000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-41935-11

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	24000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	4900	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	5300	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	36000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-41935-12

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:30

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	37000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	3600	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	7100	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	90000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-41935-13

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:55

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	22000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6400	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	6100	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	30000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-41935-14

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 14:10

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	23000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6200	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	6300	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	32000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-41935-15

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 13:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	38000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6700	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	8900	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	56000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-41935-16

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 09:25

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	20000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	6100	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	5800	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	31000	100	3.8	ug/L			1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41935-17

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 08:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	76000	100	2.8	ug/L		B	1	6020A
7440-09-7	Potassium	5600	100	5.8	ug/L			1	6020A
7439-95-4	Magnesium	15000	100	1.2	ug/L			1	6020A
7440-23-5	Sodium	57000	100	3.8	ug/L			1	6020A

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

ICV Source: MICVX_00030 Concentration Units: ug/L

CCV Source: MCCV1X_00073

Analyte	ICV 180-136203/5 03/20/2015 10:51				CCV 180-136203/10 03/20/2015 11:26				CCV 180-136203/22 03/20/2015 12:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	39800		40000	99	49300		50000	99	48900		50000	98
Magnesium	39300		40000	98	50300		50000	101	48600		50000	97
Potassium	39600		40000	99	49100		50000	98	47900		50000	96
Sodium	40200		40000	100	50400		50000	101	48800		50000	98

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

ICV Source: MICVX_00030 Concentration Units: ug/L

CCV Source: MCCV1X_00073

Analyte	CCV 180-136203/34 03/20/2015 13:05				CCV 180-136203/46 03/20/2015 13:57							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	48200		50000	96	48800		50000	98				
Magnesium	47800		50000	96	48200		50000	96				
Potassium	47600		50000	95	47800		50000	96				
Sodium	47700		50000	95	48300		50000	97				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Method: 6020A Instrument ID: M

Lab Sample ID: CRI 180-136203/7 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00062

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	105		105	70-130
Potassium	100	106		106	70-130
Magnesium	100	98.7	J	99	70-130
Sodium	100	98.7	J	99	70-130

Lab Sample ID: CRI 180-136203/66 Concentration Units: ug/L

CRQL Check Standard Source: MCRIX_00062

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	100	102		102	70-130
Potassium	100	105		105	70-130
Magnesium	100	96.4	J	96	70-130
Sodium	100	81.5	J	81	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 180-136203/6 03/20/2015 11:08		CCB1 180-136203/11 03/20/2015 11:32		CCB2 180-136203/23 03/20/2015 12:23		CCB3 180-136203/35 03/20/2015 13:12	
		Found	C	Found	C	Found	C	Found	C
Calcium	100	100	U	100	U	100	U	100	U
Magnesium	100	100	U	100	U	100	U	100	U
Potassium	100	100	U	7.33	J	100	U	100	U
Sodium	100	100	U	100	U	100	U	100	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB4 180-136203/47 03/20/2015 14:03							
		Found	C	Found	C	Found	C	Found	C
Calcium	100	100	U						
Magnesium	100	100	U						
Potassium	100	100	U						
Sodium	100	100	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 180-135569/1-A

Instrument Code: M Batch No.: 136203

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	3.89	J		6020A
7440-09-7	Potassium	100	U		6020A
7439-95-4	Magnesium	100	U		6020A
7440-23-5	Sodium	100	U		6020A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: ICSA 180-136203/8 Instrument ID: M

Lab File ID: M50320A.xml ICS Source: MICSAX_00064

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**100000**	**99710**	**100**
Magnesium	**100000**	**97440**	**97**
Potassium	**100000**	**97630**	**98**
Sodium	**100000**	**99000**	**99**
Aluminum	*100000*	*98650*	*99*
Antimony		*0.0420*	
Arsenic		*0.0900*	
Barium		*0.147*	
Beryllium		*0.0680*	
Boron		*-5.45*	
Cadmium		*0.148*	
Chromium		*0.388*	
Cobalt		*0.0250*	
Copper		*1.21*	
Iron	*100000*	*99080*	*99*
Lead		*0.272*	
Manganese		*0.517*	
Molybdenum	*2000*	*2105*	*105*
Nickel		*-0.575*	
Selenium		*-0.108*	
Silicon		*33.5*	
Silver		*-0.0020*	
Strontium		*0.690*	
Thallium		*0.0070*	
Tin		*0.0310*	
Titanium	*2000*	*1987*	*99*
Vanadium		*-0.198*	
Zinc		*2.40*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Lab Sample ID: ICSAB 180-136203/9 Instrument ID: M

Lab File ID: M50320A.xml ICS Source: MICSABX_00068

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Calcium	**100000**	**100117**	**100**
Magnesium	**100000**	**98833**	**99**
Potassium	**100000**	**97733**	**98**
Sodium	**100000**	**100837**	**101**
Aluminum	*100000*	*100833*	*101*
Antimony	*20.0*	*20.1*	*101*
Arsenic	*20.0*	*20.7*	*103*
Barium	*20.0*	*19.6*	*98*
Beryllium	*20.0*	*21.3*	*107*
Boron	*50.0*	*40.8*	*82*
Cadmium	*20.0*	*20.9*	*104*
Chromium	*20.0*	*20.3*	*101*
Cobalt	*20.0*	*20.0*	*100*
Copper	*20.0*	*20.7*	*104*
Iron	*100000*	*100250*	*100*
Lead	*20.0*	*21.0*	*105*
Manganese	*22.5*	*19.9*	*88*
Molybdenum	*2000*	*2132*	*107*
Nickel	*20.0*	*18.9*	*95*
Selenium	*50.0*	*52.2*	*104*
Silicon	*500*	*526*	*105*
Silver	*20.0*	*19.7*	*98*
Strontium	*25.0*	*20.3*	*81*
Thallium	*20.0*	*19.9*	*100*
Tin	*100*	*100*	*100*
Titanium	*2000*	*2019*	*101*
Vanadium	*20.0*	*19.6*	*98*
Zinc	*25.0*	*22.7*	*91*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-COD-SW-17-0/1-0 MS Lab ID: 180-41935-11 MS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	71300		24000		50000	95	75-125		6020A
Potassium	49200		4900		50000	89	75-125		6020A
Magnesium	47400		5300		50000	84	75-125		6020A
Sodium	80100		36000		50000	89	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: HD-COD-SW-17-0/1-0 MSD Lab ID: 180-41935-11 MSD

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	73400		50000	100	75-125	3	20		6020A
Potassium	50600		50000	91	75-125	3	20		6020A
Magnesium	48500		50000	86	75-125	2	20		6020A
Sodium	81700		50000	92	75-125	2	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: HD-COD-SW-17-0/1-0 PDS Lab ID: 180-41935-11 PDS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	72900		24000		50000	98	75-125		6020A
Potassium	51300		4900		50000	93	75-125		6020A
Magnesium	49300		5300		50000	88	75-125		6020A
Sodium	80100		36000		50000	89	75-125		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 180-135569/2-A

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

Sample Matrix: Water LCS Source: MTAPITTMSA_00023

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	45600		91	80	120		6020A
Potassium	50000	45400		91	80	120		6020A
Magnesium	50000	43800		88	80	120		6020A
Sodium	50000	44100		88	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 180-41935-11

SDG No:

Lab Name: TestAmerica Pittsburgh Job No: 180-41935-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	24000		23900		1.1		6020A
Potassium	4900		4850		1.5		6020A
Magnesium	5300		5600		5.3		6020A
Sodium	36000		37700		5.9		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41935-1

SDG Number:

Matrix: Water Instrument ID: M

Method: 6020A MDL Date: 01/23/2010 18:33

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Pittsburgh Job Number: 180-41935-1

SDG Number:

Matrix: Water Instrument ID: M

Method: 6020A XMDL Date: 01/23/2010 18:33

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	44	100	2.8374
Magnesium	26	100	1.1665
Potassium	39	100	5.823
Sodium	23	100	3.8135

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Pittsburgh Job No: 180-41935-1

SDG No.:

Instrument ID: M Date: 03/14/2011 22:35

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		1500000	6020A
Potassium		450000	6020A
Magnesium		1500000	6020A
Sodium		450000	6020A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 180-135569/1-A	03/16/2015 09:13	135569		50	50
LCS 180-135569/2-A	03/16/2015 09:13	135569		50	50
180-41935-1	03/16/2015 09:13	135569		50	50
180-41935-2	03/16/2015 09:13	135569		50	50
180-41935-3	03/16/2015 09:13	135569		50	50
180-41935-4	03/16/2015 09:13	135569		50	50
180-41935-5	03/16/2015 09:13	135569		50	50
180-41935-6	03/16/2015 09:13	135569		50	50
180-41935-7	03/16/2015 09:13	135569		50	50
180-41935-8	03/16/2015 09:13	135569		50	50
180-41935-9	03/16/2015 09:13	135569		50	50
180-41935-10	03/16/2015 09:13	135569		50	50
180-41935-11	03/16/2015 09:13	135569		50	50
180-41935-11 MS	03/16/2015 09:13	135569		50	50
180-41935-11 MSD	03/16/2015 09:13	135569		50	50
180-41935-12	03/16/2015 09:13	135569		50	50
180-41935-13	03/16/2015 09:13	135569		50	50
180-41935-14	03/16/2015 09:13	135569		50	50
180-41935-15	03/16/2015 09:13	135569		50	50
180-41935-16	03/16/2015 09:13	135569		50	50
180-41935-17	03/16/2015 09:13	135569		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: M Analysis Method: 6020A

Start Date: 03/20/2015 08:29 End Date: 03/20/2015 16:09

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na																						
ITUNE 180-136203/1			08:29																										
STD1 180-136203/2 IC	1		10:40	X	X	X	X																						
STD2 180-136203/3 IC	1		10:44	X	X	X	X																						
STD3 180-136203/4 IC	1		10:47	X	X	X	X																						
ICV 180-136203/5	1		10:51	X	X	X	X																						
ICB 180-136203/6	1		11:08	X	X	X	X																						
CRI 180-136203/7	1		11:12	X	X	X	X																						
ICSA 180-136203/8	1		11:15	X	X	X	X																						
ICSAB 180-136203/9	1		11:19	X	X	X	X																						
CCV 180-136203/10	1		11:26	X	X	X	X																						
CCB1 180-136203/11	1		11:32	X	X	X	X																						
MB 180-135569/1-A	1	R	11:36	X	X	X	X																						
LCS 180-135569/2-A	1	R	11:40	X	X	X	X																						
180-41935-1	1	T	11:44	X	X	X	X																						
180-41935-2	1	T	11:47	X	X	X	X																						
180-41935-3	1	T	11:51	X	X	X	X																						
180-41935-4	1	T	11:55	X	X	X	X																						
180-41935-5	1	T	11:59	X	X	X	X																						
180-41935-6	1	T	12:05	X	X	X	X																						
180-41935-7	1	T	12:09	X	X	X	X																						
180-41935-8	1	T	12:13	X	X	X	X																						
CCV 180-136203/22	1		12:17	X	X	X	X																						
CCB2 180-136203/23	1		12:23	X	X	X	X																						
180-41935-9	1	T	12:27	X	X	X	X																						
180-41935-10	1	T	12:31	X	X	X	X																						
180-41935-11	1	T	12:35	X	X	X	X																						
180-41935-11 SD	5	T	12:38	X	X	X	X																						
180-41935-11 MS	1	T	12:42	X	X	X	X																						
180-41935-11 MSD	1	T	12:46	X	X	X	X																						
180-41935-11 PDS	1	T	12:50	X	X	X	X																						
180-41935-12	1	T	12:54	X	X	X	X																						
180-41935-13	1	T	12:57	X	X	X	X																						
180-41935-14	1	T	13:01	X	X	X	X																						
CCV 180-136203/34	1		13:05	X	X	X	X																						
CCB3 180-136203/35	1		13:12	X	X	X	X																						
180-41935-15	1	T	13:15	X	X	X	X																						
180-41935-16	1	T	13:19	X	X	X	X																						
180-41935-17	1	T	13:23	X	X	X	X																						
ZZZZZZ			13:30																										
ZZZZZZ			13:34																										
ZZZZZZ			13:38																										
ZZZZZZ			13:41																										

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: M Analysis Method: 6020A

Start Date: 03/20/2015 08:29 End Date: 03/20/2015 16:09

Lab Sample Id	D/F	Type	Time	Analytes																									
				Ca	K	Mg	Na																						
ZZZZZZ			13:45																										
ZZZZZZ			13:49																										
ZZZZZZ			13:53																										
CCV 180-136203/46	1		13:57	X	X	X	X																						
CCB4 180-136203/47	1		14:03	X	X	X	X																						
ZZZZZZ			14:07																										
ZZZZZZ			14:11																										
ZZZZZZ			14:15																										
ZZZZZZ			14:19																										
ZZZZZZ			14:22																										
ZZZZZZ			14:26																										
ZZZZZZ			14:30																										
ZZZZZZ			14:34																										
ZZZZZZ			14:38																										
ZZZZZZ			14:41																										
CCV 180-136203/58			14:45																										
CCB5 180-136203/59			14:52																										
ZZZZZZ			14:56																										
ZZZZZZ			14:59																										
ZZZZZZ			15:03																										
ZZZZZZ			15:07																										
ZZZZZZ			15:11																										
ZZZZZZ			15:15																										
CRI 180-136203/66	1		15:25	X	X	X	X																						
CCV 180-136203/67			15:29																										
CCB6 180-136203/68			15:36																										
ZZZZZZ			15:40																										
ZZZZZZ			15:44																										
ZZZZZZ			15:47																										
ZZZZZZ			15:51																										
ZZZZZZ			15:55																										
ZZZZZZ			15:59																										
CCV 180-136203/75			16:03																										
CCB7 180-136203/76			16:09																										

Prep Types:
R = Total Recoverable
T = Total/NA

FORM XIII-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

ICP-MS Instrument ID: M Start Date: 03/20/2015 End Date: 03/20/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li-6	Q	Element Sc	Q	Element Y-89	Q	Element Rh-103	Q	Element In	Q
STD1 180-136203/2 IC	10:40	100		100		100		100		100	
STD2 180-136203/3 IC	10:44	95		98		89		85		86	
STD3 180-136203/4 IC	10:47	92		96		88		89		87	
ICV 180-136203/5	10:51	95		95		89		86		86	
ICB 180-136203/6	11:08	108		110		104		105		103	
CRI 180-136203/7	11:12	108		111		104		103		102	
ICSA 180-136203/8	11:15	77		77		75		71		74	
ICSAB 180-136203/9	11:19	77		78		75		71		74	
CCV 180-136203/10	11:26	92		93		84		82		81	
CCB1 180-136203/11	11:32	102		99		94		94		92	
MB 180-135569/1-A	11:36	103		103		97		96		95	
LCS 180-135569/2-A	11:40	82		74		73		71		74	
180-41935-1	11:44	83		72		73		72		74	
180-41935-2	11:47	80		69	*	72		69	*	72	
180-41935-3	11:51	78		67	*	72		69	*	72	
180-41935-4	11:55	79		70		72		71		74	
180-41935-5	11:59	77		69	*	71		69	*	73	
180-41935-6	12:05	76		68	*	70		69	*	72	
180-41935-7	12:09	74		66	*	69	*	68	*	71	
180-41935-8	12:13	78		66	*	70		68	*	71	
CCV 180-136203/22	12:17	90		85		78		76		77	
CCB2 180-136203/23	12:23	102		97		91		91		89	
180-41935-9	12:27	76		66	*	68	*	67	*	70	
180-41935-10	12:31	74		63	*	78		66	*	69	*
180-41935-11	12:35	76		63	*	68	*	67	*	70	
180-41935-11 SD	12:38	80		70		71		71		72	
180-41935-11 MS	12:42	70		61	*	65	*	62	*	66	*
180-41935-11 MSD	12:46	71		62	*	65	*	63	*	66	*
180-41935-11 PDS	12:50	73		62	*	67	*	63	*	67	*
180-41935-12	12:54	77		65	*	67	*	66	*	69	*
180-41935-13	12:57	75		65	*	67	*	66	*	68	*
180-41935-14	13:01	75		63	*	67	*	65	*	68	*
CCV 180-136203/34	13:05	93		85		77		75		75	
CCB3 180-136203/35	13:12	104		98		90		90		88	
180-41935-15	13:15	77		67	*	68	*	67	*	69	*
180-41935-16	13:19	74		64	*	68	*	65	*	68	*
180-41935-17	13:23	73		63	*	66	*	65	*	68	*
CCV 180-136203/46	13:57	91		85		79		77		77	
CCB4 180-136203/47	14:03	105		100		90		91		88	
CRI 180-136203/66	15:25	111		106		101		98		93	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

ICP-MS Instrument ID: M Start Date: 03/20/2015 End Date: 03/20/2015

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD1 180-136203/2 IC	10:40	100		100		100					
STD2 180-136203/3 IC	10:44	89		89		94					
STD3 180-136203/4 IC	10:47	87		87		92					
ICV 180-136203/5	10:51	87		87		87					
ICB 180-136203/6	11:08	102		101		104					
CRI 180-136203/7	11:12	100		99		103					
ICSA 180-136203/8	11:15	79		79		88					
ICSAB 180-136203/9	11:19	78		79		81					
CCV 180-136203/10	11:26	84		83		82					
CCB1 180-136203/11	11:32	91		90		90					
MB 180-135569/1-A	11:36	93		93		93					
LCS 180-135569/2-A	11:40	80		80		76					
180-41935-1	11:44	80		80		76					
180-41935-2	11:47	78		78		76					
180-41935-3	11:51	78		78		77					
180-41935-4	11:55	80		80		78					
180-41935-5	11:59	79		79		76					
180-41935-6	12:05	79		79		77					
180-41935-7	12:09	78		78		75					
180-41935-8	12:13	77		77		75					
CCV 180-136203/22	12:17	80		83		79					
CCB2 180-136203/23	12:23	89		88		87					
180-41935-9	12:27	76		77		74					
180-41935-10	12:31	77		77		74					
180-41935-11	12:35	77		76		75					
180-41935-11 SD	12:38	76		76		78					
180-41935-11 MS	12:42	74		75		72					
180-41935-11 MSD	12:46	74		75		72					
180-41935-11 PDS	12:50	74		75		72					
180-41935-12	12:54	75		76		73					
180-41935-13	12:57	74		74		74					
180-41935-14	13:01	74		74		72					
CCV 180-136203/34	13:05	77		77		77					
CCB3 180-136203/35	13:12	87		87		86					
180-41935-15	13:15	75		76		74					
180-41935-16	13:19	75		75		75					
180-41935-17	13:23	76		76		74					
CCV 180-136203/46	13:57	80		79		80					
CCB4 180-136203/47	14:03	87		86		85					
CRI 180-136203/66	15:25	91		90		92					

Dilution Corrected Concentrations

STD1 1503807 INT STD 3/20/2015 10:40:59 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	99.778%	-0.000	-1.572	0.314	0.000	-1.759	-0.064	-0.099
2	10:41:37	100.842%	-0.000	0.646	0.744	0.000	0.023	0.000	-0.017
3	10:41:56	99.380%	-0.000	0.925	-1.058	0.000	1.737	0.064	0.115
x		100.000%	-0.000	-0.000	-0.000	0.000	-0.000	0.000	0.000
σ		0.756%	0.000	1.368	0.941	0.000	1.748	0.064	0.108
%RSD		0.756	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	0.040	0.418	0.000	0.731	-5.651	0.273	102.035%	-0.021
2	10:41:37	0.002	0.214	0.000	0.389	8.512	0.430	98.145%	0.011
3	10:41:56	-0.042	-0.632	0.000	-1.120	-2.861	-0.703	99.820%	0.010
x		0.000	-0.000	0.000	0.000	-0.000	0.000	100.000%	0.000
σ		0.041	0.556	0.000	0.985	7.502	0.614	1.951%	0.018
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	1.951	0.000

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	0.025	-0.003	-0.014	-0.217	-0.681	-0.003	-0.003	-0.033
2	10:41:37	-0.014	-0.023	0.016	0.718	-0.646	-0.001	-0.010	-0.015
3	10:41:56	-0.012	0.026	-0.002	-0.501	1.327	0.004	0.013	0.048
x		-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	-0.000
σ		0.022	0.024	0.015	0.638	1.149	0.003	0.012	0.043
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	0.052	0.015	-0.043	-0.035	-0.211	-0.088	0.000	-0.000
2	10:41:37	-0.060	-0.052	-0.030	0.012	0.099	0.018	0.000	0.001
3	10:41:56	0.007	0.037	0.073	0.022	0.111	0.071	0.000	-0.000
x		0.000	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000
σ		0.056	0.046	0.063	0.031	0.183	0.081	0.000	0.001
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	100.558%	-0.003	-0.000	100.158%	-0.014	-0.018	-0.019	-0.014
2	10:41:37	99.816%	0.001	0.000	100.062%	-0.008	-0.004	-0.024	-0.020
3	10:41:56	99.627%	0.001	0.000	99.780%	0.022	0.021	0.043	0.034
x		100.000%	-0.000	-0.000	100.000%	0.000	0.000	-0.000	0.000
σ		0.492%	0.002	0.000	0.197%	0.019	0.020	0.037	0.030
%RSD		0.492	0.000	0.000	0.197	0.000	0.000	0.000	0.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	99.690%	0.000	0.002	0.000	0.002	0.003	99.672%	99.104%
2	10:41:37	100.145%	0.029	-0.010	-0.002	0.002	0.007	99.659%	100.099%
3	10:41:56	100.164%	-0.029	0.008	0.002	-0.005	-0.009	100.669%	100.797%
x		100.000%	0.000	-0.000	-0.000	-0.000	0.000	100.000%	100.000%
σ		0.268%	0.029	0.009	0.002	0.004	0.008	0.579%	0.851%
%RSD		0.268	0.000	0.000	0.000	0.000	0.000	0.579	0.851

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:41:18	-0.005	-0.001	-0.002	-0.005	0.005	99.287%
2	10:41:37	0.004	0.002	0.012	-0.024	-0.007	99.155%
3	10:41:56	0.001	-0.001	-0.010	0.029	0.002	101.558%
x		-0.000	0.000	-0.000	-0.000	0.000	100.000%
σ		0.004	0.001	0.011	0.027	0.006	1.351%
%RSD		0.000	0.000	0.000	0.000	0.000	1.351

STD2 1487947 3/20/2015 10:44:16 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:16	95.727%	198.100	2.399	3.835	0.000	100900.000	99670.000	98970.000
2	10:44:35	95.131%	195.900	0.169	4.322	0.000	100500.000	101700.000	102900.000
3	10:44:54	95.180%	206.000	3.032	3.503	0.000	98550.000	98610.000	98110.000
x		95.346%	200.000	1.867	3.887	0.000	100000.000	100000.000	100000.000
σ		0.331%	5.323	1.504	0.412	0.000	1266.000	1579.000	2568.000
%RSD		0.347	2.662	80.570	10.590	0.000	1.266	1.579	2.568
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:16	987.200	49.980	0.000	98550.000	98820.000	98870.000	100.923%	0.067
2	10:44:35	1024.000	51.010	0.000	99900.000	100700.000	101700.000	97.521%	-0.047
3	10:44:54	989.100	50.110	0.000	101500.000	100500.000	99470.000	94.765%	0.045
x		1000.000	50.370	0.000	100000.000	100000.000	100000.000	97.736%	0.021
σ		20.620	0.559	0.000	1500.000	1028.000	1466.000	3.085%	0.061
%RSD		2.062	1.111	0.000	1.500	1.028	1.466	3.156	283.200
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:16	197.600	196.900	991.700	49520.000	49200.000	199.100	199.000	200.000
2	10:44:35	200.400	200.600	997.500	49480.000	49600.000	197.300	196.700	195.700
3	10:44:54	201.900	202.500	1011.000	51000.000	51200.000	203.700	204.300	204.300
x		200.000	200.000	1000.000	50000.000	50000.000	200.000	200.000	200.000
σ		2.189	2.866	9.744	866.600	1059.000	3.294	3.921	4.313
%RSD		1.094	1.433	0.974	1.733	2.118	1.647	1.961	2.157
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:16	197.300	198.400	199.300	199.100	202.500	203.000	0.000	199.800
2	10:44:35	200.000	200.200	199.300	200.200	199.700	201.300	0.000	200.900
3	10:44:54	202.700	201.400	201.400	200.700	197.800	195.700	0.000	199.300
x		200.000	200.000	200.000	200.000	200.000	200.000	0.000	200.000
σ		2.685	1.480	1.251	0.804	2.344	3.830	0.000	0.808
%RSD		1.342	0.740	0.625	0.402	1.172	1.915	0.000	0.404
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:16	90.423%	0.139	0.093	86.687%	199.300	199.200	198.800	199.700
2	10:44:35	89.074%	0.074	0.098	85.248%	200.700	200.400	201.600	200.200
3	10:44:54	88.504%	0.090	0.075	84.252%	200.000	200.500	199.600	200.100
x		89.334%	0.101	0.089	85.396%	200.000	200.000	200.000	200.000
σ		0.986%	0.034	0.012	1.224%	0.690	0.721	1.443	0.226
%RSD		1.104	33.240	13.300	1.434	0.345	0.360	0.721	0.113
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:44:16	87.660%	0.050	0.205	0.167	198.000	198.400	89.896%	89.822%
2	10:44:35	85.463%	0.045	0.166	0.145	199.300	200.900	89.635%	88.343%
3	10:44:54	84.609%	0.038	0.169	0.158	202.700	200.700	88.173%	87.469%
x		85.910%	0.044	0.180	0.157	200.000	200.000	89.234%	88.545%
σ		1.574%	0.006	0.022	0.011	2.395	1.402	0.929%	1.190%
%RSD		1.832	13.740	12.050	6.943	1.198	0.701	1.041	1.344
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	10:44:16	194.200	194.100	193.300	193.200	193.200	96.850%		
2	10:44:35	201.200	200.900	201.000	201.500	200.800	93.420%		
3	10:44:54	204.600	205.000	205.800	205.300	206.000	90.211%		
x		200.000	200.000	200.000	200.000	200.000	93.494%		
σ		5.308	5.525	6.287	6.188	6.448	3.320%		
%RSD		2.654	2.762	3.144	3.094	3.224	3.551		

STD3 1487948 3/20/2015 10:47:53 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	95.046%	0.066	196.300	197.100	0.000	53.590	43.500	43.280
2	10:48:12	93.034%	0.135	201.100	198.800	0.000	52.770	41.110	40.620
3	10:48:31	89.016%	0.035	202.600	204.100	0.000	51.380	40.080	37.470
x		92.366%	0.079	200.000	200.000	0.000	52.580	41.560	40.450
σ		3.070%	0.051	3.301	3.634	0.000	1.113	1.756	2.909
%RSD		3.324	64.880	1.650	1.817	0.000	2.118	4.224	7.191

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	29.130	10170.000	0.000	40.470	40.280	79.610	97.078%	202.500
2	10:48:12	27.900	9858.000	0.000	37.320	55.660	70.260	95.472%	200.100
3	10:48:31	30.230	9973.000	0.000	34.260	41.660	70.570	94.441%	197.400
x		29.090	10000.000	0.000	37.350	45.870	73.480	95.664%	200.000
σ		1.166	157.100	0.000	3.110	8.512	5.308	1.329%	2.568
%RSD		4.009	1.571	0.000	8.326	18.560	7.224	1.389	1.284

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	0.043	0.094	0.485	40.740	34.600	0.074	0.235	0.318
2	10:48:12	0.063	0.011	0.517	29.930	31.470	0.071	0.238	0.293
3	10:48:31	0.122	0.042	0.397	25.070	26.100	0.072	0.325	0.253
x		0.076	0.049	0.466	31.910	30.720	0.072	0.266	0.288
σ		0.041	0.042	0.062	8.022	4.295	0.001	0.051	0.032
%RSD		53.690	85.120	13.390	25.140	13.980	1.661	19.150	11.250

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	0.296	0.884	1.468	-0.074	-0.982	-0.003	0.000	0.108
2	10:48:12	0.221	1.192	0.988	0.089	-0.586	0.423	0.000	0.092
3	10:48:31	0.302	1.092	1.219	0.021	-0.477	0.032	0.000	0.103
x		0.273	1.056	1.225	0.012	-0.681	0.150	0.000	0.101
σ		0.045	0.157	0.240	0.082	0.266	0.237	0.000	0.008
%RSD		16.480	14.890	19.630	684.700	39.020	157.400	0.000	7.996

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	89.043%	198.000	197.600	89.186%	0.326	0.329	0.151	-0.458
2	10:48:12	88.372%	201.600	198.700	88.200%	0.335	0.362	0.159	-0.318
3	10:48:31	87.439%	200.400	203.700	88.542%	0.293	0.382	-0.005	-0.473
x		88.285%	200.000	200.000	88.643%	0.318	0.358	0.102	-0.416
σ		0.805%	1.811	3.256	0.501%	0.022	0.027	0.092	0.085
%RSD		0.912	0.905	1.628	0.565	6.914	7.444	90.770	20.530

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	85.882%	199.800	199.800	200.100	0.095	0.220	85.815%	85.204%
2	10:48:12	86.349%	200.300	201.000	200.400	0.183	0.253	87.299%	86.833%
3	10:48:31	87.281%	199.800	199.200	199.500	0.149	0.205	88.303%	87.768%
x		86.504%	200.000	200.000	200.000	0.142	0.226	87.139%	86.602%
σ		0.712%	0.294	0.918	0.445	0.044	0.025	1.252%	1.297%
%RSD		0.823	0.147	0.459	0.222	30.970	10.970	1.436	1.498

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:47:53	0.156	0.147	0.122	0.074	0.108	91.114%
2	10:48:12	0.127	0.140	0.116	0.113	0.111	91.788%
3	10:48:31	0.127	0.110	0.111	0.090	0.108	91.736%
x		0.137	0.133	0.116	0.092	0.109	91.546%
σ		0.017	0.020	0.006	0.019	0.001	0.375%
%RSD		12.460	14.770	4.813	20.870	1.176	0.410

ICV 1495536 3/20/2015 10:51:30 AM QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	95.841%	81.010	88.840	88.980	0.000	41190.000	40930.000	40340.000
2	10:51:49	97.581%	83.820	79.440	82.200	0.000	40120.000	39200.000	38700.000
3	10:52:08	92.530%	82.500	92.230	79.440	0.000	39280.000	38790.000	38980.000
x		95.317%	103.053%	108.547%	104.425%	0.000	100.496%	99.102%	98.345%
σ		2.566%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		2.692	1.704	7.635	5.878	0.000	2.385	2.863	2.226

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	415.200	3812.000	0.000	39810.000	39450.000	40090.000	96.861%	80.140
2	10:51:49	402.600	3704.000	0.000	39710.000	39750.000	39690.000	94.324%	81.180
3	10:52:08	407.000	3738.000	0.000	39360.000	39760.000	39490.000	93.217%	83.090
x		102.074%	93.786%	0.000	99.073%	99.135%	99.387%	94.801%	101.836%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.869%	n/a
%RSD		1.569	1.476	0.000	0.593	0.446	0.772	1.971	1.836

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	81.460	80.270	384.700	19760.000	19700.000	81.470	83.390	82.590
2	10:51:49	81.470	82.250	386.400	19880.000	19810.000	83.460	82.850	82.960
3	10:52:08	80.820	81.630	388.200	19890.000	19580.000	79.480	79.950	78.550
x		101.562%	101.727%	96.605%	99.203%	98.489%	101.838%	102.580%	101.706%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.461	1.247	0.455	0.371	0.568	2.438	2.258	3.008

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	83.210	82.440	81.480	82.100	80.240	81.560	0.000	77.730
2	10:51:49	82.970	82.770	82.470	81.220	80.660	83.840	0.000	78.300
3	10:52:08	80.580	78.800	78.480	79.940	82.550	82.300	0.000	77.670
x		102.817%	101.669%	101.010%	101.357%	101.439%	103.207%	0.000	97.374%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.768	2.712	2.574	1.338	1.514	1.408	0.000	0.446

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	89.760%	80.200	79.780	87.331%	78.840	78.950	78.300	79.250
2	10:51:49	88.174%	81.600	80.180	86.024%	79.080	79.000	78.330	78.930
3	10:52:08	87.697%	80.260	81.100	85.280%	78.780	79.170	78.800	78.280
x		88.544%	100.857%	100.442%	86.212%	98.624%	98.803%	98.096%	98.526%
σ		1.080%	n/a	n/a	1.038%	n/a	n/a	n/a	n/a
%RSD		1.220	0.977	0.845	1.205	0.201	0.147	0.361	0.627

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	86.896%	79.470	79.360	78.410	77.450	78.120	87.535%	86.150%
2	10:51:49	86.085%	78.630	79.660	79.550	79.050	79.210	87.450%	87.295%
3	10:52:08	85.845%	79.080	79.480	79.280	78.000	76.380	87.101%	87.407%
x		86.275%	98.824%	99.373%	98.849%	97.708%	97.377%	87.362%	86.951%
σ		0.551%	n/a	n/a	n/a	n/a	n/a	0.230%	0.695%
%RSD		0.638	0.534	0.186	0.754	1.041	1.833	0.263	0.800

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	10:51:30	84.200	83.530	83.720	81.110	82.230	88.047%
2	10:51:49	85.770	85.260	85.120	81.870	83.600	86.663%
3	10:52:08	86.780	86.440	86.470	84.880	85.560	85.935%
x		106.980%	106.343%	106.380%	103.275%	104.742%	86.881%
σ		n/a	n/a	n/a	n/a	n/a	1.073%
%RSD		1.518	1.719	1.617	2.417	1.998	1.235

ICB 3/20/2015 11:08:34 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:08:34	112.288%	-0.000	-10.160	-7.686	0.000	-8.312	0.556	0.002
2	11:08:54	108.785%	-0.000	-9.728	-5.958	0.000	-5.237	0.227	0.034
3	11:09:14	102.755%	-0.000	-10.790	-7.641	0.000	-3.245	0.297	0.219
x		107.942%	-0.000	-10.230	-7.095	0.000	-5.598	0.360	0.085
σ		4.822%	0.000	0.535	0.985	0.000	2.553	0.173	0.117
%RSD		4.467	0.000	5.227	13.880	0.000	45.600	48.210	137.100
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:08:34	0.142	1.061	0.000	6.221	9.164	-1.318	112.773%	-0.077
2	11:08:54	-0.038	0.739	0.000	5.151	9.594	-0.158	109.609%	-0.077
3	11:09:14	0.180	1.008	0.000	3.775	9.787	0.121	108.506%	0.029
x		0.095	0.936	0.000	5.049	9.515	-0.452	110.296%	-0.042
σ		0.117	0.172	0.000	1.226	0.319	0.763	2.215%	0.062
%RSD		122.800	18.430	0.000	24.280	3.354	169.000	2.008	147.800
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:08:34	-0.065	0.018	0.015	3.467	-1.485	0.000	0.009	0.070
2	11:08:54	0.018	0.025	-0.000	1.646	0.036	-0.004	0.009	0.017
3	11:09:14	0.034	0.003	0.017	0.445	0.267	-0.001	-0.019	0.002
x		-0.005	0.016	0.010	1.853	-0.394	-0.002	-0.000	0.030
σ		0.053	0.011	0.009	1.521	0.952	0.002	0.016	0.035
%RSD		1149.000	70.850	89.200	82.110	241.400	121.900	4738.000	118.700
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:08:34	-0.016	-0.093	0.129	-0.066	-0.170	-0.003	0.000	0.002
2	11:08:54	0.041	-0.138	0.062	-0.097	0.084	-0.420	0.000	0.002
3	11:09:14	-0.016	-0.015	0.266	-0.200	0.032	-0.573	0.000	-0.002
x		0.003	-0.082	0.152	-0.121	-0.018	-0.332	0.000	0.000
σ		0.033	0.063	0.104	0.070	0.134	0.295	0.000	0.002
%RSD		1244.000	76.100	68.360	57.870	749.100	88.810	0.000	585.800
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:08:34	104.519%	0.021	0.023	104.955%	-0.038	-0.040	0.161	0.114
2	11:08:54	104.217%	0.021	0.011	105.213%	-0.031	-0.044	0.064	0.064
3	11:09:14	104.277%	0.009	0.024	103.759%	-0.027	-0.044	0.048	0.048
x		104.337%	0.017	0.019	104.642%	-0.032	-0.043	0.091	0.075
σ		0.160%	0.007	0.007	0.776%	0.006	0.002	0.061	0.034
%RSD		0.153	40.660	35.980	0.741	18.040	4.661	67.320	45.550
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:08:34	101.933%	-0.017	-0.004	-0.006	0.023	0.010	100.201%	99.694%
2	11:08:54	103.980%	0.005	-0.005	0.024	0.002	0.002	102.128%	101.324%
3	11:09:14	102.859%	-0.030	-0.003	0.018	0.009	0.021	102.516%	101.133%
x		102.924%	-0.014	-0.004	0.012	0.011	0.011	101.615%	100.717%
σ		1.025%	0.017	0.001	0.016	0.011	0.010	1.240%	0.891%
%RSD		0.996	123.400	20.820	130.400	97.750	87.230	1.220	0.885
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:08:34	0.011	0.004	0.011	-0.012	-0.002	104.411%		
2	11:08:54	0.007	0.002	0.013	0.001	0.000	104.588%		
3	11:09:14	0.006	0.006	0.015	-0.031	-0.004	104.252%		
x		0.008	0.004	0.013	-0.014	-0.002	104.417%		
σ		0.003	0.002	0.002	0.016	0.002	0.168%		
%RSD		31.700	41.880	16.390	113.400	107.600	0.161		

CRI 1495535 3/20/2015 11:12:16 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	112.879%	0.918	-3.573	-2.127	0.000	94.800	99.490	96.660
2	11:12:35	108.319%	0.841	-4.472	-0.699	0.000	100.100	100.400	100.100
3	11:12:54	103.832%	1.177	-7.004	-1.052	0.000	101.100	101.500	99.460
x		108.343%	97.844%	-100.325%	-25.854%	0.000	98.655%	100.440%	98.732%
σ		4.524%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		4.175	17.980	35.460	57.560	0.000	3.421	0.982	1.844

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	34.150	515.300	0.000	105.000	89.810	103.900	113.779%	4.965
2	11:12:35	33.300	501.200	0.000	108.000	105.800	108.200	110.028%	5.078
3	11:12:54	33.550	510.300	0.000	104.400	94.530	102.700	108.635%	4.874
x		112.228%	101.787%	0.000	105.802%	96.701%	104.932%	110.814%	99.443%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.660%	n/a
%RSD		1.293	1.402	0.000	1.811	8.476	2.756	2.401	2.051

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	0.925	1.911	4.776	53.190	51.270	0.508	1.210	2.297
2	11:12:35	0.784	1.993	4.895	50.620	50.360	0.483	0.927	2.121
3	11:12:54	0.992	2.015	4.809	49.370	52.620	0.481	1.229	2.278
x		90.043%	98.650%	96.530%	102.119%	102.832%	98.136%	112.229%	111.604%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		11.770	2.785	1.271	3.820	2.212	3.148	15.080	4.317

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	2.285	6.093	6.677	1.331	5.155	5.562	0.000	4.842
2	11:12:35	2.158	6.645	6.798	1.158	6.021	6.563	0.000	4.904
3	11:12:54	2.268	6.343	6.344	1.000	4.998	5.435	0.000	4.991
x		111.856%	127.213%	132.131%	116.302%	107.822%	117.066%	0.000	98.247%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		3.077	4.344	3.558	14.260	10.220	10.560	0.000	1.521

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	104.051%	4.797	4.816	104.651%	0.959	0.960	1.034	1.139
2	11:12:35	103.264%	4.899	4.851	103.031%	0.978	0.969	1.269	1.098
3	11:12:54	103.368%	5.312	4.953	102.594%	0.984	0.913	1.103	0.909
x		103.561%	100.050%	97.458%	103.425%	97.366%	94.721%	113.517%	104.876%
σ		0.428%	n/a	n/a	1.083%	n/a	n/a	n/a	n/a
%RSD		0.413	5.455	1.461	1.048	1.322	3.119	10.640	11.670

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	101.473%	5.061	1.884	1.961	10.330	9.882	98.669%	98.840%
2	11:12:35	101.594%	4.932	1.947	1.953	9.171	9.762	100.256%	99.516%
3	11:12:54	101.321%	5.168	1.877	1.918	9.565	9.615	99.640%	99.842%
x		101.463%	101.072%	95.123%	97.204%	96.880%	97.530%	99.522%	99.399%
σ		0.137%	n/a	n/a	n/a	n/a	n/a	0.800%	0.511%
%RSD		0.135	2.333	2.015	1.182	6.070	1.372	0.804	0.514

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:12:16	1.016	0.983	1.055	0.955	1.026	102.905%
2	11:12:35	1.005	1.009	1.123	1.011	1.060	102.050%
3	11:12:54	0.985	0.989	1.107	0.993	1.048	102.454%
x		100.224%	99.347%	109.483%	98.651%	104.488%	102.470%
σ		n/a	n/a	n/a	n/a	n/a	0.428%
%RSD		1.601	1.368	3.264	2.914	1.619	0.418

ICSA 1501693 3/20/2015 11:15:55 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	77.415%	0.081	-10.080	-5.754	0.000	102600.000	102000.000	100700.000
2	11:16:15	76.682%	0.082	-7.256	-4.625	0.000	99360.000	98460.000	96940.000
3	11:16:34	76.208%	0.041	-7.577	-5.982	0.000	95030.000	96300.000	94650.000
x		76.768%	0.068	-8.305	-5.453	0.000	99000.000	98920.000	97440.000
σ		0.608%	0.023	1.548	0.727	0.000	3812.000	2868.000	3074.000
%RSD		0.792	34.180	18.640	13.330	0.000	3.850	2.900	3.155

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	101000.000	34.820	0.000	98500.000	98830.000	99660.000	78.178%	1994.000
2	11:16:15	98590.000	32.950	0.000	98110.000	101000.000	100100.000	75.724%	1970.000
3	11:16:34	96410.000	32.630	0.000	96280.000	98110.000	99350.000	75.779%	1995.000
x		98650.000	33.470	0.000	97630.000	99300.000	99710.000	76.560%	1987.000
σ		2276.000	1.183	0.000	1184.000	1481.000	376.700	1.401%	14.520
%RSD		2.308	3.535	0.000	1.213	1.492	0.378	1.830	0.731

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	-0.385	0.288	0.472	98260.000	99130.000	0.025	-0.499	1.211
2	11:16:15	-0.021	0.481	0.487	100100.000	101300.000	0.032	-0.623	1.396
3	11:16:34	-0.188	0.395	0.590	98880.000	100200.000	0.019	-0.603	1.436
x		-0.198	0.388	0.516	99080.000	100200.000	0.025	-0.575	1.348
σ		0.182	0.097	0.064	938.300	1064.000	0.006	0.066	0.120
%RSD		92.140	24.930	12.430	0.947	1.061	25.250	11.500	8.911

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	1.216	2.335	2.318	-0.050	-1.582	-0.693	0.000	0.681
2	11:16:15	1.199	2.359	2.159	0.272	-1.079	0.757	0.000	0.694
3	11:16:34	1.211	2.492	1.639	0.049	-0.806	-0.388	0.000	0.694
x		1.209	2.395	2.039	0.090	-1.155	-0.108	0.000	0.690
σ		0.008	0.085	0.355	0.165	0.394	0.765	0.000	0.007
%RSD		0.702	3.541	17.420	182.100	34.060	708.000	0.000	1.052

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	75.434%	2051.000	2081.000	71.641%	-0.007	-0.021	0.080	0.227
2	11:16:15	74.601%	2058.000	2108.000	71.890%	0.024	-0.019	0.080	0.261
3	11:16:34	74.122%	2084.000	2126.000	70.784%	-0.022	0.007	0.284	0.212
x		74.719%	2064.000	2105.000	71.438%	-0.002	-0.011	0.148	0.234
σ		0.664%	17.370	22.500	0.580%	0.024	0.016	0.118	0.025
%RSD		0.889	0.842	1.069	0.812	1474.000	143.800	79.450	10.810

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	73.572%	0.038	0.056	0.069	0.166	0.168	78.227%	78.049%
2	11:16:15	74.680%	-0.002	0.048	0.049	0.100	0.135	78.590%	79.345%
3	11:16:34	73.171%	0.057	0.021	0.052	0.101	0.140	80.026%	79.332%
x		73.808%	0.031	0.042	0.057	0.123	0.147	78.948%	78.909%
σ		0.782%	0.030	0.018	0.011	0.038	0.018	0.952%	0.745%
%RSD		1.059	98.320	43.630	19.500	31.010	12.010	1.205	0.944

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:15:55	0.012	0.003	0.296	0.258	0.263	91.674%
2	11:16:15	0.007	0.011	0.279	0.300	0.278	87.354%
3	11:16:34	0.015	0.006	0.290	0.283	0.277	84.278%
x		0.011	0.007	0.288	0.281	0.272	87.769%
σ		0.004	0.004	0.009	0.021	0.008	3.715%
%RSD		38.040	57.290	3.104	7.514	3.083	4.233

ICSAB 1501694 3/20/2015 11:19:35 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	77.436%	21.050	36.100	41.280	0.000	100600.000	99780.000	99250.000
2	11:19:54	80.746%	19.270	41.200	40.090	0.000	99410.000	97130.000	96650.000
3	11:20:13	72.819%	23.590	48.280	41.130	0.000	102500.000	101500.000	100600.000
x		77.000%	106.506%	83.720%	81.660%	0.000	100.826%	99.469%	98.845%
σ		3.982%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		5.171	10.200	14.610	1.590	0.000	1.557	2.212	2.049

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	101800.000	539.800	0.000	97980.000	100700.000	100600.000	80.466%	2021.000
2	11:19:54	98200.000	505.100	0.000	96040.000	102300.000	99350.000	76.839%	1998.000
3	11:20:13	102500.000	534.000	0.000	99180.000	101600.000	100400.000	75.580%	2038.000
x		100.829%	105.265%	0.000	97.732%	101.511%	100.104%	77.628%	100.945%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.537%	n/a
%RSD		2.276	3.530	0.000	1.620	0.788	0.663	3.268	1.009

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	19.390	20.230	19.940	99710.000	99690.000	20.050	19.580	21.080
2	11:19:54	19.560	20.770	19.910	101500.000	101800.000	20.230	19.140	21.040
3	11:20:13	19.960	19.800	19.820	99540.000	100700.000	19.650	18.110	20.140
x		98.184%	101.331%	86.470%	100.237%	100.734%	99.889%	94.727%	103.765%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.476	2.408	0.322	1.054	1.041	1.499	3.972	2.578

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	20.860	23.050	22.150	21.830	51.050	54.490	0.000	20.170
2	11:19:54	21.090	22.560	22.180	19.330	53.600	50.760	0.000	20.330
3	11:20:13	20.230	22.440	22.470	20.830	51.760	51.470	0.000	20.450
x		103.643%	90.741%	89.073%	103.306%	104.272%	104.479%	0.000	101.591%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		2.150	1.419	0.797	6.087	2.524	3.789	0.000	0.699

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	74.900%	2080.000	2122.000	71.603%	19.480	19.400	19.670	19.620
2	11:19:54	74.594%	2098.000	2129.000	71.137%	20.000	19.340	21.030	20.320
3	11:20:13	74.663%	2105.000	2144.000	70.184%	19.590	20.140	21.950	20.980
x		74.719%	104.707%	106.590%	70.975%	98.453%	98.140%	104.420%	101.535%
σ		0.160%	n/a	n/a	0.724%	n/a	n/a	n/a	n/a
%RSD		0.215	0.622	0.535	1.020	1.381	2.282	5.484	3.368

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	74.100%	99.960	20.090	19.700	19.510	19.330	77.456%	77.816%
2	11:19:54	74.071%	100.700	20.230	20.870	19.340	19.710	78.612%	78.807%
3	11:20:13	73.688%	100.500	20.110	20.140	19.380	19.740	78.750%	78.745%
x		73.953%	100.382%	100.715%	101.188%	97.059%	97.959%	78.273%	78.456%
σ		0.230%	n/a	n/a	n/a	n/a	n/a	0.710%	0.555%
%RSD		0.311	0.388	0.391	2.914	0.454	1.164	0.908	0.708

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:35	19.350	19.180	20.430	20.490	20.300	82.585%
2	11:19:54	20.330	20.050	21.290	21.260	21.240	79.794%
3	11:20:13	20.630	20.560	21.190	21.870	21.590	79.610%
x		100.506%	99.648%	104.836%	106.031%	105.200%	80.663%
σ		n/a	n/a	n/a	n/a	n/a	1.667%
%RSD		3.319	3.492	2.237	3.279	3.177	2.067

CCV 1487954 3/20/2015 11:26:12 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	93.566%	103.100	91.070	87.970	0.000	51490.000	50910.000	51230.000
2	11:26:31	90.214%	107.200	94.800	88.820	0.000	50020.000	50450.000	49500.000
3	11:26:51	91.474%	102.400	81.500	87.920	0.000	49570.000	50190.000	50100.000
x		91.751%	104.225%	89.120%	88.238%	0.000	100.722%	101.030%	100.551%
σ		1.693%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.845	2.476	7.699	0.575	0.000	1.994	0.718	1.745

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	527.900	5037.000	0.000	49170.000	49580.000	49590.000	94.670%	96.780
2	11:26:31	522.200	5046.000	0.000	48880.000	49230.000	48660.000	92.754%	100.800
3	11:26:51	517.600	4962.000	0.000	49100.000	50180.000	49660.000	91.351%	97.430
x		104.515%	100.294%	0.000	98.097%	99.327%	98.610%	92.925%	98.354%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.666%	n/a
%RSD		0.983	0.914	0.000	0.311	0.976	1.130	1.793	2.222

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	97.730	98.810	483.100	24660.000	24720.000	99.320	100.700	102.200
2	11:26:31	99.890	99.610	487.900	24900.000	24900.000	100.400	101.500	102.900
3	11:26:51	100.300	99.830	480.300	24570.000	24770.000	99.230	98.760	100.300
x		99.310%	99.418%	96.757%	98.833%	99.190%	99.648%	100.322%	101.799%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.391	0.540	0.795	0.692	0.381	0.648	1.408	1.333

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	102.100	102.400	102.700	102.500	105.400	106.300	0.000	97.730
2	11:26:31	102.800	100.100	103.600	101.600	101.500	103.800	0.000	98.520
3	11:26:51	102.000	104.000	102.700	102.500	102.000	103.900	0.000	98.120
x		102.295%	102.147%	102.995%	102.206%	102.965%	104.642%	0.000	98.124%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.461	1.937	0.498	0.485	2.092	1.338	0.000	0.404

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	84.996%	100.400	100.600	82.854%	99.590	99.150	100.000	99.430
2	11:26:31	84.264%	101.700	102.300	81.459%	98.780	98.770	99.070	99.210
3	11:26:51	83.745%	104.100	102.500	80.441%	100.100	99.740	99.210	99.890
x		84.335%	102.067%	101.810%	81.585%	99.496%	99.222%	99.428%	99.510%
σ		0.629%	n/a	n/a	1.211%	n/a	n/a	n/a	n/a
%RSD		0.746	1.834	1.002	1.485	0.674	0.493	0.507	0.352

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	81.277%	97.840	98.690	97.900	96.040	96.590	83.479%	82.883%
2	11:26:31	81.233%	99.100	99.230	97.640	97.970	97.820	83.906%	83.152%
3	11:26:51	81.535%	98.680	99.240	98.640	98.200	98.060	84.321%	83.870%
x		81.348%	98.541%	99.057%	98.058%	97.404%	97.492%	83.902%	83.301%
σ		0.163%	n/a	n/a	n/a	n/a	n/a	0.421%	0.510%
%RSD		0.200	0.654	0.318	0.529	1.217	0.807	0.501	0.612

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:26:12	105.200	104.700	105.400	106.200	106.100	82.298%
2	11:26:31	106.100	106.400	108.900	109.900	108.400	81.637%
3	11:26:51	106.800	107.300	108.500	109.700	109.000	81.309%
x		106.032%	106.120%	107.606%	108.604%	107.819%	81.748%
σ		n/a	n/a	n/a	n/a	n/a	0.504%
%RSD		0.746	1.236	1.761	1.939	1.453	0.616

CCB1 3/20/2015 11:32:41 AM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	103.916%	-0.000	-14.300	-10.950	0.000	-5.746	0.808	0.445
2	11:33:20	100.515%	-0.000	-12.450	-10.630	0.000	-3.076	0.570	0.403
3	11:33:39	102.149%	0.093	-15.210	-11.460	0.000	-2.936	0.761	0.617
x		102.193%	0.031	-13.980	-11.010	0.000	-3.919	0.713	0.488
σ		1.701%	0.053	1.408	0.414	0.000	1.584	0.126	0.113
%RSD		1.664	173.200	10.070	3.764	0.000	40.410	17.710	23.180

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	0.008	1.563	0.000	9.915	-0.077	-1.166	99.678%	-0.019
2	11:33:20	0.060	1.036	0.000	6.036	2.727	-1.931	99.636%	0.068
3	11:33:39	0.217	0.818	0.000	6.051	0.040	-2.525	97.607%	-0.077
x		0.095	1.139	0.000	7.334	0.897	-1.874	98.974%	-0.009
σ		0.109	0.383	0.000	2.235	1.586	0.681	1.184%	0.073
%RSD		114.200	33.640	0.000	30.470	176.800	36.330	1.196	778.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	0.048	0.033	0.043	3.023	1.046	-0.001	-0.010	0.029
2	11:33:20	-0.042	-0.018	0.026	1.470	1.310	0.002	-0.002	0.051
3	11:33:39	-0.037	-0.002	0.043	0.146	1.478	0.001	0.006	0.004
x		-0.010	0.004	0.037	1.546	1.278	0.001	-0.002	0.028
σ		0.051	0.026	0.010	1.440	0.218	0.002	0.008	0.024
%RSD		501.900	604.900	26.470	93.140	17.030	252.200	483.900	85.080

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	-0.062	-0.124	0.181	-0.193	-0.092	-0.701	0.000	-0.002
2	11:33:20	-0.062	0.071	0.096	0.099	-0.015	0.630	0.000	0.001
3	11:33:39	0.030	-0.085	0.197	-0.122	-0.271	-0.238	0.000	0.001
x		-0.031	-0.046	0.158	-0.072	-0.126	-0.103	0.000	0.000
σ		0.053	0.103	0.054	0.152	0.132	0.675	0.000	0.002
%RSD		171.200	223.700	34.260	210.900	104.200	656.100	0.000	543.800

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	93.909%	0.353	0.367	93.084%	-0.035	-0.044	0.046	0.014
2	11:33:20	93.659%	0.380	0.310	93.275%	-0.025	-0.033	0.062	0.045
3	11:33:39	94.877%	0.305	0.280	94.050%	-0.006	-0.046	0.044	0.026
x		94.148%	0.346	0.319	93.470%	-0.022	-0.041	0.051	0.028
σ		0.643%	0.038	0.044	0.511%	0.014	0.007	0.010	0.016
%RSD		0.683	10.910	13.760	0.547	65.930	17.100	19.550	55.210

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	91.622%	0.041	0.030	0.036	-0.003	0.005	90.386%	89.474%
2	11:33:20	92.163%	0.038	0.037	0.031	-0.019	0.013	91.360%	90.053%
3	11:33:39	92.236%	0.044	0.034	0.039	0.012	0.009	91.574%	91.205%
x		92.007%	0.041	0.034	0.035	-0.003	0.009	91.107%	90.244%
σ		0.335%	0.003	0.004	0.004	0.015	0.004	0.633%	0.881%
%RSD		0.364	7.501	11.150	11.240	448.100	46.110	0.695	0.976

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:33:00	0.030	0.026	0.013	0.002	0.023	89.689%
2	11:33:20	0.022	0.031	0.026	0.015	0.019	89.804%
3	11:33:39	0.025	0.025	0.043	0.022	0.035	90.411%
x		0.026	0.027	0.027	0.013	0.026	89.968%
σ		0.004	0.003	0.015	0.010	0.008	0.388%
%RSD		15.160	11.470	54.950	76.450	31.890	0.431

MB 180-135569/1-A 3/20/2015 11:36:31 AM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:50	104.598%	-0.000	-14.550	-11.180	0.000	-2.521	1.028	0.249
2	11:37:09	100.643%	-0.000	-13.270	-11.790	0.000	-1.966	0.684	0.419
3	11:37:28	104.730%	-0.000	-12.430	-12.230	0.000	0.580	0.489	0.154
x		103.324%	-0.000	-13.420	-11.730	0.000	-1.303	0.734	0.274
σ		2.323%	0.000	1.069	0.530	0.000	1.654	0.272	0.134
%RSD		2.248	0.000	7.964	4.521	0.000	126.900	37.130	48.890
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:50	0.464	0.868	0.000	6.217	5.010	2.210	104.447%	-0.022
2	11:37:09	0.487	0.144	0.000	5.542	13.330	5.777	102.759%	1.274
3	11:37:28	0.250	0.516	0.000	4.893	16.270	3.691	101.438%	0.037
x		0.400	0.509	0.000	5.551	11.540	3.893	102.881%	0.430
σ		0.130	0.362	0.000	0.662	5.840	1.792	1.508%	0.732
%RSD		32.560	71.070	0.000	11.920	50.620	46.030	1.466	170.300
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:50	0.016	0.018	0.029	1.721	0.134	-0.003	0.035	0.032
2	11:37:09	-0.003	-0.003	0.045	1.630	-0.773	-0.001	0.050	0.082
3	11:37:28	0.007	0.035	0.027	0.672	0.417	-0.003	0.013	0.073
x		0.006	0.017	0.033	1.341	-0.074	-0.002	0.033	0.062
σ		0.010	0.019	0.010	0.582	0.622	0.001	0.019	0.026
%RSD		152.200	114.000	29.940	43.370	842.100	42.230	58.100	42.150
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:50	0.173	-0.021	0.501	-0.105	-0.357	-0.201	0.000	0.008
2	11:37:09	0.025	0.111	0.278	-0.011	-0.433	0.363	0.000	0.012
3	11:37:28	0.027	0.049	0.441	-0.144	-0.199	-0.157	0.000	0.011
x		0.075	0.046	0.406	-0.086	-0.329	0.002	0.000	0.010
σ		0.085	0.066	0.115	0.068	0.119	0.314	0.000	0.002
%RSD		112.900	142.100	28.310	78.920	36.240	19790.000	0.000	17.670
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:50	96.512%	0.934	1.009	95.894%	-0.055	-0.034	0.128	0.101
2	11:37:09	97.295%	1.124	1.060	95.729%	-0.039	-0.052	0.079	0.055
3	11:37:28	97.016%	0.950	0.920	95.633%	-0.047	-0.039	0.075	0.066
x		96.941%	1.003	0.996	95.752%	-0.047	-0.042	0.094	0.074
σ		0.397%	0.105	0.071	0.132%	0.008	0.009	0.030	0.024
%RSD		0.409	10.510	7.080	0.138	17.000	22.700	31.690	32.120
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:36:50	93.870%	0.006	0.002	0.011	0.034	0.043	92.170%	91.890%
2	11:37:09	95.486%	0.016	0.011	0.022	0.041	0.042	92.889%	92.435%
3	11:37:28	95.367%	-0.008	0.005	0.016	0.026	0.050	94.402%	93.923%
x		94.908%	0.005	0.006	0.016	0.033	0.045	93.154%	92.749%
σ		0.901%	0.012	0.004	0.006	0.008	0.004	1.139%	1.052%
%RSD		0.949	256.700	74.310	34.300	22.710	9.676	1.223	1.135
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:36:50	0.018	0.019	0.085	0.072	0.087	91.716%		
2	11:37:09	0.021	0.020	0.093	0.083	0.085	93.027%		
3	11:37:28	0.015	0.015	0.098	0.069	0.081	93.198%		
x		0.018	0.018	0.092	0.074	0.084	92.647%		
σ		0.003	0.003	0.007	0.008	0.003	0.811%		
%RSD		18.120	16.670	7.325	10.160	3.717	0.875		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:38	85.020%	48.430	965.000	883.100	0.000	43990.000	43700.000	43160.000
2	11:40:57	83.336%	48.020	970.000	874.000	0.000	43320.000	43410.000	43350.000
3	11:41:16	78.765%	48.260	1011.000	930.900	0.000	45100.000	45450.000	45010.000
x		82.374%	48.240	982.000	896.000	0.000	44140.000	44190.000	43840.000
σ		3.237%	0.206	25.180	30.560	0.000	900.600	1104.000	1017.000
%RSD		3.930	0.427	2.564	3.410	0.000	2.041	2.499	2.319
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:38	1796.000	8434.000	0.000	45030.000	46620.000	46710.000	75.470%	918.000
2	11:40:57	1786.000	8281.000	0.000	45110.000	47540.000	46120.000	73.576%	923.800
3	11:41:16	1837.000	8419.000	0.000	46070.000	47560.000	43890.000	72.334%	931.700
x		1807.000	8378.000	0.000	45400.000	47240.000	45570.000	73.793%	924.500
σ		27.090	84.150	0.000	578.500	536.900	1485.000	1.579%	6.882
%RSD		1.500	1.004	0.000	1.274	1.136	3.259	2.140	0.744
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:38	474.200	189.400	458.200	918.700	967.700	467.700	462.800	226.800
2	11:40:57	475.000	188.200	460.100	928.300	980.600	464.300	462.100	231.300
3	11:41:16	476.100	188.800	459.200	919.400	984.000	466.800	455.600	225.000
x		475.100	188.800	459.200	922.100	977.500	466.300	460.100	227.700
σ		0.934	0.631	0.985	5.386	8.583	1.763	3.981	3.273
%RSD		0.197	0.334	0.215	0.584	0.878	0.378	0.865	1.437
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:38	229.600	470.100	473.600	36.300	9.696	10.430	0.000	947.600
2	11:40:57	228.500	481.000	480.300	36.330	9.356	9.166	0.000	949.700
3	11:41:16	228.500	472.500	478.900	37.490	8.468	9.296	0.000	957.200
x		228.900	474.500	477.600	36.710	9.173	9.630	0.000	951.500
σ		0.647	5.747	3.536	0.683	0.634	0.693	0.000	5.058
%RSD		0.283	1.211	0.740	1.860	6.916	7.198	0.000	0.532
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:38	73.791%	982.300	998.600	71.890%	47.240	47.100	47.790	41.320
2	11:40:57	73.331%	999.300	1011.000	71.532%	48.180	47.170	49.610	41.230
3	11:41:16	73.117%	997.900	1009.000	70.620%	47.860	48.240	49.310	41.660
x		73.413%	993.100	1006.000	71.347%	47.760	47.500	48.900	41.400
σ		0.344%	9.451	6.695	0.655%	0.479	0.640	0.978	0.227
%RSD		0.469	0.952	0.665	0.917	1.003	1.347	2.000	0.547
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:40:38	73.450%	1944.000	479.800	478.000	1818.000	1823.000	79.144%	78.507%
2	11:40:57	74.041%	1952.000	482.700	479.500	1819.000	1833.000	79.431%	80.338%
3	11:41:16	74.411%	1930.000	480.200	477.400	1815.000	1831.000	80.940%	81.054%
x		73.968%	1942.000	480.900	478.300	1817.000	1829.000	79.838%	79.966%
σ		0.485%	11.210	1.554	1.082	2.161	5.382	0.965%	1.314%
%RSD		0.655	0.577	0.323	0.226	0.119	0.294	1.208	1.643
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	11:40:38	50.000	49.950	21.580	21.500	21.520	74.893%		
2	11:40:57	50.670	50.800	21.170	21.250	21.330	76.095%		
3	11:41:16	51.540	51.430	21.460	22.110	21.620	76.567%		
x		50.740	50.730	21.400	21.620	21.490	75.852%		
σ		0.771	0.742	0.211	0.443	0.143	0.863%		
%RSD		1.520	1.464	0.986	2.049	0.666	1.137		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	83.566%	-0.000	15.720	16.020	0.000	88020.000	7024.000	7031.000
2	11:44:45	83.760%	-0.000	10.830	12.060	0.000	85520.000	6689.000	6769.000
3	11:45:04	80.388%	-0.000	11.160	11.060	0.000	87120.000	6857.000	6704.000
x		82.571%	-0.000	12.570	13.050	0.000	86890.000	6857.000	6834.000
σ		1.893%	0.000	2.734	2.623	0.000	1268.000	167.600	173.100
%RSD		2.293	0.000	21.750	20.100	0.000	1.459	2.444	2.532

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	164.200	1834.000	0.000	3567.000	37280.000	34330.000	74.047%	3.352
2	11:44:45	158.500	1792.000	0.000	3476.000	38370.000	34780.000	71.767%	2.775
3	11:45:04	153.400	1746.000	0.000	3443.000	37670.000	34200.000	71.104%	3.003
x		158.700	1791.000	0.000	3496.000	37780.000	34440.000	72.306%	3.043
σ		5.374	44.000	0.000	64.140	553.100	307.800	1.544%	0.291
%RSD		3.386	2.457	0.000	1.835	1.464	0.894	2.135	9.559

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	0.787	1.311	23.990	291.400	329.400	0.327	0.445	4.047
2	11:44:45	2.826	1.256	24.180	286.500	332.400	0.355	0.414	3.660
3	11:45:04	1.791	1.418	24.650	283.000	324.900	0.319	0.333	3.831
x		1.801	1.328	24.270	287.000	328.900	0.334	0.397	3.846
σ		1.020	0.082	0.337	4.197	3.783	0.019	0.058	0.194
%RSD		56.600	6.210	1.386	1.463	1.150	5.623	14.550	5.044

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	2.923	13.270	13.980	0.912	-1.300	0.398	0.000	116.000
2	11:44:45	2.973	12.580	12.670	0.000	-1.589	0.497	0.000	116.200
3	11:45:04	3.094	13.350	13.330	0.193	-1.086	-1.745	0.000	116.700
x		2.996	13.060	13.320	0.368	-1.325	-0.283	0.000	116.300
σ		0.088	0.426	0.656	0.480	0.253	1.267	0.000	0.360
%RSD		2.937	3.262	4.925	130.400	19.070	447.400	0.000	0.310

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	73.636%	2.808	2.932	71.374%	-0.033	-0.044	0.018	-0.007
2	11:44:45	73.030%	2.367	2.364	71.392%	-0.035	-0.040	-0.008	0.020
3	11:45:04	73.033%	1.973	1.929	71.717%	-0.030	-0.016	-0.001	0.028
x		73.233%	2.383	2.408	71.494%	-0.033	-0.033	0.003	0.014
σ		0.349%	0.418	0.503	0.193%	0.003	0.015	0.013	0.018
%RSD		0.477	17.540	20.880	0.270	7.793	45.930	435.600	135.000

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	73.018%	2.259	0.308	0.269	37.780	39.360	78.888%	78.764%
2	11:44:45	74.309%	1.770	0.276	0.289	38.740	37.690	79.937%	79.233%
3	11:45:04	74.452%	1.553	0.277	0.232	38.010	37.930	80.294%	80.581%
x		73.926%	1.861	0.287	0.263	38.180	38.330	79.706%	79.526%
σ		0.790%	0.362	0.018	0.029	0.503	0.904	0.731%	0.944%
%RSD		1.069	19.440	6.448	10.970	1.317	2.359	0.917	1.186

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:44:26	0.226	0.224	1.033	1.091	1.086	75.319%
2	11:44:45	0.229	0.206	1.141	1.023	1.094	75.851%
3	11:45:04	0.173	0.186	1.180	1.021	1.080	76.673%
x		0.209	0.205	1.118	1.045	1.087	75.948%
σ		0.031	0.019	0.076	0.040	0.007	0.682%
%RSD		14.910	9.354	6.820	3.823	0.625	0.899

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	82.917%	0.154	-1.469	4.742	0.000	29540.000	6079.000	6075.000
2	11:48:33	78.814%	0.242	8.258	5.618	0.000	28780.000	5943.000	5919.000
3	11:48:52	77.997%	0.245	7.823	3.583	0.000	28730.000	6029.000	6037.000
x		79.909%	0.214	4.871	4.648	0.000	29020.000	6017.000	6010.000
σ		2.636%	0.052	5.494	1.021	0.000	456.400	68.720	81.430
%RSD		3.299	24.190	112.800	21.960	0.000	1.573	1.142	1.355

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	3524.000	4631.000	0.000	6808.000	22590.000	20870.000	69.590%	50.130
2	11:48:33	3360.000	4487.000	0.000	6622.000	22230.000	20650.000	69.149%	49.250
3	11:48:52	3442.000	4421.000	0.000	6618.000	22670.000	20800.000	67.597%	46.380
x		3442.000	4513.000	0.000	6683.000	22500.000	20770.000	68.779%	48.590
σ		81.980	107.100	0.000	108.600	236.400	109.300	1.047%	1.964
%RSD		2.382	2.373	0.000	1.626	1.051	0.526	1.522	4.042

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	8.046	5.629	193.400	5498.000	5567.000	3.524	4.133	12.050
2	11:48:33	8.520	5.586	192.200	5445.000	5461.000	3.425	4.358	11.450
3	11:48:52	7.642	5.554	193.800	5494.000	5507.000	3.364	3.614	11.420
x		8.069	5.590	193.100	5479.000	5511.000	3.438	4.035	11.640
σ		0.439	0.037	0.841	29.430	53.070	0.081	0.381	0.356
%RSD		5.442	0.666	0.435	0.537	0.963	2.344	9.446	3.056

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	12.090	43.130	42.540	1.690	-1.305	-0.439	0.000	60.930
2	11:48:33	10.960	41.820	43.550	1.387	-1.285	-0.368	0.000	61.300
3	11:48:52	11.480	41.900	42.520	0.845	-1.091	-0.655	0.000	61.830
x		11.510	42.280	42.870	1.307	-1.227	-0.487	0.000	61.350
σ		0.564	0.739	0.587	0.428	0.118	0.149	0.000	0.453
%RSD		4.903	1.748	1.369	32.740	9.649	30.630	0.000	0.738

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	72.418%	1.209	1.458	69.538%	-0.010	-0.011	0.167	0.202
2	11:48:33	71.639%	1.428	1.361	68.878%	-0.026	-0.020	0.284	0.271
3	11:48:52	71.578%	1.209	1.338	69.070%	-0.010	-0.013	0.129	0.115
x		71.878%	1.282	1.386	69.162%	-0.015	-0.015	0.194	0.196
σ		0.468%	0.127	0.064	0.340%	0.009	0.005	0.081	0.078
%RSD		0.652	9.866	4.603	0.491	61.290	33.540	41.760	39.670

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	71.324%	2.113	0.258	0.314	54.420	53.690	76.488%	77.252%
2	11:48:33	72.744%	1.908	0.304	0.265	53.010	53.780	78.217%	78.697%
3	11:48:52	72.899%	1.982	0.309	0.289	54.780	52.540	78.777%	78.581%
x		72.322%	2.001	0.290	0.289	54.070	53.340	77.827%	78.177%
σ		0.868%	0.104	0.028	0.025	0.936	0.694	1.193%	0.803%
%RSD		1.200	5.177	9.616	8.471	1.731	1.301	1.533	1.027

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:14	0.127	0.107	8.065	7.353	7.662	74.492%
2	11:48:33	0.119	0.118	7.920	7.474	7.617	75.851%
3	11:48:52	0.117	0.103	7.901	7.645	7.712	76.601%
x		0.121	0.109	7.962	7.491	7.664	75.648%
σ		0.005	0.007	0.090	0.147	0.048	1.069%
%RSD		4.436	6.834	1.126	1.960	0.621	1.413

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	78.621%	0.121	5.750	2.848	0.000	33660.000	5717.000	5665.000
2	11:52:22	77.310%	0.206	2.534	2.825	0.000	32490.000	5475.000	5432.000
3	11:52:41	78.008%	0.082	2.231	1.650	0.000	33040.000	5541.000	5504.000
x		77.980%	0.136	3.505	2.441	0.000	33060.000	5578.000	5534.000
σ		0.656%	0.063	1.950	0.685	0.000	588.000	124.800	119.300
%RSD		0.841	46.400	55.630	28.080	0.000	1.778	2.237	2.156

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	3071.000	4049.000	0.000	6098.000	21820.000	20420.000	68.071%	44.440
2	11:52:22	2865.000	3846.000	0.000	5869.000	21350.000	20120.000	67.080%	42.290
3	11:52:41	2956.000	3989.000	0.000	6029.000	22010.000	20050.000	64.729%	43.290
x		2964.000	3961.000	0.000	5999.000	21730.000	20200.000	66.627%	43.340
σ		103.500	104.500	0.000	117.400	341.400	196.900	1.716%	1.080
%RSD		3.491	2.637	0.000	1.958	1.571	0.975	2.576	2.491

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	5.887	5.062	200.900	4846.000	4782.000	3.371	3.682	10.000
2	11:52:22	5.402	4.725	199.800	4829.000	4853.000	3.282	3.884	10.480
3	11:52:41	8.037	5.282	201.900	4880.000	4916.000	3.355	3.386	10.510
x		6.442	5.023	200.800	4852.000	4850.000	3.336	3.651	10.330
σ		1.403	0.281	1.046	26.200	66.930	0.047	0.251	0.284
%RSD		21.770	5.587	0.521	0.540	1.380	1.417	6.874	2.746

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	10.520	34.660	34.530	1.968	-1.485	-0.920	0.000	61.660
2	11:52:22	10.210	35.100	34.290	0.704	-1.991	-0.235	0.000	61.870
3	11:52:41	10.290	35.280	35.220	1.133	-1.533	-0.612	0.000	61.920
x		10.340	35.010	34.680	1.268	-1.669	-0.589	0.000	61.820
σ		0.159	0.316	0.484	0.643	0.279	0.343	0.000	0.139
%RSD		1.533	0.902	1.397	50.680	16.730	58.300	0.000	0.224

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	72.255%	0.933	0.995	70.018%	-0.025	-0.039	0.183	0.155
2	11:52:22	72.212%	0.768	0.824	69.186%	-0.008	-0.007	0.092	0.091
3	11:52:41	71.561%	0.814	0.885	69.037%	-0.006	-0.019	0.089	0.102
x		72.009%	0.839	0.901	69.414%	-0.013	-0.022	0.121	0.116
σ		0.389%	0.085	0.086	0.529%	0.010	0.016	0.053	0.034
%RSD		0.540	10.130	9.593	0.762	78.430	73.610	43.740	29.600

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	72.044%	0.911	0.261	0.250	50.160	50.280	77.182%	77.213%
2	11:52:22	72.193%	0.989	0.272	0.234	49.840	49.040	78.799%	78.308%
3	11:52:41	72.806%	0.978	0.290	0.235	49.630	50.440	78.550%	78.710%
x		72.348%	0.959	0.274	0.240	49.880	49.920	78.177%	78.077%
σ		0.404%	0.043	0.014	0.009	0.266	0.763	0.871%	0.775%
%RSD		0.558	4.442	5.204	3.861	0.533	1.529	1.114	0.993

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:52:03	0.066	0.066	7.321	6.728	7.095	75.877%
2	11:52:22	0.069	0.068	7.228	6.733	6.989	76.769%
3	11:52:41	0.069	0.063	7.385	6.781	7.005	77.227%
x		0.068	0.066	7.311	6.747	7.030	76.624%
σ		0.002	0.003	0.079	0.029	0.057	0.686%
%RSD		2.793	3.787	1.081	0.434	0.810	0.896

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	77.433%	0.082	13.980	18.260	0.000	52410.000	7710.000	7563.000
2	11:56:11	81.612%	0.039	17.240	14.110	0.000	50140.000	7488.000	7497.000
3	11:56:30	76.669%	0.083	9.931	12.000	0.000	49710.000	7629.000	7627.000
x		78.571%	0.068	13.720	14.790	0.000	50750.000	7609.000	7562.000
σ		2.661%	0.025	3.663	3.185	0.000	1453.000	112.200	65.280
%RSD		3.386	36.790	26.700	21.530	0.000	2.862	1.474	0.863

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	452.500	2114.000	0.000	7073.000	33900.000	31410.000	71.162%	5.554
2	11:56:11	452.300	2051.000	0.000	7007.000	33500.000	31510.000	69.543%	4.147
3	11:56:30	456.500	2063.000	0.000	7007.000	34590.000	31930.000	68.232%	4.734
x		453.800	2076.000	0.000	7029.000	34000.000	31620.000	69.646%	4.812
σ		2.379	33.250	0.000	38.210	552.100	273.900	1.468%	0.707
%RSD		0.524	1.602	0.000	0.544	1.624	0.866	2.107	14.690

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	2.319	1.310	124.000	734.800	783.800	1.455	1.040	5.673
2	11:56:11	2.910	1.375	121.100	728.900	787.800	1.344	1.091	5.467
3	11:56:30	3.592	1.530	125.600	738.900	784.300	1.345	0.995	5.168
x		2.940	1.405	123.600	734.200	785.300	1.381	1.042	5.436
σ		0.637	0.113	2.297	5.002	2.187	0.064	0.048	0.254
%RSD		21.670	8.042	1.859	0.681	0.279	4.603	4.586	4.665

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	4.995	18.380	18.280	0.647	-1.509	-0.316	0.000	88.390
2	11:56:11	5.013	18.500	17.200	0.685	-1.354	0.803	0.000	89.120
3	11:56:30	5.280	18.690	18.120	0.835	-0.849	-0.004	0.000	88.350
x		5.096	18.520	17.870	0.723	-1.237	0.161	0.000	88.620
σ		0.160	0.156	0.583	0.099	0.345	0.578	0.000	0.430
%RSD		3.136	0.842	3.264	13.720	27.910	358.600	0.000	0.485

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	72.328%	8.821	9.066	71.414%	-0.041	-0.044	0.009	0.002
2	11:56:11	72.222%	8.902	9.291	70.382%	-0.027	-0.020	0.077	0.100
3	11:56:30	71.282%	9.298	9.055	70.152%	-0.018	-0.031	0.010	0.050
x		71.944%	9.007	9.137	70.650%	-0.029	-0.031	0.032	0.051
σ		0.576%	0.255	0.133	0.672%	0.011	0.012	0.039	0.049
%RSD		0.800	2.834	1.460	0.951	38.470	37.970	120.900	96.660

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	73.468%	0.570	0.156	0.213	38.210	37.650	79.542%	79.411%
2	11:56:11	73.540%	0.478	0.208	0.215	37.560	38.690	79.663%	80.303%
3	11:56:30	74.010%	0.510	0.164	0.191	38.130	37.070	80.476%	80.363%
x		73.673%	0.519	0.176	0.206	37.970	37.800	79.894%	80.026%
σ		0.294%	0.047	0.028	0.013	0.357	0.820	0.508%	0.533%
%RSD		0.399	8.967	16.010	6.337	0.941	2.170	0.636	0.666

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:55:52	0.039	0.026	4.336	3.928	4.097	76.959%
2	11:56:11	0.035	0.027	4.213	3.900	4.042	77.814%
3	11:56:30	0.026	0.030	4.319	3.952	4.127	78.398%
x		0.033	0.028	4.289	3.927	4.089	77.724%
σ		0.007	0.002	0.067	0.026	0.043	0.723%
%RSD		21.040	7.799	1.551	0.663	1.055	0.931

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	77.690%	-0.000	14.430	14.020	0.000	101800.000	11090.000	10920.000
2	12:00:00	78.316%	0.041	19.850	14.530	0.000	100000.000	10670.000	10640.000
3	12:00:19	74.749%	-0.000	15.340	13.360	0.000	99370.000	10600.000	10590.000
x		76.918%	0.014	16.540	13.970	0.000	100400.000	10780.000	10720.000
σ		1.905%	0.023	2.903	0.587	0.000	1264.000	264.600	177.700
%RSD		2.477	173.200	17.550	4.205	0.000	1.259	2.454	1.658

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	76.620	2935.000	0.000	6506.000	64190.000	64580.000	71.956%	2.210
2	12:00:00	73.490	2748.000	0.000	6490.000	65150.000	64700.000	68.616%	1.350
3	12:00:19	71.440	2839.000	0.000	6690.000	68210.000	66850.000	65.399%	1.595
x		73.850	2841.000	0.000	6562.000	65850.000	65380.000	68.657%	1.718
σ		2.612	93.290	0.000	111.300	2099.000	1277.000	3.279%	0.443
%RSD		3.537	3.284	0.000	1.697	3.188	1.953	4.776	25.780

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	2.044	4.682	18.100	99.930	148.900	0.224	2.230	2.283
2	12:00:00	1.615	4.907	18.930	103.900	170.100	0.229	2.597	2.160
3	12:00:19	0.388	4.931	19.330	109.000	159.900	0.214	2.647	2.177
x		1.349	4.840	18.790	104.300	159.700	0.222	2.491	2.207
σ		0.859	0.138	0.627	4.544	10.600	0.007	0.228	0.067
%RSD		63.690	2.841	3.340	4.358	6.640	3.319	9.144	3.020

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	1.652	10.600	10.400	-0.184	-1.555	-0.624	0.000	179.700
2	12:00:00	1.574	11.170	11.240	-0.865	-0.697	-0.246	0.000	179.600
3	12:00:19	1.513	11.310	11.350	0.233	-1.342	-0.753	0.000	182.400
x		1.580	11.030	11.000	-0.272	-1.198	-0.541	0.000	180.500
σ		0.070	0.376	0.518	0.554	0.447	0.263	0.000	1.594
%RSD		4.430	3.406	4.715	203.600	37.320	48.690	0.000	0.883

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	70.971%	1.476	1.224	69.603%	-0.036	-0.043	2.230	2.077
2	12:00:00	71.216%	1.138	1.283	69.575%	-0.045	-0.043	1.954	1.988
3	12:00:19	69.684%	1.023	1.215	68.258%	-0.011	-0.024	2.312	2.049
x		70.624%	1.213	1.241	69.145%	-0.031	-0.036	2.166	2.038
σ		0.823%	0.235	0.037	0.769%	0.018	0.011	0.188	0.046
%RSD		1.165	19.420	3.011	1.112	57.110	30.370	8.663	2.243

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	72.906%	0.470	0.258	0.239	49.400	48.640	79.148%	78.771%
2	12:00:00	72.922%	0.520	0.252	0.239	48.590	50.270	78.803%	79.016%
3	12:00:19	72.496%	0.486	0.257	0.218	50.820	49.970	79.723%	79.198%
x		72.775%	0.492	0.255	0.232	49.600	49.630	79.225%	78.995%
σ		0.241%	0.025	0.003	0.013	1.127	0.865	0.465%	0.214%
%RSD		0.331	5.179	1.227	5.393	2.272	1.744	0.587	0.271

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	11:59:41	0.020	0.022	0.436	0.382	0.389	75.419%
2	12:00:00	0.006	0.016	0.381	0.339	0.353	75.851%
3	12:00:19	0.018	0.024	0.371	0.346	0.362	76.736%
x		0.015	0.021	0.396	0.356	0.368	76.002%
σ		0.008	0.005	0.035	0.023	0.018	0.671%
%RSD		53.550	22.140	8.788	6.423	4.982	0.883

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	79.102%	-0.000	-7.184	-2.387	0.000	60780.000	14630.000	14890.000
2	12:06:06	76.470%	-0.000	0.085	-2.348	0.000	60040.000	14510.000	14840.000
3	12:06:25	72.489%	-0.000	-3.300	-4.036	0.000	59980.000	14310.000	14450.000
x		76.020%	-0.000	-3.466	-2.924	0.000	60270.000	14480.000	14730.000
σ		3.329%	0.000	3.637	0.964	0.000	445.300	161.600	240.800
%RSD		4.380	0.000	104.900	32.950	0.000	0.739	1.116	1.635

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	89.770	2448.000	0.000	2662.000	65910.000	64680.000	70.591%	2.048
2	12:06:06	89.830	2489.000	0.000	2741.000	65890.000	65330.000	67.060%	2.327
3	12:06:25	86.520	2440.000	0.000	2642.000	65630.000	65360.000	66.023%	1.884
x		88.710	2459.000	0.000	2681.000	65810.000	65120.000	67.891%	2.087
σ		1.896	26.100	0.000	52.310	156.000	386.500	2.395%	0.224
%RSD		2.138	1.061	0.000	1.951	0.237	0.594	3.527	10.730

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	0.546	1.627	7.188	93.110	159.700	0.095	-0.296	1.962
2	12:06:06	1.391	1.634	7.545	93.630	155.900	0.120	-0.257	2.357
3	12:06:25	1.121	1.802	7.379	97.330	159.000	0.129	-0.039	2.369
x		1.019	1.687	7.371	94.690	158.200	0.115	-0.198	2.229
σ		0.431	0.099	0.178	2.301	2.019	0.017	0.138	0.231
%RSD		42.300	5.883	2.421	2.430	1.276	15.190	70.020	10.370

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	1.854	5.381	5.068	-0.013	-1.073	-0.645	0.000	131.800
2	12:06:06	2.087	5.657	5.126	-0.362	-0.812	-0.755	0.000	132.100
3	12:06:25	1.983	5.322	6.076	-0.146	-1.979	-0.722	0.000	133.400
x		1.975	5.453	5.423	-0.174	-1.288	-0.707	0.000	132.400
σ		0.116	0.179	0.566	0.176	0.612	0.057	0.000	0.826
%RSD		5.895	3.278	10.430	101.200	47.540	7.994	0.000	0.623

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	70.626%	0.350	0.329	69.395%	-0.043	-0.039	0.044	0.071
2	12:06:06	70.161%	0.448	0.371	69.001%	-0.037	-0.037	-1.641	-1.090
3	12:06:25	69.817%	0.474	0.325	68.891%	-0.010	-0.035	0.023	0.031
x		70.201%	0.424	0.342	69.096%	-0.030	-0.037	-0.525	-0.329
σ		0.406%	0.065	0.025	0.265%	0.018	0.002	0.967	0.659
%RSD		0.578	15.330	7.458	0.383	58.920	5.042	184.300	200.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	72.263%	0.393	0.105	0.149	36.550	36.560	78.349%	78.407%
2	12:06:06	72.074%	0.474	0.121	0.118	36.760	36.570	78.894%	78.755%
3	12:06:25	72.716%	0.466	0.116	0.127	36.270	37.150	80.061%	80.116%
x		72.351%	0.444	0.114	0.131	36.530	36.760	79.102%	79.093%
σ		0.330%	0.044	0.008	0.015	0.250	0.336	0.875%	0.903%
%RSD		0.456	9.995	7.166	11.750	0.685	0.914	1.106	1.142

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:05:47	0.019	0.009	0.555	0.504	0.514	75.602%
2	12:06:06	0.009	0.012	0.509	0.440	0.507	76.382%
3	12:06:25	0.018	0.002	0.514	0.429	0.496	77.555%
x		0.015	0.008	0.526	0.458	0.506	76.513%
σ		0.006	0.005	0.025	0.041	0.009	0.983%
%RSD		36.850	62.440	4.761	8.878	1.744	1.285

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:37	77.326%	-0.000	67.650	71.390	0.000	136700.000	11530.000	11360.000
2	12:09:57	72.606%	-0.000	76.030	71.700	0.000	134800.000	11600.000	11490.000
3	12:10:17	72.737%	-0.000	78.530	71.940	0.000	129900.000	11140.000	11200.000
x		74.223%	-0.000	74.070	71.680	0.000	133800.000	11420.000	11350.000
σ		2.688%	0.000	5.699	0.278	0.000	3515.000	248.600	144.500
%RSD		3.621	0.000	7.694	0.388	0.000	2.627	2.176	1.273
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:37	7.946	2585.000	0.000	11270.000	65460.000	63440.000	67.173%	0.695
2	12:09:57	8.498	2629.000	0.000	11380.000	66170.000	65230.000	65.452%	0.715
3	12:10:17	7.764	2545.000	0.000	11180.000	63860.000	59660.000	63.980%	0.597
x		8.069	2586.000	0.000	11280.000	65160.000	62780.000	65.535%	0.669
σ		0.382	41.980	0.000	101.200	1185.000	2839.000	1.598%	0.063
%RSD		4.732	1.623	0.000	0.898	1.819	4.523	2.439	9.372
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:37	2.077	0.803	29.470	54.570	106.200	0.467	0.557	3.674
2	12:09:57	0.240	0.800	29.330	53.090	105.300	0.410	0.525	3.803
3	12:10:17	2.487	0.717	30.110	53.160	104.200	0.401	0.799	3.511
x		1.601	0.773	29.630	53.610	105.200	0.426	0.627	3.663
σ		1.197	0.049	0.416	0.832	1.005	0.036	0.150	0.146
%RSD		74.740	6.306	1.404	1.553	0.955	8.367	23.910	4.001
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:37	2.814	20.670	22.080	0.480	-0.988	0.664	0.000	181.500
2	12:09:57	2.760	21.530	21.950	-0.658	-1.016	-0.386	0.000	183.300
3	12:10:17	2.850	21.430	22.750	-0.756	-0.847	0.171	0.000	184.700
x		2.808	21.210	22.260	-0.311	-0.950	0.150	0.000	183.200
σ		0.045	0.474	0.434	0.687	0.091	0.525	0.000	1.595
%RSD		1.602	2.233	1.950	220.700	9.532	351.200	0.000	0.871
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:37	69.823%	65.610	63.800	68.331%	-0.026	-0.038	0.051	0.050
2	12:09:57	68.666%	65.630	67.240	67.252%	-0.023	-0.030	-0.004	0.017
3	12:10:17	68.042%	65.520	66.800	66.901%	-0.028	-0.022	-0.047	-0.010
x		68.844%	65.590	65.950	67.495%	-0.026	-0.030	0.000	0.019
σ		0.904%	0.055	1.872	0.745%	0.003	0.008	0.049	0.030
%RSD		1.313	0.084	2.839	1.104	10.710	26.130	214900.000	156.700
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:09:37	71.004%	0.480	0.406	0.366	31.170	31.590	77.188%	77.791%
2	12:09:57	70.867%	0.599	0.388	0.363	31.340	30.970	78.797%	78.690%
3	12:10:17	71.122%	0.527	0.410	0.410	31.500	32.010	79.014%	78.855%
x		70.997%	0.535	0.402	0.380	31.340	31.520	78.333%	78.445%
σ		0.128%	0.060	0.012	0.026	0.163	0.525	0.997%	0.572%
%RSD		0.180	11.190	3.007	6.914	0.519	1.667	1.273	0.729
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:09:37	0.023	0.003	0.822	0.746	0.775	74.604%		
2	12:09:57	0.017	0.007	0.814	0.700	0.741	75.222%		
3	12:10:17	0.016	0.007	0.764	0.852	0.815	76.131%		
x		0.018	0.005	0.800	0.766	0.777	75.319%		
σ		0.004	0.002	0.031	0.078	0.037	0.768%		
%RSD		20.880	39.620	3.881	10.190	4.765	1.019		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	78.140%	0.081	-5.123	-1.508	0.000	35910.000	5472.000	5355.000
2	12:13:48	77.679%	0.041	-2.041	-0.046	0.000	34850.000	5307.000	5234.000
3	12:14:08	76.744%	0.042	-2.575	-0.904	0.000	33930.000	5240.000	5164.000
x		77.521%	0.055	-3.247	-0.819	0.000	34900.000	5339.000	5251.000
σ		0.711%	0.023	1.647	0.734	0.000	992.400	119.300	96.930
%RSD		0.917	42.250	50.740	89.640	0.000	2.844	2.234	1.846

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	597.800	1842.000	0.000	5813.000	22410.000	20880.000	68.893%	6.157
2	12:13:48	625.800	1762.000	0.000	5766.000	22590.000	21190.000	65.743%	5.790
3	12:14:08	574.900	1725.000	0.000	5699.000	23050.000	21220.000	64.103%	5.976
x		599.500	1776.000	0.000	5759.000	22680.000	21100.000	66.246%	5.974
σ		25.500	59.510	0.000	56.820	330.100	188.700	2.434%	0.184
%RSD		4.254	3.350	0.000	0.987	1.455	0.894	3.675	3.074

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	3.999	1.484	172.400	995.300	1011.000	1.896	1.456	5.320
2	12:13:48	3.258	1.496	179.000	1032.000	1065.000	1.905	1.451	5.735
3	12:14:08	4.396	1.557	176.300	1028.000	1068.000	1.902	1.322	5.606
x		3.885	1.512	175.900	1018.000	1048.000	1.901	1.410	5.554
σ		0.578	0.039	3.304	19.950	32.080	0.004	0.076	0.212
%RSD		14.870	2.585	1.878	1.959	3.061	0.236	5.403	3.823

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	5.288	18.480	18.440	0.353	-1.936	-0.164	0.000	64.920
2	12:13:48	5.369	18.200	19.650	-0.034	-1.355	-0.334	0.000	66.680
3	12:14:08	5.518	19.590	20.510	1.304	-1.362	-0.685	0.000	64.920
x		5.392	18.760	19.530	0.541	-1.551	-0.394	0.000	65.510
σ		0.117	0.733	1.037	0.689	0.333	0.266	0.000	1.014
%RSD		2.167	3.910	5.310	127.300	21.490	67.420	0.000	1.548

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	70.220%	0.390	0.483	68.283%	-0.039	-0.055	2.096	1.388
2	12:13:48	69.205%	0.425	0.418	67.737%	-0.021	-0.054	4.737	3.167
3	12:14:08	69.914%	0.350	0.382	68.037%	-0.023	-0.025	0.093	0.071
x		69.780%	0.388	0.428	68.019%	-0.028	-0.045	2.309	1.542
σ		0.521%	0.038	0.051	0.273%	0.009	0.017	2.329	1.554
%RSD		0.746	9.728	11.910	0.402	34.020	38.790	100.900	100.800

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	71.531%	0.324	0.125	0.138	39.840	39.230	76.712%	76.931%
2	12:13:48	70.492%	0.316	0.137	0.142	40.610	40.770	76.799%	76.972%
3	12:14:08	70.917%	0.351	0.154	0.154	39.790	40.220	78.060%	77.423%
x		70.980%	0.331	0.139	0.145	40.080	40.070	77.190%	77.108%
σ		0.522%	0.018	0.015	0.008	0.463	0.783	0.754%	0.273%
%RSD		0.735	5.548	10.530	5.700	1.154	1.955	0.977	0.354

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:13:29	0.010	0.008	4.999	4.713	4.805	75.329%
2	12:13:48	0.002	0.016	4.938	4.849	4.849	76.059%
3	12:14:08	0.021	0.012	5.192	4.864	4.989	74.444%
x		0.011	0.012	5.043	4.809	4.881	75.278%
σ		0.009	0.004	0.132	0.083	0.096	0.809%
%RSD		82.690	32.410	2.625	1.728	1.966	1.075

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	95.019%	101.400	86.010	81.760	0.000	47280.000	48120.000	47380.000
2	12:17:27	89.565%	105.700	85.280	81.390	0.000	48860.000	49340.000	48410.000
3	12:17:46	86.452%	102.000	89.650	83.710	0.000	50220.000	50720.000	49950.000
x		90.345%	103.045%	86.979%	82.288%	0.000	97.574%	98.792%	97.160%
σ		4.337%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		4.800	2.265	2.694	1.515	0.000	3.010	2.627	2.669

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	482.400	4767.000	0.000	46500.000	48650.000	48410.000	88.242%	97.830
2	12:17:27	495.300	4888.000	0.000	48190.000	49970.000	48670.000	84.463%	98.960
3	12:17:46	522.800	4991.000	0.000	48920.000	49790.000	49680.000	82.210%	100.700
x		100.034%	97.643%	0.000	95.740%	98.946%	97.843%	84.972%	99.147%
σ		n/a	n/a	0.000	n/a	n/a	n/a	3.048%	n/a
%RSD		4.130	2.302	0.000	2.602	1.444	1.373	3.587	1.432

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	98.400	98.160	473.900	24680.000	24970.000	102.400	102.500	102.900
2	12:17:27	99.270	97.220	490.000	24960.000	25110.000	104.100	104.500	103.200
3	12:17:46	99.800	100.700	493.000	25370.000	25590.000	102.900	102.400	102.800
x		99.156%	98.702%	97.129%	100.008%	100.908%	103.146%	103.134%	102.951%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.714	1.841	2.119	1.386	1.285	0.848	1.148	0.243

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	104.400	101.600	102.400	101.700	99.500	101.500	0.000	96.990
2	12:17:27	103.900	101.700	103.400	101.500	100.500	103.500	0.000	97.400
3	12:17:46	105.000	104.400	104.600	101.900	105.300	100.900	0.000	98.720
x		104.461%	102.560%	103.445%	101.699%	101.779%	101.982%	0.000	97.703%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.528	1.516	1.076	0.196	3.054	1.361	0.000	0.929

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	78.977%	97.300	98.840	77.372%	99.080	97.780	97.270	99.940
2	12:17:27	79.132%	99.340	100.100	76.585%	98.690	99.250	99.320	99.910
3	12:17:46	77.057%	101.800	102.400	75.115%	99.840	100.200	100.500	99.490
x		78.389%	99.494%	100.444%	76.357%	99.206%	99.064%	99.026%	99.779%
σ		1.156%	n/a	n/a	1.146%	n/a	n/a	n/a	n/a
%RSD		1.474	2.281	1.809	1.500	0.590	1.211	1.649	0.254

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	76.485%	97.850	98.340	98.280	95.560	96.940	79.312%	82.043%
2	12:17:27	77.716%	95.850	98.060	97.800	95.700	96.210	80.673%	84.155%
3	12:17:46	75.814%	100.400	100.100	99.590	97.370	98.910	79.594%	83.984%
x		76.671%	98.033%	98.824%	98.560%	96.209%	97.352%	79.860%	83.394%
σ		0.965%	n/a	n/a	n/a	n/a	n/a	0.718%	1.173%
%RSD		1.258	2.320	1.102	0.940	1.044	1.436	0.900	1.406

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:17:08	104.700	105.000	105.600	105.900	105.800	78.165%
2	12:17:27	105.500	105.600	106.600	107.400	107.000	78.920%
3	12:17:46	105.300	107.300	108.400	109.100	108.300	78.606%
x		105.148%	105.949%	106.882%	107.425%	107.023%	78.564%
σ		n/a	n/a	n/a	n/a	n/a	0.379%
%RSD		0.387	1.091	1.349	1.484	1.165	0.483

CCB2 3/20/2015 12:23:37 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	102.066%	-0.000	-16.440	-14.180	0.000	-9.654	0.824	0.616
2	12:24:15	103.046%	-0.000	-17.870	-15.350	0.000	-8.645	0.635	0.459
3	12:24:34	102.092%	0.031	-16.890	-14.650	0.000	-8.893	0.512	0.464
x		102.402%	0.010	-17.070	-14.720	0.000	-9.064	0.657	0.513
σ		0.558%	0.018	0.732	0.588	0.000	0.526	0.157	0.089
%RSD		0.545	173.200	4.291	3.993	0.000	5.799	23.940	17.390
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	0.224	1.217	0.000	4.095	0.031	-1.906	97.773%	-0.018
2	12:24:15	0.037	1.064	0.000	4.781	8.723	-1.620	96.525%	-0.047
3	12:24:34	0.408	0.828	0.000	3.295	3.011	-0.448	96.134%	-0.077
x		0.223	1.036	0.000	4.057	3.922	-1.325	96.810%	-0.047
σ		0.186	0.196	0.000	0.744	4.417	0.773	0.856%	0.030
%RSD		83.400	18.900	0.000	18.330	112.600	58.330	0.884	62.470
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	0.040	-0.037	0.098	2.215	1.463	0.002	0.015	0.100
2	12:24:15	0.033	-0.001	0.081	1.256	1.788	-0.004	-0.001	0.089
3	12:24:34	0.036	-0.053	0.121	-1.177	0.899	0.001	0.015	0.061
x		0.036	-0.030	0.100	0.765	1.383	-0.000	0.010	0.083
σ		0.003	0.026	0.020	1.749	0.450	0.004	0.009	0.020
%RSD		8.546	87.650	20.250	228.700	32.520	1002.000	94.660	23.940
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	0.057	-0.052	0.242	-0.009	0.034	0.167	0.000	0.006
2	12:24:15	0.011	0.086	0.104	-0.213	-0.669	-0.515	0.000	0.002
3	12:24:34	0.018	-0.148	0.207	-0.231	0.319	-0.780	0.000	0.001
x		0.029	-0.038	0.184	-0.151	-0.105	-0.376	0.000	0.003
σ		0.025	0.118	0.072	0.123	0.508	0.489	0.000	0.003
%RSD		85.180	311.900	39.040	81.570	482.300	130.000	0.000	109.000
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	90.535%	0.135	0.170	91.297%	-0.044	-0.054	0.101	0.076
2	12:24:15	91.321%	0.148	0.109	91.006%	-0.019	-0.024	0.017	0.020
3	12:24:34	91.251%	0.112	0.084	91.106%	-0.032	-0.043	0.030	0.030
x		91.036%	0.132	0.121	91.136%	-0.032	-0.040	0.049	0.042
σ		0.435%	0.018	0.044	0.148%	0.013	0.015	0.045	0.030
%RSD		0.478	14.000	36.520	0.162	39.890	37.840	92.060	71.780
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:23:56	88.188%	0.021	0.040	0.067	-0.003	0.006	88.357%	87.158%
2	12:24:15	89.586%	0.002	0.047	0.049	-0.003	-0.008	88.520%	88.342%
3	12:24:34	89.421%	-0.003	0.055	0.070	-0.011	-0.008	90.166%	88.640%
x		89.065%	0.007	0.048	0.062	-0.006	-0.003	89.015%	88.047%
σ		0.764%	0.013	0.008	0.011	0.005	0.008	1.001%	0.784%
%RSD		0.858	191.900	16.010	17.900	83.090	237.900	1.124	0.890
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:23:56	0.028	0.022	0.217	0.196	0.195	87.073%		
2	12:24:15	0.032	0.022	0.224	0.198	0.204	87.128%		
3	12:24:34	0.023	0.014	0.191	0.197	0.196	87.960%		
x		0.028	0.019	0.210	0.197	0.198	87.387%		
σ		0.005	0.005	0.018	0.001	0.005	0.497%		
%RSD		16.420	24.410	8.349	0.595	2.379	0.568		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:48	78.483%	0.040	22.760	24.630	0.000	55540.000	14340.000	14490.000
2	12:28:07	75.132%	-0.000	23.270	24.000	0.000	56930.000	14600.000	15010.000
3	12:28:26	73.528%	-0.000	25.410	24.140	0.000	56130.000	14920.000	14680.000
x		75.714%	0.013	23.820	24.260	0.000	56200.000	14620.000	14730.000
σ		2.528%	0.023	1.405	0.332	0.000	698.600	288.700	264.800
%RSD		3.339	173.200	5.901	1.367	0.000	1.243	1.975	1.798
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:48	288.000	3441.000	0.000	5349.000	75140.000	72550.000	69.243%	4.922
2	12:28:07	290.000	3511.000	0.000	5443.000	75540.000	74990.000	64.781%	4.678
3	12:28:26	288.700	3348.000	0.000	5369.000	74580.000	74540.000	63.113%	3.661
x		288.900	3434.000	0.000	5387.000	75090.000	74020.000	65.712%	4.420
σ		1.016	81.420	0.000	49.740	483.600	1297.000	3.169%	0.669
%RSD		0.352	2.371	0.000	0.923	0.644	1.753	4.823	15.140
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:48	0.687	5.067	37.190	413.900	486.700	0.472	0.263	2.826
2	12:28:07	1.250	5.112	38.510	423.600	483.700	0.439	0.144	2.867
3	12:28:26	2.758	5.345	37.170	412.600	503.100	0.495	0.263	2.869
x		1.565	5.175	37.620	416.700	491.200	0.469	0.223	2.854
σ		1.071	0.149	0.764	6.052	10.440	0.028	0.069	0.024
%RSD		68.450	2.878	2.031	1.452	2.125	6.071	30.850	0.838
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:48	2.464	7.432	7.966	-0.377	-1.534	-0.038	0.000	169.200
2	12:28:07	2.556	7.489	8.575	0.601	-1.347	0.512	0.000	170.700
3	12:28:26	2.725	7.511	8.351	-0.637	-0.780	0.710	0.000	171.200
x		2.582	7.477	8.297	-0.138	-1.220	0.395	0.000	170.400
σ		0.133	0.041	0.308	0.653	0.393	0.388	0.000	1.015
%RSD		5.134	0.548	3.717	473.900	32.190	98.240	0.000	0.596
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:48	69.377%	8.628	8.716	67.457%	-0.021	-0.037	0.047	0.127
2	12:28:07	67.927%	8.569	8.770	66.190%	-0.016	-0.006	0.197	0.163
3	12:28:26	67.278%	8.622	8.531	66.738%	-0.030	-0.018	0.178	0.130
x		68.194%	8.606	8.673	66.795%	-0.022	-0.020	0.141	0.140
σ		1.075%	0.033	0.125	0.635%	0.007	0.016	0.082	0.020
%RSD		1.576	0.378	1.444	0.951	30.800	76.470	57.860	14.240
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:27:48	69.598%	0.449	0.207	0.202	41.880	40.500	75.625%	76.666%
2	12:28:07	70.424%	0.496	0.198	0.272	41.770	39.770	76.073%	76.731%
3	12:28:26	69.898%	0.454	0.205	0.239	40.620	41.620	77.566%	77.213%
x		69.973%	0.466	0.204	0.237	41.420	40.630	76.421%	76.870%
σ		0.418%	0.026	0.005	0.035	0.699	0.928	1.016%	0.299%
%RSD		0.597	5.642	2.263	14.730	1.689	2.285	1.330	0.389
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:27:48	0.017	0.019	1.163	1.127	1.145	74.012%		
2	12:28:07	0.020	0.010	1.182	1.212	1.193	73.954%		
3	12:28:26	0.019	0.019	1.158	1.151	1.170	73.744%		
x		0.019	0.016	1.168	1.163	1.169	73.903%		
σ		0.001	0.005	0.012	0.044	0.024	0.141%		
%RSD		6.163	31.620	1.048	3.745	2.064	0.191		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	77.275%	0.743	-0.879	1.121	0.000	37140.000	8513.000	8511.000
2	12:31:56	72.729%	0.612	-3.461	-0.339	0.000	37620.000	8628.000	8361.000
3	12:32:15	70.797%	0.943	-4.737	-1.028	0.000	36960.000	8553.000	8252.000
x		73.600%	0.766	-3.026	-0.082	0.000	37240.000	8565.000	8374.000
σ		3.326%	0.166	1.965	1.097	0.000	342.400	58.320	130.000
%RSD		4.519	21.710	64.960	1338.000	0.000	0.919	0.681	1.552

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	3272.000	3474.000	0.000	6123.000	37350.000	34790.000	65.068%	5.859
2	12:31:56	3194.000	3317.000	0.000	6039.000	38400.000	34370.000	62.771%	6.253
3	12:32:15	3192.000	3352.000	0.000	6066.000	38510.000	35100.000	61.944%	5.279
x		3219.000	3381.000	0.000	6076.000	38090.000	34750.000	63.261%	5.797
σ		45.950	82.180	0.000	43.270	637.500	365.700	1.618%	0.490
%RSD		1.427	2.431	0.000	0.712	1.674	1.052	2.558	8.452

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	13.210	5.527	1586.000	3756.000	3739.000	19.560	10.650	50.190
2	12:31:56	12.590	5.401	1632.000	3824.000	3806.000	19.460	11.090	50.800
3	12:32:15	13.800	5.356	1584.000	3729.000	3759.000	19.110	10.600	48.630
x		13.200	5.428	1601.000	3770.000	3768.000	19.380	10.780	49.870
σ		0.605	0.089	26.870	48.630	34.060	0.236	0.270	1.124
%RSD		4.586	1.633	1.679	1.290	0.904	1.219	2.504	2.253

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	51.040	123.900	126.100	0.146	-2.534	-2.204	0.000	79.590
2	12:31:56	52.090	124.900	125.600	0.655	-2.180	-1.906	0.000	80.690
3	12:32:15	49.030	123.100	124.400	1.043	-2.971	-1.430	0.000	81.790
x		50.720	124.000	125.400	0.615	-2.562	-1.847	0.000	80.690
σ		1.553	0.935	0.870	0.450	0.396	0.390	0.000	1.100
%RSD		3.061	0.754	0.694	73.170	15.480	21.140	0.000	1.363

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	79.561%	0.192	0.278	66.674%	-0.005	-0.007	11.010	7.771
2	12:31:56	78.692%	0.211	0.224	66.229%	-0.020	-0.036	0.866	0.899
3	12:32:15	76.499%	0.230	0.249	64.231%	-0.004	-0.009	0.858	1.006
x		78.251%	0.211	0.250	65.711%	-0.010	-0.018	4.246	3.226
σ		1.578%	0.019	0.027	1.301%	0.009	0.016	5.862	3.937
%RSD		2.016	8.837	10.970	1.980	92.820	92.170	138.100	122.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	68.425%	0.416	0.296	0.326	194.500	194.500	75.954%	75.997%
2	12:31:56	68.923%	0.414	0.291	0.334	195.000	194.400	77.363%	77.455%
3	12:32:15	68.022%	0.298	0.339	0.264	197.700	198.000	76.995%	76.912%
x		68.457%	0.376	0.309	0.308	195.800	195.600	76.770%	76.788%
σ		0.452%	0.068	0.026	0.039	1.725	2.025	0.731%	0.737%
%RSD		0.660	18.020	8.537	12.510	0.881	1.035	0.952	0.960

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:31:37	0.070	0.054	139.400	129.100	133.500	73.868%
2	12:31:56	0.054	0.055	141.900	130.800	135.500	74.129%
3	12:32:15	0.043	0.063	140.700	131.500	135.700	74.729%
x		0.056	0.057	140.700	130.500	134.900	74.242%
σ		0.014	0.005	1.206	1.224	1.191	0.442%
%RSD		24.340	9.101	0.857	0.938	0.883	0.595

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	78.376%	0.122	-7.686	-2.810	0.000	36010.000	5391.000	5281.000
2	12:35:43	75.378%	0.127	-3.042	-3.874	0.000	35860.000	5388.000	5419.000
3	12:36:02	73.919%	0.043	-6.749	-4.112	0.000	34880.000	5331.000	5246.000
x		75.891%	0.097	-5.826	-3.599	0.000	35590.000	5370.000	5315.000
σ		2.273%	0.047	2.456	0.693	0.000	613.000	33.690	91.750
%RSD		2.995	48.320	42.160	19.260	0.000	1.722	0.627	1.726

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	551.400	1860.000	0.000	4939.000	25210.000	23670.000	64.452%	4.563
2	12:35:43	562.400	1870.000	0.000	4927.000	26490.000	23600.000	63.037%	5.624
3	12:36:02	529.100	1839.000	0.000	4900.000	25140.000	23720.000	61.932%	5.956
x		547.600	1856.000	0.000	4922.000	25610.000	23670.000	63.140%	5.381
σ		16.940	15.680	0.000	19.970	761.800	61.330	1.263%	0.728
%RSD		3.094	0.845	0.000	0.406	2.975	0.259	2.000	13.530

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	3.094	1.626	153.300	1038.000	1066.000	1.773	1.561	8.187
2	12:35:43	2.292	1.650	155.000	1050.000	1084.000	1.810	1.422	7.554
3	12:36:02	2.164	1.648	154.000	1035.000	1078.000	1.690	1.272	8.008
x		2.516	1.641	154.100	1041.000	1076.000	1.758	1.418	7.916
σ		0.504	0.014	0.844	8.016	8.967	0.062	0.144	0.326
%RSD		20.040	0.823	0.547	0.770	0.833	3.500	10.180	4.119

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	7.373	19.390	20.490	1.145	-1.497	-0.470	0.000	67.000
2	12:35:43	7.289	20.190	20.150	-0.020	-1.342	-1.247	0.000	67.410
3	12:36:02	7.352	19.900	20.060	-0.226	-1.430	-1.298	0.000	67.960
x		7.338	19.830	20.230	0.300	-1.423	-1.005	0.000	67.450
σ		0.044	0.406	0.225	0.739	0.077	0.464	0.000	0.481
%RSD		0.597	2.047	1.110	246.500	5.438	46.130	0.000	0.713

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	69.590%	1.171	1.215	67.945%	-0.034	-0.035	0.137	0.121
2	12:35:43	68.185%	1.244	1.087	66.612%	-0.018	-0.044	9.588	6.425
3	12:36:02	67.451%	1.267	1.178	66.260%	-0.001	-0.044	0.114	0.150
x		68.409%	1.228	1.160	66.939%	-0.018	-0.041	3.279	2.232
σ		1.087%	0.050	0.066	0.889%	0.017	0.005	5.463	3.631
%RSD		1.589	4.098	5.695	1.328	93.010	12.390	166.600	162.700

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	69.706%	0.357	0.174	0.217	37.160	38.180	75.361%	75.258%
2	12:35:43	69.283%	0.288	0.189	0.215	38.270	36.980	77.126%	76.685%
3	12:36:02	70.046%	0.376	0.197	0.226	36.360	37.540	77.055%	77.199%
x		69.678%	0.340	0.187	0.219	37.260	37.570	76.514%	76.380%
σ		0.382%	0.047	0.012	0.006	0.960	0.600	0.999%	1.006%
%RSD		0.548	13.710	6.277	2.612	2.576	1.598	1.306	1.317

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:35:24	0.005	0.010	9.467	8.480	8.931	73.964%
2	12:35:43	0.009	0.008	9.280	8.726	8.987	74.497%
3	12:36:02	0.008	0.006	9.420	8.582	8.995	75.681%
x		0.007	0.008	9.389	8.596	8.971	74.714%
σ		0.002	0.002	0.097	0.123	0.035	0.879%
%RSD		30.200	23.640	1.035	1.435	0.388	1.176

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	82.408%	-0.000	-15.530	-12.760	0.000	7397.000	1126.000	1106.000
2	12:39:30	78.576%	0.040	-15.970	-13.550	0.000	7797.000	1182.000	1153.000
3	12:39:49	79.145%	-0.000	-17.200	-13.410	0.000	7425.000	1093.000	1100.000
x		80.043%	0.013	-16.230	-13.240	0.000	7540.000	1133.000	1119.000
σ		2.068%	0.023	0.865	0.422	0.000	223.100	44.960	29.030
%RSD		2.584	173.200	5.330	3.186	0.000	2.959	3.967	2.593

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	115.100	388.900	0.000	974.600	5062.000	4780.000	70.943%	1.508
2	12:39:30	119.000	399.000	0.000	964.900	5167.000	4818.000	70.097%	1.568
3	12:39:49	113.900	384.900	0.000	968.100	5436.000	4766.000	67.828%	1.282
x		116.000	390.900	0.000	969.200	5222.000	4788.000	69.623%	1.453
σ		2.656	7.245	0.000	4.937	193.100	26.880	1.611%	0.151
%RSD		2.290	1.853	0.000	0.509	3.699	0.561	2.314	10.400

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	0.741	0.306	30.940	201.600	207.800	0.362	0.352	1.712
2	12:39:30	1.174	0.332	30.770	198.000	216.500	0.410	0.313	1.453
3	12:39:49	0.811	0.321	30.520	199.600	212.900	0.367	0.365	1.787
x		0.908	0.320	30.740	199.700	212.400	0.380	0.344	1.650
σ		0.233	0.013	0.209	1.769	4.370	0.026	0.027	0.175
%RSD		25.600	4.072	0.681	0.886	2.057	6.951	7.889	10.620

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	1.271	4.541	5.144	0.194	-1.431	0.385	0.000	13.600
2	12:39:30	1.576	4.475	4.173	-0.012	-1.322	-0.893	0.000	13.720
3	12:39:49	1.606	3.991	4.445	0.524	-1.125	-0.176	0.000	13.710
x		1.485	4.336	4.587	0.235	-1.293	-0.228	0.000	13.670
σ		0.185	0.301	0.501	0.271	0.155	0.641	0.000	0.067
%RSD		12.480	6.932	10.930	115.000	11.970	281.100	0.000	0.492

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	71.722%	0.238	0.302	71.786%	-0.033	-0.058	0.082	0.070
2	12:39:30	70.782%	0.235	0.298	71.202%	-0.046	-0.052	-0.026	-0.008
3	12:39:49	70.278%	0.279	0.313	70.211%	-0.023	-0.048	-0.020	0.005
x		70.927%	0.250	0.305	71.066%	-0.034	-0.053	0.012	0.023
σ		0.733%	0.024	0.007	0.796%	0.011	0.005	0.060	0.042
%RSD		1.033	9.780	2.434	1.121	32.940	9.041	502.000	185.700

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	71.641%	0.067	0.031	0.039	7.080	7.484	75.495%	75.281%
2	12:39:30	72.702%	0.001	0.048	0.053	7.721	7.995	76.575%	76.303%
3	12:39:49	71.863%	0.042	0.020	0.023	7.995	7.302	76.246%	76.129%
x		72.069%	0.037	0.033	0.038	7.598	7.594	76.106%	75.904%
σ		0.560%	0.033	0.014	0.015	0.469	0.359	0.553%	0.547%
%RSD		0.777	91.150	41.800	38.750	6.179	4.730	0.727	0.720

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:39:11	-0.002	-0.003	1.842	1.641	1.739	77.830%
2	12:39:30	-0.001	-0.003	1.808	1.701	1.751	77.794%
3	12:39:49	-0.004	-0.004	1.901	1.711	1.801	77.296%
x		-0.003	-0.003	1.850	1.685	1.764	77.640%
σ		0.002	0.001	0.047	0.038	0.033	0.299%
%RSD		63.950	25.070	2.563	2.239	1.866	0.385

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	70.083%	52.480	1010.000	917.500	0.000	83410.000	49500.000	48270.000
2	12:43:18	69.803%	47.240	960.600	877.700	0.000	78800.000	46910.000	47090.000
3	12:43:37	68.632%	48.640	961.900	883.200	0.000	77940.000	46670.000	46830.000
x		69.506%	49.460	977.500	892.800	0.000	80050.000	47690.000	47400.000
σ		0.770%	2.713	28.200	21.560	0.000	2941.000	1570.000	766.500
%RSD		1.107	5.486	2.885	2.415	0.000	3.674	3.292	1.617

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	2335.000	9972.000	0.000	49890.000	72180.000	71250.000	64.342%	899.800
2	12:43:18	2255.000	9273.000	0.000	48580.000	71080.000	71610.000	59.349%	898.300
3	12:43:37	2329.000	9632.000	0.000	49160.000	72110.000	70950.000	59.220%	933.300
x		2306.000	9626.000	0.000	49210.000	71790.000	71270.000	60.970%	910.500
σ		44.390	349.200	0.000	657.300	615.100	330.100	2.921%	19.800
%RSD		1.925	3.627	0.000	1.336	0.857	0.463	4.790	2.174

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	463.500	180.000	554.800	1701.000	1724.000	453.300	441.500	226.300
2	12:43:18	466.000	186.700	569.400	1727.000	1807.000	466.400	448.500	230.200
3	12:43:37	476.500	185.600	567.200	1705.000	1884.000	456.600	442.700	225.500
x		468.700	184.100	563.800	1711.000	1805.000	458.700	444.300	227.400
σ		6.872	3.579	7.861	13.640	79.820	6.839	3.728	2.522
%RSD		1.466	1.944	1.394	0.797	4.422	1.491	0.839	1.109

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	225.600	474.100	473.600	35.450	8.343	9.051	0.000	1010.000
2	12:43:18	228.900	474.000	472.700	35.690	7.154	9.922	0.000	1030.000
3	12:43:37	228.100	476.800	483.400	36.490	7.890	8.227	0.000	1019.000
x		227.500	475.000	476.600	35.880	7.796	9.067	0.000	1020.000
σ		1.702	1.596	5.917	0.547	0.601	0.847	0.000	9.663
%RSD		0.748	0.336	1.242	1.526	7.703	9.346	0.000	0.948

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	65.511%	958.800	978.800	63.280%	47.310	47.640	49.560	43.130
2	12:43:18	64.689%	975.500	1006.000	62.057%	48.400	47.380	49.750	41.580
3	12:43:37	64.110%	970.000	998.400	61.977%	47.880	46.830	49.030	42.040
x		64.770%	968.100	994.300	62.438%	47.860	47.290	49.450	42.250
σ		0.704%	8.472	13.970	0.730%	0.543	0.417	0.376	0.795
%RSD		1.086	0.875	1.405	1.170	1.134	0.881	0.761	1.881

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	66.254%	1882.000	470.800	468.200	1828.000	1838.000	73.517%	74.514%
2	12:43:18	65.546%	1960.000	482.700	474.500	1857.000	1851.000	73.997%	74.328%
3	12:43:37	66.155%	1930.000	475.300	471.400	1816.000	1822.000	75.416%	75.817%
x		65.985%	1924.000	476.300	471.400	1834.000	1837.000	74.310%	74.886%
σ		0.383%	38.890	6.003	3.149	20.930	14.480	0.987%	0.811%
%RSD		0.581	2.022	1.260	0.668	1.141	0.788	1.329	1.083

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:59	50.660	50.190	28.510	27.900	28.280	71.565%
2	12:43:18	50.270	50.380	28.500	28.150	28.400	72.811%
3	12:43:37	50.880	50.680	29.110	28.730	28.960	72.233%
x		50.610	50.410	28.710	28.260	28.550	72.203%
σ		0.310	0.249	0.348	0.426	0.365	0.623%
%RSD		0.613	0.494	1.211	1.507	1.280	0.863

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:47	72.986%	51.260	1039.000	913.000	0.000	81030.000	49580.000	48890.000
2	12:47:06	70.390%	49.880	1009.000	919.900	0.000	81910.000	49240.000	48030.000
3	12:47:26	69.365%	49.480	971.000	927.500	0.000	82260.000	49080.000	48670.000
x		70.914%	50.210	1006.000	920.100	0.000	81730.000	49300.000	48530.000
σ		1.866%	0.931	34.280	7.240	0.000	635.100	256.500	448.300
%RSD		2.632	1.854	3.406	0.787	0.000	0.777	0.520	0.924
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:47	2317.000	9995.000	0.000	51310.000	73930.000	73840.000	63.234%	940.600
2	12:47:06	2329.000	9978.000	0.000	50410.000	76120.000	73210.000	60.497%	925.300
3	12:47:26	2249.000	9775.000	0.000	49960.000	72410.000	73230.000	60.748%	933.600
x		2298.000	9916.000	0.000	50560.000	74150.000	73430.000	61.493%	933.200
σ		43.090	122.200	0.000	691.300	1863.000	358.700	1.513%	7.660
%RSD		1.875	1.232	0.000	1.367	2.512	0.488	2.460	0.821
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:47	480.800	192.800	556.800	1704.000	1747.000	459.200	458.500	231.000
2	12:47:06	487.700	192.800	569.400	1752.000	1876.000	469.400	450.800	233.500
3	12:47:26	475.500	190.300	555.900	1706.000	1913.000	468.200	450.000	231.100
x		481.300	192.000	560.700	1721.000	1845.000	465.600	453.100	231.900
σ		6.089	1.487	7.549	27.100	87.270	5.580	4.661	1.425
%RSD		1.265	0.775	1.346	1.575	4.729	1.198	1.029	0.615
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:47	233.400	479.900	481.600	34.860	7.426	9.083	0.000	1027.000
2	12:47:06	230.500	482.300	482.300	36.390	8.087	7.690	0.000	1032.000
3	12:47:26	229.600	479.700	480.900	34.610	8.348	8.777	0.000	1036.000
x		231.200	480.700	481.600	35.290	7.954	8.516	0.000	1032.000
σ		1.940	1.458	0.692	0.962	0.475	0.732	0.000	4.547
%RSD		0.839	0.303	0.144	2.725	5.977	8.595	0.000	0.441
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:47	66.402%	989.700	1008.000	64.272%	48.720	48.130	49.400	41.350
2	12:47:06	65.266%	986.300	1008.000	63.147%	48.040	46.950	48.550	42.170
3	12:47:26	63.606%	1010.000	1030.000	60.598%	49.340	48.770	49.530	41.940
x		65.091%	995.200	1015.000	62.672%	48.700	47.950	49.160	41.820
σ		1.406%	12.530	12.800	1.883%	0.648	0.925	0.535	0.422
%RSD		2.160	1.259	1.261	3.004	1.331	1.930	1.088	1.009
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:46:47	66.375%	1992.000	500.400	484.400	1862.000	1874.000	74.022%	74.893%
2	12:47:06	66.797%	1962.000	482.300	478.900	1840.000	1858.000	74.885%	75.422%
3	12:47:26	65.322%	2003.000	506.100	487.500	1877.000	1873.000	74.226%	74.844%
x		66.165%	1986.000	496.300	483.600	1860.000	1868.000	74.378%	75.053%
σ		0.759%	21.090	12.390	4.357	18.760	8.684	0.451%	0.320%
%RSD		1.148	1.062	2.497	0.901	1.009	0.465	0.607	0.427
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	12:46:47	51.220	51.150	26.380	26.390	26.300	71.012%		
2	12:47:06	52.170	51.670	26.490	26.310	26.310	71.685%		
3	12:47:26	51.980	51.900	26.650	26.400	26.470	72.299%		
x		51.790	51.570	26.510	26.370	26.360	71.666%		
σ		0.501	0.382	0.133	0.051	0.098	0.644%		
%RSD		0.967	0.741	0.500	0.192	0.372	0.899		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	75.432%	50.500	1009.000	929.700	0.000	79600.000	49500.000	49420.000
2	12:50:55	72.025%	48.790	989.500	944.400	0.000	79150.000	49360.000	48580.000
3	12:51:14	70.778%	51.620	1073.000	952.600	0.000	81390.000	51080.000	49800.000
x		72.745%	50.310	1024.000	942.300	0.000	80050.000	49980.000	49270.000
σ		2.409%	1.426	43.520	11.590	0.000	1188.000	955.400	624.100
%RSD		3.312	2.834	4.251	1.230	0.000	1.484	1.911	1.267

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	2380.000	10150.000	0.000	51110.000	73230.000	72720.000	63.832%	992.500
2	12:50:55	2301.000	10010.000	0.000	51800.000	73650.000	72790.000	61.934%	970.300
3	12:51:14	2328.000	10000.000	0.000	51030.000	74140.000	73110.000	59.790%	968.200
x		2336.000	10050.000	0.000	51310.000	73680.000	72870.000	61.852%	977.000
σ		39.920	83.840	0.000	426.600	455.900	209.400	2.022%	13.500
%RSD		1.709	0.834	0.000	0.831	0.619	0.287	3.269	1.381

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	488.300	194.400	626.400	2000.000	2066.000	488.500	478.100	244.600
2	12:50:55	485.000	196.500	627.600	1995.000	2041.000	480.200	473.400	246.300
3	12:51:14	487.700	193.000	632.300	1991.000	2042.000	477.900	470.900	240.500
x		487.000	194.600	628.800	1995.000	2050.000	482.200	474.100	243.800
σ		1.758	1.778	3.108	4.279	14.320	5.580	3.624	2.985
%RSD		0.361	0.913	0.494	0.215	0.699	1.157	0.764	1.225

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	246.100	512.100	505.100	36.100	8.324	9.557	0.000	1039.000
2	12:50:55	243.400	504.000	498.500	38.340	8.165	10.830	0.000	1044.000
3	12:51:14	239.000	509.100	508.500	35.610	8.614	9.516	0.000	1033.000
x		242.800	508.400	504.000	36.680	8.368	9.966	0.000	1038.000
σ		3.599	4.114	5.043	1.457	0.228	0.745	0.000	5.736
%RSD		1.482	0.809	1.001	3.971	2.719	7.471	0.000	0.552

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	67.489%	1027.000	1046.000	63.811%	47.650	46.610	49.840	43.280
2	12:50:55	66.576%	1052.000	1067.000	63.216%	47.240	46.780	49.420	44.650
3	12:51:14	66.721%	1038.000	1059.000	63.313%	47.440	46.010	51.000	43.110
x		66.929%	1039.000	1057.000	63.447%	47.440	46.470	50.090	43.680
σ		0.491%	12.710	10.800	0.319%	0.202	0.403	0.816	0.844
%RSD		0.733	1.223	1.021	0.503	0.425	0.867	1.628	1.932

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	66.167%	2080.000	508.900	503.200	1922.000	1926.000	73.971%	74.528%
2	12:50:55	67.180%	2038.000	499.700	495.400	1888.000	1911.000	74.874%	75.388%
3	12:51:14	66.516%	2063.000	504.800	503.300	1934.000	1926.000	74.493%	75.408%
x		66.621%	2060.000	504.500	500.600	1915.000	1921.000	74.446%	75.108%
σ		0.515%	21.480	4.589	4.554	24.030	8.914	0.453%	0.502%
%RSD		0.772	1.043	0.909	0.910	1.255	0.464	0.609	0.669

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:50:35	53.630	53.990	31.010	30.310	30.750	71.313%
2	12:50:55	53.340	53.410	30.800	30.480	30.620	72.290%
3	12:51:14	53.290	54.010	31.020	29.930	30.760	72.371%
x		53.420	53.800	30.940	30.240	30.710	71.991%
σ		0.188	0.338	0.122	0.281	0.081	0.589%
%RSD		0.351	0.628	0.393	0.930	0.264	0.818

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	79.682%	0.040	7.295	11.760	0.000	90510.000	7166.000	7134.000
2	12:54:43	75.836%	-0.000	6.264	11.120	0.000	92010.000	7328.000	7282.000
3	12:55:02	75.437%	0.042	8.217	10.910	0.000	88090.000	6956.000	6977.000
x		76.985%	0.027	7.259	11.260	0.000	90200.000	7150.000	7131.000
σ		2.344%	0.024	0.977	0.441	0.000	1975.000	186.500	152.800
%RSD		3.045	86.700	13.460	3.913	0.000	2.189	2.609	2.142

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	139.900	1849.000	0.000	3521.000	38970.000	36730.000	66.453%	3.307
2	12:54:43	142.400	1853.000	0.000	3625.000	40130.000	37440.000	64.603%	3.178
3	12:55:02	134.800	1777.000	0.000	3507.000	40560.000	36610.000	62.609%	3.094
x		139.000	1826.000	0.000	3551.000	39890.000	36920.000	64.555%	3.193
σ		3.864	42.850	0.000	64.490	820.100	447.500	1.922%	0.108
%RSD		2.779	2.346	0.000	1.816	2.056	1.212	2.978	3.365

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	1.464	1.295	19.340	229.700	279.900	0.224	0.524	3.538
2	12:54:43	1.414	1.215	19.530	226.100	269.000	0.207	0.700	3.783
3	12:55:02	3.073	1.280	19.900	227.100	267.700	0.217	0.377	3.538
x		1.984	1.263	19.590	227.600	272.200	0.216	0.534	3.620
σ		0.944	0.042	0.283	1.860	6.705	0.009	0.162	0.141
%RSD		47.570	3.362	1.446	0.817	2.463	3.976	30.280	3.910

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	3.280	15.170	15.240	0.291	-0.823	0.056	0.000	124.700
2	12:54:43	3.128	14.450	15.650	0.924	-0.862	0.168	0.000	124.900
3	12:55:02	3.302	14.550	16.280	0.452	-1.494	-0.029	0.000	125.200
x		3.237	14.720	15.720	0.556	-1.060	0.065	0.000	124.900
σ		0.095	0.389	0.521	0.329	0.376	0.099	0.000	0.283
%RSD		2.932	2.641	3.311	59.220	35.530	151.600	0.000	0.227

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	67.203%	3.170	3.224	66.715%	-0.029	-0.042	8.083	5.436
2	12:54:43	66.707%	2.538	2.764	66.211%	-0.027	-0.042	10.160	6.796
3	12:55:02	66.397%	2.293	2.135	66.277%	-0.039	-0.040	11.190	7.465
x		66.769%	2.667	2.708	66.401%	-0.032	-0.041	9.811	6.566
σ		0.406%	0.453	0.547	0.274%	0.006	0.001	1.583	1.034
%RSD		0.609	16.970	20.200	0.413	19.310	2.616	16.140	15.740

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	68.178%	2.572	1.438	1.472	38.520	38.790	74.573%	74.928%
2	12:54:43	68.867%	2.087	1.224	1.038	37.970	38.600	75.384%	75.682%
3	12:55:02	68.871%	1.939	1.038	0.955	38.910	38.370	75.848%	76.165%
x		68.639%	2.199	1.234	1.155	38.470	38.590	75.268%	75.592%
σ		0.399%	0.331	0.200	0.277	0.473	0.208	0.645%	0.623%
%RSD		0.582	15.060	16.240	24.010	1.231	0.540	0.857	0.825

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:54:24	0.121	0.113	0.882	0.790	0.854	72.439%
2	12:54:43	0.129	0.119	0.835	0.791	0.852	73.732%
3	12:55:02	0.108	0.091	0.912	0.809	0.845	74.057%
x		0.119	0.108	0.876	0.797	0.851	73.409%
σ		0.011	0.015	0.039	0.011	0.005	0.856%
%RSD		8.976	13.590	4.421	1.335	0.547	1.166

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	79.673%	0.120	-2.153	0.709	0.000	29890.000	6113.000	6025.000
2	12:58:32	72.701%	0.131	1.075	2.188	0.000	30600.000	6240.000	6155.000
3	12:58:51	73.591%	0.260	-0.005	3.791	0.000	30260.000	5986.000	5985.000
x		75.322%	0.170	-0.361	2.229	0.000	30250.000	6113.000	6055.000
σ		3.795%	0.078	1.643	1.541	0.000	352.400	127.200	88.940
%RSD		5.038	45.540	455.300	69.150	0.000	1.165	2.081	1.469

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	1989.000	3102.000	0.000	6346.000	23320.000	21650.000	66.572%	30.790
2	12:58:32	2045.000	3188.000	0.000	6328.000	23470.000	21670.000	64.460%	25.980
3	12:58:51	1964.000	3148.000	0.000	6414.000	23210.000	22030.000	63.276%	27.320
x		2000.000	3146.000	0.000	6362.000	23330.000	21780.000	64.770%	28.030
σ		41.620	42.710	0.000	45.120	128.700	214.000	1.670%	2.484
%RSD		2.081	1.358	0.000	0.709	0.552	0.982	2.578	8.861

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	4.174	3.291	171.900	3104.000	3172.000	2.445	3.192	6.555
2	12:58:32	6.840	3.308	173.500	3158.000	3187.000	2.439	2.965	6.138
3	12:58:51	5.627	3.260	172.800	3164.000	3210.000	2.623	3.202	5.971
x		5.547	3.287	172.800	3142.000	3190.000	2.502	3.120	6.222
σ		1.335	0.024	0.794	33.380	19.050	0.104	0.134	0.301
%RSD		24.060	0.736	0.460	1.062	0.597	4.174	4.306	4.837

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	6.266	30.290	30.520	-0.305	-2.100	-0.306	0.000	62.740
2	12:58:32	6.324	29.690	30.240	0.825	-0.952	-0.390	0.000	63.360
3	12:58:51	6.432	29.920	29.780	1.253	-1.818	-0.183	0.000	63.440
x		6.340	29.970	30.180	0.591	-1.623	-0.293	0.000	63.180
σ		0.084	0.303	0.375	0.805	0.598	0.104	0.000	0.382
%RSD		1.330	1.012	1.242	136.200	36.850	35.590	0.000	0.604

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	68.292%	1.081	1.103	66.061%	-0.025	-0.020	0.162	0.273
2	12:58:32	66.827%	0.997	1.097	65.712%	-0.033	-0.024	9.962	6.821
3	12:58:51	65.940%	1.026	1.056	65.356%	-0.017	-0.041	8.072	5.524
x		67.020%	1.035	1.085	65.710%	-0.025	-0.028	6.065	4.206
σ		1.187%	0.043	0.026	0.353%	0.008	0.011	5.199	3.467
%RSD		1.772	4.132	2.355	0.537	31.470	39.210	85.720	82.430

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	68.562%	1.242	0.596	0.673	46.010	45.420	73.374%	73.417%
2	12:58:32	67.922%	1.234	0.582	0.647	45.560	46.830	74.313%	74.437%
3	12:58:51	68.108%	1.195	0.460	0.541	45.630	45.100	75.264%	74.631%
x		68.197%	1.224	0.546	0.620	45.730	45.780	74.317%	74.161%
σ		0.329%	0.025	0.075	0.070	0.245	0.921	0.945%	0.652%
%RSD		0.482	2.041	13.770	11.290	0.536	2.013	1.271	0.879

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	12:58:12	0.096	0.078	6.198	5.903	6.045	72.943%
2	12:58:32	0.066	0.079	6.273	5.759	6.008	73.777%
3	12:58:51	0.083	0.075	6.409	5.776	6.031	74.235%
x		0.081	0.077	6.294	5.813	6.028	73.652%
σ		0.015	0.002	0.107	0.079	0.018	0.655%
%RSD		18.420	3.187	1.699	1.361	0.305	0.890

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	76.604%	0.042	2.843	1.845	0.000	32380.000	6466.000	6382.000
2	13:02:21	74.803%	0.043	-0.523	2.968	0.000	32090.000	6277.000	6187.000
3	13:02:40	74.475%	0.086	4.600	1.589	0.000	32180.000	6400.000	6277.000
x		75.294%	0.057	2.307	2.134	0.000	32220.000	6381.000	6282.000
σ		1.146%	0.025	2.603	0.733	0.000	147.900	96.000	97.580
%RSD		1.522	44.550	112.900	34.360	0.000	0.459	1.505	1.553

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	2161.000	3444.000	0.000	6207.000	24540.000	22940.000	65.084%	27.050
2	13:02:21	2072.000	3407.000	0.000	6232.000	24560.000	23260.000	62.443%	30.480
3	13:02:40	2083.000	3424.000	0.000	6201.000	24650.000	23160.000	60.815%	28.950
x		2106.000	3425.000	0.000	6213.000	24590.000	23120.000	62.781%	28.830
σ		48.490	18.460	0.000	16.370	58.500	166.900	2.154%	1.714
%RSD		2.303	0.539	0.000	0.264	0.238	0.722	3.431	5.947

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	5.746	3.522	145.200	3297.000	3323.000	2.318	2.641	6.193
2	13:02:21	6.320	3.429	148.700	3321.000	3358.000	2.425	2.671	6.201
3	13:02:40	6.506	3.633	147.500	3258.000	3315.000	2.320	2.573	6.193
x		6.191	3.528	147.100	3292.000	3332.000	2.354	2.628	6.195
σ		0.396	0.102	1.800	31.970	22.970	0.062	0.050	0.005
%RSD		6.397	2.890	1.224	0.971	0.689	2.619	1.916	0.076

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	5.871	22.500	23.120	0.748	-0.877	-0.775	0.000	64.350
2	13:02:21	6.228	23.010	23.700	2.492	-1.628	-0.474	0.000	65.510
3	13:02:40	6.139	22.980	24.350	2.395	-1.191	0.289	0.000	65.720
x		6.079	22.830	23.720	1.878	-1.232	-0.320	0.000	65.190
σ		0.186	0.286	0.614	0.980	0.377	0.549	0.000	0.742
%RSD		3.059	1.255	2.589	52.190	30.600	171.400	0.000	1.138

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	67.509%	1.821	1.572	66.088%	-0.044	-0.047	0.020	0.044
2	13:02:21	66.367%	1.720	1.606	65.490%	-0.017	-0.051	0.039	0.047
3	13:02:40	65.856%	1.774	1.568	64.772%	-0.009	-0.027	0.029	0.020
x		66.577%	1.772	1.582	65.450%	-0.023	-0.042	0.029	0.037
σ		0.846%	0.050	0.021	0.659%	0.019	0.013	0.009	0.015
%RSD		1.271	2.847	1.323	1.007	80.610	30.670	31.950	39.360

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	67.346%	0.894	0.379	0.352	43.170	42.360	73.212%	73.031%
2	13:02:21	67.541%	1.047	0.395	0.364	42.550	44.290	73.296%	73.661%
3	13:02:40	67.722%	1.012	0.427	0.355	42.920	44.630	74.157%	74.086%
x		67.536%	0.984	0.400	0.357	42.880	43.760	73.555%	73.592%
σ		0.188%	0.080	0.025	0.007	0.313	1.221	0.523%	0.531%
%RSD		0.278	8.147	6.130	1.833	0.730	2.789	0.711	0.722

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:02:01	0.072	0.061	4.591	4.281	4.387	71.565%
2	13:02:21	0.066	0.077	4.589	4.102	4.390	72.171%
3	13:02:40	0.050	0.049	4.568	4.081	4.299	73.000%
x		0.063	0.063	4.582	4.154	4.359	72.245%
σ		0.011	0.014	0.013	0.110	0.051	0.721%
%RSD		17.600	22.290	0.273	2.653	1.181	0.997

CCV 1487954 3/20/2015 1:05:39 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	94.332%	95.220	79.900	78.260	0.000	47160.000	47420.000	47210.000
2	13:05:58	92.228%	100.800	82.280	80.880	0.000	47920.000	48230.000	48340.000
3	13:06:17	93.490%	97.540	88.240	78.100	0.000	48030.000	48410.000	47830.000
x		93.350%	97.869%	83.475%	79.080%	0.000	95.406%	96.037%	95.586%
σ		1.059%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		1.134	2.891	5.146	1.976	0.000	0.994	1.096	1.186

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	489.800	4744.000	0.000	46710.000	48180.000	47320.000	87.847%	98.400
2	13:05:58	501.600	4788.000	0.000	47590.000	48550.000	48720.000	84.560%	95.580
3	13:06:17	490.000	4773.000	0.000	48420.000	49660.000	48520.000	82.739%	97.140
x		98.761%	95.370%	0.000	95.146%	97.595%	96.370%	85.049%	97.039%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.589%	n/a
%RSD		1.362	0.467	0.000	1.790	1.581	1.572	3.044	1.452

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	99.300	98.260	475.800	24480.000	24260.000	101.000	100.500	101.400
2	13:05:58	98.230	98.940	478.300	24770.000	24850.000	100.800	101.500	101.700
3	13:06:17	98.160	98.300	483.100	25110.000	24900.000	101.100	99.560	101.200
x		98.563%	98.497%	95.819%	99.147%	98.674%	100.969%	100.504%	101.426%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.652	0.388	0.773	1.265	1.454	0.128	0.950	0.219

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	102.700	101.800	98.500	102.000	103.000	104.100	0.000	96.750
2	13:05:58	102.800	101.300	100.100	98.240	101.700	99.710	0.000	96.540
3	13:06:17	103.100	102.700	103.800	101.900	99.780	101.900	0.000	97.570
x		102.849%	101.937%	100.809%	100.728%	101.516%	101.915%	0.000	96.953%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.172	0.697	2.707	2.139	1.620	2.165	0.000	0.561

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	77.153%	99.160	98.540	75.134%	98.360	99.230	97.690	98.360
2	13:05:58	77.626%	99.000	98.800	75.228%	99.170	98.810	98.350	99.000
3	13:06:17	76.978%	99.200	101.000	74.937%	98.780	98.640	99.500	99.400
x		77.253%	99.118%	99.443%	75.100%	98.770%	98.893%	98.513%	98.920%
σ		0.335%	n/a	n/a	0.149%	n/a	n/a	n/a	n/a
%RSD		0.434	0.108	1.354	0.198	0.413	0.304	0.931	0.531

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	74.248%	98.020	97.770	97.230	94.800	96.480	76.498%	76.315%
2	13:05:58	74.584%	98.650	98.760	98.260	96.180	96.460	77.603%	76.970%
3	13:06:17	75.364%	97.460	98.230	98.340	98.660	96.590	77.606%	77.699%
x		74.732%	98.047%	98.254%	97.942%	96.550%	96.511%	77.236%	76.995%
σ		0.573%	n/a	n/a	n/a	n/a	n/a	0.639%	0.692%
%RSD		0.767	0.608	0.501	0.633	2.027	0.077	0.827	0.899

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:39	102.200	103.000	103.600	104.200	103.900	77.114%
2	13:05:58	105.200	104.400	106.900	107.400	106.400	76.797%
3	13:06:17	104.900	105.300	106.900	106.700	106.500	76.933%
x		104.063%	104.245%	105.830%	106.129%	105.606%	76.948%
σ		n/a	n/a	n/a	n/a	n/a	0.159%
%RSD		1.592	1.160	1.793	1.576	1.389	0.206

CCB3 3/20/2015 1:12:07 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:27	106.967%	0.059	-18.810	-14.830	0.000	-16.310	1.056	0.730
2	13:12:46	101.203%	-0.000	-17.790	-14.890	0.000	-15.580	0.508	0.724
3	13:13:05	102.680%	0.061	-17.550	-15.700	0.000	-15.360	0.633	0.827
x		103.617%	0.040	-18.050	-15.140	0.000	-15.750	0.732	0.760
σ		2.994%	0.035	0.671	0.482	0.000	0.501	0.287	0.058
%RSD		2.889	86.650	3.715	3.186	0.000	3.180	39.160	7.631
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:27	0.402	1.601	0.000	5.731	0.058	-0.410	97.068%	-0.077
2	13:12:46	0.330	1.190	0.000	4.012	2.839	0.102	98.228%	-0.018
3	13:13:05	0.252	1.588	0.000	3.242	0.056	-3.134	97.305%	-0.077
x		0.328	1.459	0.000	4.328	0.984	-1.147	97.533%	-0.057
σ		0.075	0.234	0.000	1.274	1.606	1.740	0.613%	0.034
%RSD		22.920	16.000	0.000	29.440	163.200	151.600	0.629	59.250
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:27	-0.113	-0.009	0.127	2.882	2.576	-0.001	0.056	0.046
2	13:12:46	0.115	-0.023	0.096	-0.021	2.361	0.009	0.023	0.075
3	13:13:05	-0.007	0.026	0.102	-1.772	2.103	-0.001	0.007	0.017
x		-0.002	-0.002	0.108	0.363	2.346	0.002	0.029	0.046
σ		0.114	0.025	0.016	2.351	0.237	0.006	0.025	0.029
%RSD		6776.000	1288.000	15.110	647.800	10.090	237.100	86.250	63.680
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:27	-0.001	-0.019	0.209	-0.114	-0.558	0.092	0.000	0.004
2	13:12:46	0.031	-0.069	0.129	-0.086	-0.138	-0.289	0.000	0.002
3	13:13:05	-0.008	-0.011	0.171	-0.069	-0.505	-0.207	0.000	0.002
x		0.007	-0.033	0.170	-0.090	-0.400	-0.135	0.000	0.002
σ		0.021	0.031	0.040	0.022	0.229	0.200	0.000	0.001
%RSD		288.600	95.070	23.510	25.030	57.250	148.600	0.000	46.670
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:27	89.993%	0.206	0.185	90.106%	-0.034	-0.052	0.078	0.062
2	13:12:46	89.867%	0.174	0.194	90.046%	-0.043	-0.061	0.089	0.063
3	13:13:05	89.892%	0.141	0.171	90.487%	-0.029	-0.038	0.029	0.020
x		89.917%	0.173	0.184	90.213%	-0.035	-0.050	0.065	0.048
σ		0.067%	0.032	0.012	0.239%	0.007	0.012	0.032	0.024
%RSD		0.074	18.670	6.313	0.265	20.140	23.100	49.090	50.520
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:12:27	87.568%	0.015	0.064	0.057	-0.003	0.015	86.269%	85.670%
2	13:12:46	87.997%	0.023	0.049	0.059	-0.003	0.015	86.840%	86.584%
3	13:13:05	88.825%	0.011	0.046	0.072	0.021	0.006	88.926%	88.194%
x		88.130%	0.017	0.053	0.063	0.005	0.012	87.345%	86.816%
σ		0.639%	0.006	0.010	0.008	0.013	0.006	1.399%	1.278%
%RSD		0.725	37.570	18.200	13.430	261.400	46.240	1.601	1.472
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:12:27	0.036	0.039	0.135	0.118	0.133	84.761%		
2	13:12:46	0.026	0.028	0.175	0.150	0.168	85.653%		
3	13:13:05	0.037	0.039	0.124	0.138	0.145	86.995%		
x		0.033	0.035	0.145	0.136	0.149	85.803%		
σ		0.006	0.006	0.027	0.016	0.018	1.124%		
%RSD		18.900	17.390	18.520	11.880	11.960	1.310		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	78.818%	-0.000	9.106	11.290	0.000	56340.000	9129.000	9140.000
2	13:16:37	77.836%	0.163	7.254	12.850	0.000	56200.000	8850.000	8744.000
3	13:16:57	73.726%	0.086	10.870	11.920	0.000	55140.000	8852.000	8811.000
x		76.793%	0.083	9.077	12.020	0.000	55890.000	8944.000	8898.000
σ		2.701%	0.082	1.809	0.789	0.000	653.100	160.800	212.100
%RSD		3.518	98.270	19.930	6.566	0.000	1.169	1.798	2.383

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	1719.000	3450.000	0.000	6744.000	40740.000	37660.000	68.398%	24.300
2	13:16:37	1652.000	3318.000	0.000	6576.000	40260.000	37070.000	67.834%	23.890
3	13:16:57	1639.000	3317.000	0.000	6751.000	41570.000	38050.000	65.245%	24.170
x		1670.000	3362.000	0.000	6691.000	40860.000	37590.000	67.159%	24.120
σ		42.910	76.240	0.000	99.060	662.800	495.300	1.681%	0.209
%RSD		2.569	2.268	0.000	1.481	1.622	1.318	2.504	0.867

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	3.884	3.144	143.100	2681.000	2727.000	2.095	2.270	7.366
2	13:16:37	3.551	3.096	139.000	2617.000	2630.000	2.083	2.196	7.380
3	13:16:57	3.237	3.160	140.600	2632.000	2618.000	1.998	1.999	7.053
x		3.557	3.133	140.900	2643.000	2658.000	2.059	2.155	7.266
σ		0.324	0.033	2.043	33.370	60.050	0.053	0.140	0.185
%RSD		9.098	1.058	1.450	1.262	2.259	2.588	6.489	2.542

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	6.961	40.460	41.660	0.882	-1.287	-0.201	0.000	100.800
2	13:16:37	6.905	39.890	41.970	1.019	-1.598	0.150	0.000	101.400
3	13:16:57	6.477	40.770	42.170	1.226	-0.948	-0.309	0.000	101.900
x		6.781	40.380	41.930	1.042	-1.278	-0.120	0.000	101.400
σ		0.265	0.447	0.253	0.173	0.325	0.240	0.000	0.549
%RSD		3.906	1.108	0.603	16.640	25.430	199.800	0.000	0.542

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	68.607%	11.440	11.480	67.534%	-0.032	-0.039	12.620	8.577
2	13:16:37	69.135%	12.100	11.840	66.536%	-0.022	-0.027	0.508	0.421
3	13:16:57	67.308%	11.970	11.870	66.409%	-0.029	-0.021	12.490	8.374
x		68.350%	11.830	11.730	66.827%	-0.028	-0.029	8.539	5.791
σ		0.940%	0.350	0.214	0.616%	0.005	0.009	6.955	4.651
%RSD		1.376	2.959	1.821	0.922	18.920	31.490	81.450	80.330

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	69.391%	0.710	0.415	0.436	45.600	43.970	74.729%	74.513%
2	13:16:37	69.232%	0.792	0.353	0.355	45.940	46.740	74.786%	75.645%
3	13:16:57	69.222%	0.890	0.448	0.417	46.770	45.620	76.512%	76.527%
x		69.282%	0.797	0.405	0.403	46.100	45.440	75.342%	75.562%
σ		0.095%	0.090	0.048	0.042	0.602	1.397	1.013%	1.009%
%RSD		0.137	11.310	11.770	10.450	1.305	3.073	1.345	1.336

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:16:18	0.050	0.041	7.093	6.318	6.623	72.908%
2	13:16:37	0.036	0.029	6.994	6.306	6.702	74.145%
3	13:16:57	0.027	0.039	7.020	6.585	6.720	74.689%
x		0.038	0.036	7.036	6.403	6.682	73.914%
σ		0.012	0.006	0.051	0.157	0.052	0.913%
%RSD		30.700	17.680	0.728	2.458	0.773	1.235

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	78.503%	0.244	-4.693	-1.817	0.000	31000.000	5900.000	5917.000
2	13:20:27	71.744%	0.354	-3.442	-2.924	0.000	30640.000	5857.000	5809.000
3	13:20:47	70.237%	0.090	-4.837	-2.275	0.000	31030.000	5794.000	5762.000
x		73.495%	0.230	-4.324	-2.338	0.000	30890.000	5850.000	5829.000
σ		4.402%	0.133	0.767	0.556	0.000	214.500	53.430	79.420
%RSD		5.990	57.740	17.740	23.790	0.000	0.695	0.913	1.362

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	4650.000	5580.000	0.000	6071.000	21070.000	19530.000	65.852%	62.260
2	13:20:27	4698.000	5593.000	0.000	6132.000	21930.000	19890.000	62.942%	62.570
3	13:20:47	4545.000	5483.000	0.000	6149.000	21990.000	19580.000	62.175%	62.580
x		4631.000	5552.000	0.000	6118.000	21660.000	19670.000	63.656%	62.470
σ		78.320	60.150	0.000	41.060	514.600	192.300	1.940%	0.186
%RSD		1.691	1.083	0.000	0.671	2.375	0.978	3.047	0.297

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	8.664	6.925	247.300	6804.000	6769.000	4.404	5.362	10.040
2	13:20:27	10.370	7.040	251.000	6954.000	6940.000	4.324	5.629	10.230
3	13:20:47	9.723	6.372	243.500	6733.000	6796.000	4.351	5.150	9.514
x		9.585	6.779	247.300	6831.000	6835.000	4.360	5.380	9.927
σ		0.861	0.357	3.755	112.600	92.060	0.041	0.240	0.370
%RSD		8.978	5.270	1.518	1.648	1.347	0.942	4.461	3.728

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	10.140	45.580	46.670	1.109	-2.023	-0.422	0.000	60.630
2	13:20:27	9.141	44.890	46.220	1.515	-1.377	-0.921	0.000	60.640
3	13:20:47	9.627	43.790	45.900	1.563	-1.440	0.145	0.000	59.790
x		9.636	44.750	46.260	1.395	-1.613	-0.400	0.000	60.360
σ		0.500	0.906	0.386	0.250	0.356	0.533	0.000	0.490
%RSD		5.185	2.024	0.834	17.880	22.090	133.500	0.000	0.812

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	68.626%	1.582	1.557	66.689%	-0.008	-0.018	9.699	6.554
2	13:20:27	66.749%	1.426	1.407	64.199%	-0.000	-0.017	0.182	0.141
3	13:20:47	67.647%	1.300	1.339	65.090%	-0.017	-0.037	0.206	0.215
x		67.674%	1.436	1.434	65.326%	-0.008	-0.024	3.362	2.303
σ		0.939%	0.141	0.112	1.261%	0.008	0.011	5.488	3.682
%RSD		1.387	9.844	7.780	1.931	98.370	46.850	163.200	159.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	67.886%	1.116	0.352	0.399	59.760	60.520	74.262%	73.918%
2	13:20:27	67.951%	1.005	0.356	0.359	60.640	60.390	74.054%	74.662%
3	13:20:47	68.690%	1.101	0.397	0.391	58.380	59.250	75.626%	75.294%
x		68.176%	1.074	0.368	0.383	59.590	60.050	74.647%	74.625%
σ		0.446%	0.060	0.025	0.021	1.137	0.701	0.854%	0.689%
%RSD		0.655	5.588	6.801	5.554	1.908	1.168	1.144	0.923

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:20:08	0.068	0.062	9.026	8.549	8.694	73.635%
2	13:20:27	0.054	0.056	8.971	8.213	8.609	75.660%
3	13:20:47	0.058	0.064	9.335	8.576	8.953	74.240%
x		0.060	0.060	9.111	8.446	8.752	74.512%
σ		0.007	0.004	0.196	0.202	0.179	1.040%
%RSD		12.110	7.344	2.155	2.397	2.049	1.395

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	73.653%	-0.000	23.920	26.680	0.000	59800.000	15830.000	16100.000
2	13:24:17	75.618%	0.127	25.480	25.330	0.000	57480.000	14810.000	14690.000
3	13:24:37	69.792%	-0.000	20.280	22.900	0.000	55120.000	14820.000	14840.000
x		73.021%	0.042	23.220	24.970	0.000	57470.000	15150.000	15210.000
σ		2.964%	0.073	2.666	1.914	0.000	2342.000	582.200	774.400
%RSD		4.059	173.200	11.480	7.667	0.000	4.076	3.842	5.091

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	627.200	3855.000	0.000	5639.000	77100.000	76230.000	64.502%	9.703
2	13:24:17	598.600	3738.000	0.000	5405.000	75700.000	74300.000	63.161%	8.583
3	13:24:37	600.700	3698.000	0.000	5650.000	77020.000	76810.000	59.841%	9.911
x		608.800	3763.000	0.000	5565.000	76610.000	75780.000	62.502%	9.399
σ		15.950	81.470	0.000	138.500	786.200	1311.000	2.400%	0.714
%RSD		2.619	2.165	0.000	2.488	1.026	1.730	3.840	7.599

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	1.568	5.709	40.780	900.800	987.000	0.747	0.262	2.728
2	13:24:17	2.158	5.568	40.720	888.700	962.100	0.635	0.549	2.266
3	13:24:37	1.932	6.051	41.710	920.800	989.100	0.617	0.778	2.741
x		1.886	5.776	41.070	903.400	979.400	0.666	0.529	2.578
σ		0.298	0.248	0.552	16.200	15.040	0.070	0.259	0.270
%RSD		15.790	4.298	1.345	1.793	1.536	10.560	48.910	10.480

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	2.039	8.892	9.304	0.598	-1.003	-0.446	0.000	174.900
2	13:24:17	2.376	8.785	8.095	-0.277	-1.383	-0.379	0.000	175.000
3	13:24:37	2.399	7.991	8.339	0.741	-1.134	0.356	0.000	176.200
x		2.271	8.556	8.579	0.354	-1.173	-0.156	0.000	175.400
σ		0.201	0.492	0.639	0.551	0.193	0.445	0.000	0.746
%RSD		8.863	5.749	7.453	155.600	16.440	285.100	0.000	0.426

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	66.753%	9.752	9.456	66.606%	-0.010	-0.046	10.950	7.430
2	13:24:17	66.227%	9.615	10.040	65.008%	-0.030	-0.049	0.268	0.133
3	13:24:37	65.575%	9.875	9.771	64.208%	-0.024	-0.045	0.202	0.184
x		66.185%	9.747	9.756	65.274%	-0.022	-0.046	3.807	2.582
σ		0.590%	0.130	0.292	1.221%	0.010	0.002	6.186	4.198
%RSD		0.892	1.333	2.995	1.871	47.360	4.835	162.500	162.600

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	68.661%	0.448	0.193	0.186	42.550	42.830	75.307%	75.424%
2	13:24:17	68.394%	0.645	0.186	0.205	42.740	43.730	75.511%	75.552%
3	13:24:37	68.082%	0.634	0.163	0.232	44.210	43.120	76.079%	75.861%
x		68.379%	0.576	0.181	0.208	43.170	43.230	75.633%	75.612%
σ		0.290%	0.111	0.016	0.023	0.912	0.461	0.400%	0.225%
%RSD		0.424	19.280	8.659	11.180	2.112	1.066	0.529	0.297

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:58	0.019	0.018	1.217	1.198	1.260	73.280%
2	13:24:17	0.018	0.023	1.310	1.297	1.289	74.001%
3	13:24:37	0.017	0.014	1.349	1.189	1.306	74.502%
x		0.018	0.019	1.292	1.228	1.285	73.927%
σ		0.001	0.004	0.068	0.060	0.023	0.614%
%RSD		4.786	23.380	5.243	4.872	1.811	0.831

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	101.382%	-0.000	-20.090	-16.310	0.000	-18.600	0.135	0.186
2	13:31:04	100.779%	-0.000	-18.660	-16.020	0.000	-17.130	0.201	0.296
3	13:31:23	97.505%	-0.000	-20.760	-16.150	0.000	-14.920	0.345	0.171
x		99.889%	-0.000	-19.840	-16.160	0.000	-16.880	0.227	0.218
σ		2.086%	0.000	1.075	0.146	0.000	1.853	0.108	0.069
%RSD		2.089	0.000	5.421	0.904	0.000	10.980	47.450	31.490

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	-0.124	1.013	0.000	2.008	-2.601	-3.188	90.785%	-0.013
2	13:31:04	0.022	0.608	0.000	3.647	6.501	-3.225	91.186%	0.018
3	13:31:23	-0.154	0.453	0.000	3.218	9.955	-4.554	88.780%	-0.012
x		-0.085	0.691	0.000	2.958	4.619	-3.656	90.251%	-0.002
σ		0.094	0.289	0.000	0.850	6.486	0.778	1.289%	0.018
%RSD		110.200	41.850	0.000	28.740	140.400	21.280	1.428	724.800

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	0.298	0.017	0.123	-1.432	-0.713	-0.002	0.019	0.123
2	13:31:04	0.001	-0.037	0.085	-2.551	-1.430	0.005	-0.007	0.085
3	13:31:23	0.103	0.001	0.068	-4.885	-0.396	0.001	-0.007	0.032
x		0.134	-0.006	0.092	-2.956	-0.847	0.001	0.001	0.080
σ		0.151	0.027	0.028	1.762	0.530	0.004	0.015	0.046
%RSD		112.700	447.000	30.720	59.610	62.580	316.800	1110.000	57.380

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	-0.034	-0.108	0.151	0.036	-0.967	0.390	0.000	-0.002
2	13:31:04	0.044	-0.051	0.191	-0.053	-0.863	0.265	0.000	-0.002
3	13:31:23	0.033	0.005	0.402	0.060	-0.175	0.423	0.000	0.001
x		0.014	-0.051	0.248	0.014	-0.668	0.359	0.000	-0.001
σ		0.042	0.057	0.135	0.059	0.430	0.083	0.000	0.002
%RSD		292.400	110.600	54.370	410.100	64.380	23.110	0.000	243.300

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	85.290%	0.028	0.049	86.614%	-0.047	-0.055	0.117	0.086
2	13:31:04	85.228%	0.023	0.034	86.094%	-0.042	-0.053	0.025	0.027
3	13:31:23	85.788%	0.037	0.008	86.285%	-0.036	-0.026	0.023	0.016
x		85.436%	0.029	0.030	86.331%	-0.042	-0.044	0.055	0.043
σ		0.307%	0.007	0.021	0.263%	0.005	0.016	0.054	0.038
%RSD		0.359	24.970	68.380	0.305	12.570	36.360	97.450	88.070

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	83.544%	-0.001	-0.005	0.005	0.015	0.017	83.023%	82.633%
2	13:31:04	82.981%	-0.049	-0.006	0.005	0.006	-0.007	84.045%	83.017%
3	13:31:23	84.520%	-0.018	0.004	0.007	0.014	-0.007	85.195%	84.356%
x		83.682%	-0.023	-0.003	0.006	0.012	0.001	84.088%	83.335%
σ		0.779%	0.024	0.005	0.001	0.005	0.014	1.087%	0.904%
%RSD		0.930	106.300	208.100	18.600	39.560	1454.000	1.292	1.085

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:30:44	0.006	0.001	0.079	0.042	0.076	80.840%
2	13:31:04	0.010	-0.001	0.081	0.046	0.073	80.807%
3	13:31:23	0.000	0.001	0.129	0.079	0.086	82.484%
x		0.005	0.000	0.096	0.056	0.078	81.377%
σ		0.005	0.001	0.028	0.020	0.007	0.959%
%RSD		89.590	274.200	29.500	36.230	8.803	1.178

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	79.313%	48.130	944.200	865.700	0.000	43430.000	43750.000	43790.000
2	13:34:51	75.481%	48.490	961.400	877.900	0.000	42540.000	42490.000	42840.000
3	13:35:10	76.157%	50.470	947.200	891.200	0.000	42360.000	42120.000	41680.000
x		76.984%	49.030	950.900	878.200	0.000	42770.000	42790.000	42770.000
σ		2.045%	1.262	9.166	12.750	0.000	570.700	854.700	1061.000
%RSD		2.657	2.574	0.964	1.452	0.000	1.334	1.998	2.482

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	1726.000	8106.000	0.000	44530.000	47830.000	43220.000	66.173%	923.300
2	13:34:51	1733.000	8016.000	0.000	44820.000	46710.000	46600.000	64.411%	905.400
3	13:35:10	1689.000	7823.000	0.000	43940.000	47290.000	43540.000	61.665%	912.100
x		1716.000	7982.000	0.000	44430.000	47280.000	44450.000	64.083%	913.600
σ		23.560	144.200	0.000	447.700	561.700	1869.000	2.271%	9.026
%RSD		1.373	1.807	0.000	1.008	1.188	4.205	3.545	0.988

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	472.600	192.100	469.900	953.100	995.500	475.200	464.900	230.100
2	13:34:51	464.500	187.100	452.400	906.000	968.900	464.400	463.400	230.400
3	13:35:10	481.700	191.800	471.200	950.900	1053.000	481.200	470.500	236.200
x		472.900	190.300	464.500	936.700	1006.000	473.600	466.300	232.200
σ		8.616	2.815	10.470	26.620	43.190	8.522	3.768	3.408
%RSD		1.822	1.479	2.254	2.842	4.293	1.799	0.808	1.467

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	232.600	452.700	450.400	34.290	6.399	9.823	0.000	995.800
2	13:34:51	235.700	453.300	452.400	35.680	5.757	8.726	0.000	991.600
3	13:35:10	243.000	466.300	469.800	36.840	7.884	8.080	0.000	1048.000
x		237.100	457.400	457.500	35.600	6.680	8.876	0.000	1012.000
σ		5.365	7.667	10.680	1.280	1.091	0.882	0.000	31.320
%RSD		2.263	1.676	2.335	3.596	16.340	9.932	0.000	3.095

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	63.335%	993.100	999.200	65.266%	47.100	46.960	47.250	40.320
2	13:34:51	62.566%	999.600	999.300	64.999%	47.130	47.160	66.730	52.470
3	13:35:10	59.239%	1035.000	1029.000	64.456%	48.100	47.040	47.250	39.240
x		61.714%	1009.000	1009.000	64.907%	47.440	47.050	53.740	44.010
σ		2.177%	22.740	17.470	0.413%	0.568	0.102	11.250	7.347
%RSD		3.528	2.253	1.731	0.636	1.196	0.216	20.920	16.690

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	66.737%	1932.000	459.500	458.900	1776.000	1786.000	73.661%	74.018%
2	13:34:51	67.414%	1918.000	476.600	457.400	1797.000	1799.000	73.556%	74.646%
3	13:35:10	67.329%	1940.000	464.300	459.100	1808.000	1813.000	74.226%	74.972%
x		67.160%	1930.000	466.800	458.500	1794.000	1799.000	73.814%	74.545%
σ		0.369%	11.040	8.793	0.879	16.190	13.680	0.360%	0.485%
%RSD		0.549	0.572	1.884	0.192	0.902	0.761	0.488	0.651

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:34:31	50.630	50.840	21.780	22.230	21.730	70.893%
2	13:34:51	50.790	50.790	21.570	22.170	21.880	71.845%
3	13:35:10	52.010	51.550	22.140	22.480	22.240	72.276%
x		51.150	51.060	21.830	22.290	21.950	71.672%
σ		0.756	0.423	0.289	0.168	0.262	0.708%
%RSD		1.478	0.829	1.325	0.752	1.195	0.987

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:19	79.887%	45.840	932.800	868.700	0.000	42330.000	41560.000	41140.000
2	13:38:38	74.617%	49.350	1002.000	891.700	0.000	42500.000	43150.000	41900.000
3	13:38:58	76.318%	50.610	981.600	882.900	0.000	42600.000	42460.000	41020.000
x		76.941%	48.600	972.300	881.100	0.000	42480.000	42390.000	41350.000
σ		2.689%	2.475	35.760	11.640	0.000	133.200	799.100	476.600
%RSD		3.495	5.092	3.678	1.321	0.000	0.314	1.885	1.153
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:19	1721.000	7921.000	0.000	43770.000	45990.000	43030.000	65.881%	936.500
2	13:38:38	1700.000	7777.000	0.000	44310.000	46240.000	43490.000	63.077%	922.600
3	13:38:58	1670.000	7599.000	0.000	43490.000	45580.000	42210.000	62.444%	888.500
x		1697.000	7766.000	0.000	43860.000	45940.000	42910.000	63.801%	915.800
σ		25.950	161.500	0.000	417.100	334.100	649.500	1.829%	24.700
%RSD		1.529	2.080	0.000	0.951	0.727	1.514	2.867	2.697
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:19	480.100	193.200	458.200	940.600	981.800	473.500	466.500	234.600
2	13:38:38	471.300	190.600	459.500	932.900	1013.000	462.400	468.200	231.600
3	13:38:58	453.500	180.300	453.900	912.300	968.300	465.100	461.800	231.700
x		468.300	188.000	457.200	928.600	987.700	467.000	465.500	232.700
σ		13.550	6.811	2.939	14.630	22.820	5.828	3.299	1.725
%RSD		2.893	3.622	0.643	1.576	2.311	1.248	0.709	0.741
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:19	233.700	467.100	463.800	37.320	8.255	9.206	0.000	1039.000
2	13:38:38	234.900	460.800	470.500	35.930	8.324	10.310	0.000	1047.000
3	13:38:58	233.100	453.800	460.500	34.850	6.921	9.131	0.000	990.700
x		233.900	460.600	464.900	36.040	7.834	9.548	0.000	1026.000
σ		0.922	6.658	5.077	1.238	0.791	0.659	0.000	30.550
%RSD		0.394	1.446	1.092	3.435	10.090	6.898	0.000	2.978
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:19	59.503%	1017.000	1006.000	65.257%	46.720	46.590	59.590	48.380
2	13:38:38	58.725%	1021.000	1011.000	64.593%	46.710	47.260	46.050	39.780
3	13:38:58	61.637%	1001.000	1003.000	64.197%	47.280	46.840	46.460	39.280
x		59.955%	1013.000	1007.000	64.683%	46.910	46.900	50.700	42.480
σ		1.508%	10.440	4.036	0.536%	0.327	0.339	7.704	5.118
%RSD		2.515	1.030	0.401	0.828	0.696	0.723	15.190	12.050
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:38:19	66.897%	1914.000	454.100	452.300	1754.000	1767.000	73.837%	74.134%
2	13:38:38	66.561%	1932.000	462.600	456.400	1768.000	1771.000	74.552%	74.334%
3	13:38:58	66.452%	1931.000	465.100	459.900	1766.000	1776.000	74.619%	74.769%
x		66.636%	1925.000	460.600	456.200	1763.000	1771.000	74.336%	74.412%
σ		0.232%	10.070	5.788	3.794	7.477	4.203	0.434%	0.325%
%RSD		0.348	0.523	1.257	0.832	0.424	0.237	0.583	0.436
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:38:19	50.430	50.420	21.150	20.910	20.850	70.983%		
2	13:38:38	50.640	50.610	20.890	21.290	20.960	71.868%		
3	13:38:58	50.850	50.740	20.740	21.210	21.080	72.006%		
x		50.640	50.590	20.930	21.140	20.970	71.619%		
σ		0.211	0.161	0.206	0.200	0.114	0.555%		
%RSD		0.416	0.319	0.985	0.947	0.544	0.775		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:07	70.795%	0.359	152.400	141.900	0.000	470000.000	511.200	547.200
2	13:42:26	66.340%	0.382	160.400	145.100	0.000	456200.000	520.200	523.400
3	13:42:45	66.687%	0.524	140.600	135.300	0.000	459200.000	523.000	523.800
x		67.941%	0.422	151.100	140.800	0.000	461800.000	518.100	531.500
σ		2.478%	0.089	9.977	4.986	0.000	7273.000	6.201	13.660
%RSD		3.647	21.140	6.601	3.541	0.000	1.575	1.197	2.571
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:07	8366.000	16620.000	0.000	7694.000	2607.000	2441.000	61.504%	93.770
2	13:42:26	8160.000	16180.000	0.000	7702.000	2544.000	2425.000	59.529%	89.330
3	13:42:45	7926.000	15840.000	0.000	7665.000	2849.000	2487.000	58.537%	89.250
x		8151.000	16210.000	0.000	7687.000	2667.000	2451.000	59.857%	90.780
σ		219.900	389.200	0.000	19.720	161.200	31.980	1.510%	2.582
%RSD		2.698	2.401	0.000	0.257	6.046	1.305	2.523	2.844
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:07	395.900	266.200	52.330	6328.000	6198.000	7.461	61.580	492.200
2	13:42:26	393.500	265.600	52.300	6369.000	6318.000	7.349	62.810	488.100
3	13:42:45	399.500	271.800	53.190	6419.000	6300.000	7.835	60.230	479.300
x		396.300	267.900	52.610	6372.000	6272.000	7.548	61.540	486.500
σ		3.011	3.400	0.501	45.170	64.460	0.255	1.290	6.586
%RSD		0.760	1.269	0.952	0.709	1.028	3.371	2.096	1.354
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:07	484.200	129.000	128.000	129.500	8.742	9.818	0.000	20.980
2	13:42:26	487.200	130.000	128.300	130.000	7.780	9.255	0.000	21.380
3	13:42:45	478.400	130.600	133.100	127.000	7.014	8.249	0.000	21.350
x		483.300	129.900	129.800	128.800	7.845	9.107	0.000	21.240
σ		4.453	0.789	2.812	1.581	0.866	0.795	0.000	0.220
%RSD		0.921	0.607	2.166	1.227	11.040	8.728	0.000	1.037
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:07	67.590%	25.080	25.330	60.519%	4.789	4.814	4.986	4.701
2	13:42:26	67.322%	24.200	25.540	60.150%	4.783	4.607	4.744	5.016
3	13:42:45	66.726%	24.390	25.410	59.865%	4.726	4.696	4.784	4.699
x		67.213%	24.560	25.430	60.178%	4.766	4.705	4.838	4.805
σ		0.442%	0.462	0.106	0.328%	0.034	0.104	0.130	0.183
%RSD		0.658	1.881	0.416	0.545	0.722	2.207	2.681	3.801
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:42:07	64.393%	51.970	18.880	18.590	162.600	164.200	73.154%	73.285%
2	13:42:26	65.071%	51.390	19.000	18.530	163.800	162.300	74.296%	74.140%
3	13:42:45	65.296%	50.330	18.850	19.030	165.000	163.600	74.223%	74.587%
x		64.920%	51.230	18.910	18.720	163.800	163.400	73.891%	74.004%
σ		0.470%	0.832	0.077	0.270	1.221	1.001	0.639%	0.662%
%RSD		0.724	1.625	0.408	1.442	0.746	0.613	0.865	0.894
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:42:07	0.244	0.284	174.400	164.000	169.000	68.914%		
2	13:42:26	0.239	0.255	175.100	163.400	169.700	69.842%		
3	13:42:45	0.233	0.242	174.100	163.100	168.700	70.576%		
x		0.239	0.260	174.500	163.500	169.100	69.777%		
σ		0.005	0.022	0.534	0.505	0.475	0.833%		
%RSD		2.215	8.442	0.306	0.309	0.281	1.193		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:55	76.496%	0.249	136.700	128.800	0.000	133600.000	907.000	896.800
2	13:46:14	73.471%	0.216	149.600	137.200	0.000	130500.000	882.100	880.400
3	13:46:33	71.613%	0.311	130.400	131.300	0.000	130500.000	870.600	880.900
x		73.860%	0.259	138.900	132.400	0.000	131600.000	886.500	886.000
σ		2.465%	0.048	9.812	4.341	0.000	1781.000	18.590	9.335
%RSD		3.337	18.510	7.065	3.279	0.000	1.354	2.097	1.054
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:55	2905.000	6859.000	0.000	6411.000	1348.000	1310.000	66.822%	83.370
2	13:46:14	2903.000	6776.000	0.000	6385.000	1384.000	1390.000	64.735%	85.400
3	13:46:33	2840.000	6555.000	0.000	6425.000	1483.000	1310.000	62.991%	83.590
x		2882.000	6730.000	0.000	6407.000	1405.000	1336.000	64.849%	84.120
σ		36.920	157.200	0.000	20.040	70.240	46.040	1.918%	1.112
%RSD		1.281	2.336	0.000	0.313	4.999	3.445	2.958	1.322
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:55	115.200	68.320	28.420	5613.000	5527.000	3.036	24.010	117.800
2	13:46:14	113.100	66.440	28.370	5520.000	5416.000	2.903	22.420	115.800
3	13:46:33	113.900	68.080	28.960	5572.000	5500.000	3.094	22.550	117.600
x		114.100	67.620	28.580	5568.000	5481.000	3.011	22.990	117.000
σ		1.050	1.024	0.331	46.940	57.720	0.098	0.884	1.115
%RSD		0.921	1.514	1.159	0.843	1.053	3.245	3.844	0.953
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:55	117.900	107.300	106.800	43.800	-0.190	-0.626	0.000	15.440
2	13:46:14	114.900	106.500	104.700	45.030	-0.201	1.889	0.000	15.070
3	13:46:33	115.600	106.400	109.200	45.630	0.143	0.876	0.000	15.000
x		116.100	106.700	106.900	44.820	-0.083	0.713	0.000	15.170
σ		1.588	0.463	2.222	0.932	0.195	1.265	0.000	0.239
%RSD		1.367	0.434	2.079	2.080	236.300	177.500	0.000	1.575
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:55	69.887%	16.380	16.570	67.297%	1.735	1.700	2.244	2.335
2	13:46:14	69.306%	16.840	16.340	65.829%	1.690	1.568	15.030	11.040
3	13:46:33	68.662%	16.220	16.730	65.448%	1.630	1.577	2.484	2.532
x		69.285%	16.480	16.540	66.191%	1.685	1.615	6.585	5.302
σ		0.613%	0.323	0.197	0.976%	0.053	0.074	7.312	4.968
%RSD		0.885	1.958	1.188	1.475	3.117	4.564	111.000	93.720
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:45:55	68.900%	9.837	11.750	11.620	90.910	91.860	75.687%	76.578%
2	13:46:14	68.535%	9.668	11.340	11.590	91.870	91.830	75.721%	76.545%
3	13:46:33	69.667%	9.525	11.570	11.290	89.300	89.790	76.683%	76.538%
x		69.034%	9.677	11.550	11.500	90.690	91.160	76.030%	76.553%
σ		0.578%	0.156	0.209	0.184	1.301	1.190	0.566%	0.022%
%RSD		0.837	1.611	1.806	1.597	1.434	1.306	0.744	0.028
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:45:55	0.111	0.119	109.000	102.700	105.600	72.911%		
2	13:46:14	0.092	0.106	109.200	103.800	106.200	73.400%		
3	13:46:33	0.117	0.105	108.300	101.700	105.100	74.585%		
x		0.107	0.110	108.900	102.700	105.700	73.632%		
σ		0.013	0.008	0.445	1.065	0.568	0.861%		
%RSD		12.090	7.118	0.409	1.037	0.538	1.169		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	76.408%	0.042	118.200	111.800	0.000	59640.000	9536.000	9400.000
2	13:50:02	72.307%	0.044	118.300	110.400	0.000	57530.000	9475.000	9420.000
3	13:50:25	70.996%	-0.000	106.000	109.700	0.000	58220.000	9282.000	9258.000
x		73.237%	0.029	114.200	110.600	0.000	58460.000	9431.000	9360.000
σ		2.823%	0.025	7.053	1.044	0.000	1076.000	132.800	88.600
%RSD		3.855	86.700	6.177	0.943	0.000	1.840	1.408	0.947

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	274.700	2403.000	0.000	10510.000	13550.000	12100.000	64.527%	6.888
2	13:50:02	272.600	2439.000	0.000	10830.000	13530.000	12420.000	62.167%	6.914
3	13:50:25	279.200	2437.000	0.000	10790.000	13540.000	12420.000	61.092%	6.092
x		275.500	2426.000	0.000	10710.000	13540.000	12310.000	62.595%	6.632
σ		3.351	20.160	0.000	173.200	9.159	186.800	1.757%	0.468
%RSD		1.216	0.831	0.000	1.617	0.068	1.517	2.807	7.049

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	4.031	3.663	65.370	380.400	408.800	1.512	17.200	10.370
2	13:50:02	2.647	3.905	65.770	387.200	422.800	1.655	16.810	10.200
3	13:50:25	5.107	3.702	65.000	379.900	408.600	1.519	15.920	9.589
x		3.928	3.757	65.380	382.500	413.400	1.562	16.650	10.050
σ		1.234	0.130	0.385	4.055	8.155	0.081	0.659	0.409
%RSD		31.410	3.450	0.589	1.060	1.973	5.169	3.960	4.072

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	9.697	31.650	32.570	1.956	-0.983	0.518	0.000	114.900
2	13:50:02	9.809	30.690	33.270	1.777	-1.692	0.038	0.000	116.300
3	13:50:25	8.868	32.310	31.720	1.350	-1.584	0.782	0.000	115.000
x		9.458	31.550	32.520	1.694	-1.420	0.446	0.000	115.400
σ		0.514	0.815	0.775	0.311	0.382	0.377	0.000	0.789
%RSD		5.436	2.582	2.384	18.360	26.920	84.610	0.000	0.683

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	66.513%	8.457	8.917	66.916%	0.041	0.012	13.400	9.081
2	13:50:02	65.480%	8.899	8.837	65.247%	-0.001	0.000	12.920	8.866
3	13:50:25	65.090%	8.564	8.294	64.154%	0.019	0.017	0.457	0.580
x		65.694%	8.640	8.682	65.439%	0.020	0.010	8.925	6.176
σ		0.735%	0.231	0.339	1.391%	0.021	0.008	7.337	4.847
%RSD		1.119	2.670	3.903	2.125	106.400	88.000	82.210	78.480

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	67.975%	1.550	5.007	4.984	71.110	68.960	74.368%	74.830%
2	13:50:02	67.580%	1.641	5.086	4.864	70.310	70.200	74.839%	75.203%
3	13:50:25	67.883%	1.533	5.031	5.053	69.350	70.020	74.473%	75.438%
x		67.813%	1.575	5.041	4.967	70.260	69.730	74.560%	75.157%
σ		0.207%	0.058	0.040	0.096	0.878	0.670	0.247%	0.307%
%RSD		0.305	3.687	0.802	1.924	1.250	0.961	0.332	0.408

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:49:43	0.073	0.070	6.005	5.796	5.901	72.662%
2	13:50:02	0.078	0.070	5.905	5.482	5.733	74.784%
3	13:50:25	0.069	0.049	6.154	5.860	5.996	72.475%
x		0.073	0.063	6.021	5.713	5.877	73.307%
σ		0.005	0.012	0.125	0.203	0.133	1.283%
%RSD		6.363	19.630	2.082	3.549	2.261	1.750

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	71.514%	16.070	186.700	168.400	0.000	62960.000	58860.000	58030.000
2	13:53:56	71.280%	13.990	203.300	174.400	0.000	62870.000	58450.000	57340.000
3	13:54:15	69.721%	14.180	174.300	170.700	0.000	63280.000	57780.000	57170.000
x		70.838%	14.740	188.100	171.200	0.000	63040.000	58360.000	57510.000
σ		0.975%	1.153	14.560	3.022	0.000	214.100	544.400	459.500
%RSD		1.376	7.822	7.743	1.765	0.000	0.340	0.933	0.799
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	44600.000	35440.000	0.000	19710.000	153200.000	154000.000	65.299%	21.450
2	13:53:56	43210.000	35110.000	0.000	20010.000	157600.000	155600.000	63.061%	23.010
3	13:54:15	42550.000	34640.000	0.000	19780.000	155300.000	153100.000	63.241%	18.790
x		43450.000	35060.000	0.000	19830.000	155400.000	154200.000	63.867%	21.080
σ		1049.000	404.500	0.000	157.300	2172.000	1269.000	1.243%	2.133
%RSD		2.414	1.154	0.000	0.793	1.398	0.823	1.946	10.120
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	577.900	395.700	5024.000	198500.000	201100.000	145.100	898.900	1966.000
2	13:53:56	578.700	400.300	5072.000	197800.000	203300.000	145.900	909.500	1957.000
3	13:54:15	576.600	396.700	5064.000	198500.000	200500.000	142.700	892.100	1907.000
x		577.700	397.600	5053.000	198300.000	201700.000	144.600	900.200	1944.000
σ		1.033	2.383	25.950	414.600	1485.000	1.656	8.755	32.050
%RSD		0.179	0.599	0.513	0.209	0.737	1.145	0.973	1.649
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	1967.000	8158.000	8244.000	19.660	-0.577	3.077	0.000	956.700
2	13:53:56	1981.000	8267.000	8346.000	20.380	-0.440	3.075	0.000	975.400
3	13:54:15	1898.000	8100.000	8164.000	19.070	-0.419	2.427	0.000	963.700
x		1949.000	8175.000	8251.000	19.700	-0.479	2.860	0.000	965.300
σ		44.380	84.390	91.280	0.659	0.086	0.375	0.000	9.467
%RSD		2.278	1.032	1.106	3.344	17.900	13.110	0.000	0.981
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	0.000	0.541	0.512	64.591%	-0.026	-0.060	162.200	161.800
2	13:53:56	0.000	0.466	0.536	64.634%	-0.042	-0.059	162.300	161.900
3	13:54:15	0.000	0.475	0.602	65.193%	-0.007	-0.026	159.400	161.700
x		0.000	0.494	0.550	64.806%	-0.025	-0.048	161.300	161.800
σ		0.000	0.041	0.046	0.336%	0.017	0.019	1.669	0.085
%RSD		0.000	8.285	8.430	0.518	69.360	40.390	1.035	0.053
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:53:36	67.102%	2.436	0.928	0.935	1284.000	1281.000	87.072%	88.029%
2	13:53:56	68.219%	2.505	0.919	0.940	1275.000	1275.000	88.671%	90.107%
3	13:54:15	68.515%	2.450	0.903	0.921	1285.000	1271.000	90.277%	90.635%
x		67.946%	2.464	0.917	0.932	1282.000	1275.000	88.673%	89.590%
σ		0.745%	0.036	0.013	0.010	5.521	5.282	1.602%	1.378%
%RSD		1.097	1.476	1.393	1.050	0.431	0.414	1.807	1.538
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	13:53:36	1.277	1.255	14340.000	13230.000	13820.000	70.120%		
2	13:53:56	1.250	1.270	14270.000	13200.000	13780.000	71.295%		
3	13:54:15	1.183	1.213	14280.000	13220.000	13820.000	72.511%		
x		1.237	1.246	14300.000	13220.000	13810.000	71.309%		
σ		0.049	0.030	38.310	12.470	19.590	1.195%		
%RSD		3.922	2.382	0.268	0.094	0.142	1.676		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	94.659%	101.100	87.090	78.280	0.000	47400.000	47810.000	47250.000
2	13:57:33	90.494%	97.320	81.630	83.310	0.000	48170.000	48640.000	48320.000
3	13:57:52	87.491%	102.300	91.340	82.020	0.000	49340.000	49070.000	48990.000
x		90.881%	100.228%	86.690%	81.203%	0.000	96.613%	97.021%	96.379%
σ		3.600%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.961	2.588	5.614	3.215	0.000	2.021	1.320	1.822

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	475.900	4722.000	0.000	47250.000	48240.000	48270.000	87.930%	98.410
2	13:57:33	498.000	4755.000	0.000	47610.000	48850.000	49160.000	85.924%	98.060
3	13:57:52	502.300	4877.000	0.000	48630.000	49270.000	49020.000	82.163%	93.100
x		98.413%	95.692%	0.000	95.661%	97.571%	97.633%	85.339%	96.523%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.928%	n/a
%RSD		2.882	1.702	0.000	1.489	1.059	0.985	3.431	3.076

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	98.500	98.230	485.500	25090.000	24730.000	100.600	100.700	101.900
2	13:57:33	99.290	99.690	484.500	24690.000	24440.000	99.430	98.790	101.500
3	13:57:52	99.180	98.400	477.000	24520.000	24570.000	98.340	101.100	100.700
x		98.988%	98.775%	96.462%	99.073%	98.322%	99.456%	100.213%	101.375%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.430	0.804	0.966	1.189	0.586	1.131	1.247	0.621

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	102.800	100.900	102.000	98.950	100.500	102.300	0.000	96.510
2	13:57:33	101.700	102.300	102.100	100.600	101.700	103.900	0.000	96.920
3	13:57:52	103.600	101.100	104.700	100.800	99.200	104.000	0.000	97.350
x		102.707%	101.434%	102.935%	100.109%	100.482%	103.407%	0.000	96.926%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.925	0.757	1.456	1.006	1.262	0.936	0.000	0.431

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	79.172%	97.910	97.770	77.555%	98.000	97.260	98.270	98.420
2	13:57:33	78.211%	99.930	99.600	76.575%	100.000	99.030	99.900	99.830
3	13:57:52	78.103%	98.910	100.100	76.558%	98.620	98.990	98.250	99.030
x		78.495%	98.918%	99.143%	76.896%	98.881%	98.425%	98.804%	99.094%
σ		0.588%	n/a	n/a	0.571%	n/a	n/a	n/a	n/a
%RSD		0.749	1.020	1.225	0.743	1.053	1.029	0.958	0.715

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	77.309%	96.850	98.230	96.070	96.270	95.770	79.790%	78.408%
2	13:57:33	76.932%	98.180	97.980	98.230	96.150	96.780	79.589%	79.652%
3	13:57:52	76.876%	97.800	98.910	98.370	95.210	96.410	80.442%	79.996%
x		77.039%	97.611%	98.373%	97.556%	95.877%	96.320%	79.941%	79.352%
σ		0.235%	n/a	n/a	n/a	n/a	n/a	0.446%	0.835%
%RSD		0.305	0.702	0.494	1.320	0.604	0.529	0.558	1.053

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	13:57:14	102.300	102.800	104.400	104.200	104.000	79.855%
2	13:57:33	103.400	103.000	104.800	105.400	104.900	80.603%
3	13:57:52	104.200	103.700	104.600	105.900	105.000	80.331%
x		103.288%	103.135%	104.615%	105.154%	104.619%	80.263%
σ		n/a	n/a	n/a	n/a	n/a	0.378%
%RSD		0.929	0.446	0.156	0.820	0.543	0.471

CCB4 3/20/2015 2:03:43 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:02	105.864%	-0.000	-17.740	-15.710	0.000	-19.140	0.611	1.022
2	14:04:22	105.241%	-0.000	-19.800	-15.160	0.000	-17.230	0.617	0.595
3	14:04:41	102.974%	-0.000	-18.650	-15.360	0.000	-16.860	1.187	0.891
x		104.693%	-0.000	-18.730	-15.410	0.000	-17.740	0.805	0.836
σ		1.521%	0.000	1.032	0.279	0.000	1.226	0.331	0.219
%RSD		1.453	0.000	5.509	1.808	0.000	6.912	41.160	26.160
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:02	0.432	1.700	0.000	5.350	10.870	-2.216	100.845%	0.038
2	14:04:22	0.489	1.616	0.000	4.801	2.702	-2.883	99.712%	0.155
3	14:04:41	0.391	1.462	0.000	2.719	-5.651	-0.843	99.588%	-0.077
x		0.437	1.593	0.000	4.290	2.641	-1.981	100.048%	0.039
σ		0.049	0.121	0.000	1.388	8.261	1.040	0.693%	0.116
%RSD		11.300	7.584	0.000	32.360	312.800	52.520	0.693	300.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:02	-0.079	-0.021	0.131	4.895	3.095	-0.001	-0.002	0.075
2	14:04:22	0.080	0.046	0.114	2.058	2.497	-0.001	0.062	0.081
3	14:04:41	-0.024	-0.009	0.103	0.193	1.146	0.007	0.023	0.037
x		-0.008	0.005	0.116	2.382	2.246	0.002	0.028	0.064
σ		0.081	0.036	0.014	2.368	0.998	0.005	0.032	0.024
%RSD		1065.000	661.100	12.010	99.410	44.450	266.500	116.100	37.030
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:02	-0.025	-0.039	0.049	0.096	-0.288	0.249	0.000	0.007
2	14:04:22	-0.012	-0.021	0.073	-0.249	-0.425	-0.438	0.000	0.007
3	14:04:41	0.014	0.058	0.172	-0.067	-0.769	0.343	0.000	-0.000
x		-0.008	-0.001	0.098	-0.073	-0.494	0.051	0.000	0.005
σ		0.020	0.052	0.065	0.172	0.248	0.426	0.000	0.004
%RSD		262.200	9880.000	66.610	234.700	50.100	837.200	0.000	92.120
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:02	89.012%	0.146	0.174	90.606%	-0.028	-0.050	0.004	0.028
2	14:04:22	90.229%	0.213	0.134	91.395%	-0.040	-0.039	0.072	0.055
3	14:04:41	90.585%	0.145	0.148	90.869%	-0.050	-0.042	0.058	0.046
x		89.942%	0.168	0.152	90.957%	-0.040	-0.044	0.045	0.043
σ		0.824%	0.039	0.021	0.401%	0.011	0.006	0.036	0.014
%RSD		0.917	23.280	13.550	0.441	27.500	13.150	79.550	32.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:02	87.186%	0.021	0.048	0.049	0.006	0.007	84.847%	84.379%
2	14:04:22	88.495%	0.023	0.060	0.042	0.013	0.010	87.563%	86.036%
3	14:04:41	87.888%	-0.027	0.045	0.044	0.013	0.015	88.050%	87.063%
x		87.856%	0.005	0.051	0.045	0.011	0.011	86.820%	85.826%
σ		0.655%	0.028	0.008	0.004	0.004	0.004	1.726%	1.354%
%RSD		0.746	513.200	15.090	8.424	40.210	39.700	1.988	1.578
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:04:02	0.038	0.027	0.209	0.180	0.192	83.480%		
2	14:04:22	0.042	0.033	0.218	0.177	0.203	84.617%		
3	14:04:41	0.026	0.026	0.216	0.206	0.214	85.566%		
x		0.035	0.029	0.214	0.188	0.203	84.554%		
σ		0.008	0.004	0.004	0.016	0.011	1.044%		
%RSD		24.150	13.560	2.087	8.618	5.462	1.235		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	81.124%	0.236	-13.590	-6.035	0.000	79120.000	96.080	97.530
2	14:08:13	78.835%	0.324	-9.216	-8.077	0.000	77040.000	98.860	96.720
3	14:08:33	73.903%	0.129	-8.753	-6.115	0.000	77470.000	95.530	96.310
x		77.954%	0.230	-10.520	-6.742	0.000	77880.000	96.820	96.850
σ		3.690%	0.098	2.668	1.157	0.000	1096.000	1.784	0.616
%RSD		4.734	42.490	25.360	17.150	0.000	1.407	1.842	0.636

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	3359.000	5487.000	0.000	292.500	2376.000	2117.000	67.582%	34.900
2	14:08:13	3319.000	5373.000	0.000	299.400	2456.000	2130.000	65.261%	42.540
3	14:08:33	3349.000	5385.000	0.000	300.300	2303.000	2156.000	63.963%	39.050
x		3342.000	5415.000	0.000	297.400	2378.000	2135.000	65.602%	38.830
σ		21.080	62.420	0.000	4.243	76.390	19.670	1.834%	3.829
%RSD		0.631	1.153	0.000	1.427	3.212	0.922	2.795	9.861

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	116.700	18.450	54.540	2552.000	2520.000	9.961	26.100	305.700
2	14:08:13	114.100	18.040	54.320	2491.000	2507.000	10.020	26.080	304.300
3	14:08:33	117.100	18.580	52.880	2479.000	2491.000	9.520	24.960	297.600
x		115.900	18.360	53.910	2508.000	2506.000	9.835	25.710	302.600
σ		1.638	0.284	0.901	38.740	14.420	0.274	0.653	4.341
%RSD		1.412	1.549	1.671	1.545	0.576	2.790	2.538	1.435

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	314.000	29.260	28.800	34.930	2.039	2.053	0.000	6.134
2	14:08:13	301.600	28.220	28.450	34.320	1.556	3.380	0.000	5.877
3	14:08:33	300.400	26.940	29.230	35.670	1.248	3.087	0.000	6.082
x		305.400	28.140	28.830	34.980	1.614	2.840	0.000	6.031
σ		7.552	1.162	0.390	0.677	0.399	0.697	0.000	0.136
%RSD		2.473	4.129	1.352	1.936	24.720	24.540	0.000	2.250

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	71.153%	6.505	6.326	67.146%	0.499	0.544	0.248	0.281
2	14:08:13	71.869%	6.158	6.425	67.027%	0.568	0.511	16.890	11.430
3	14:08:33	70.357%	6.395	6.430	66.294%	0.576	0.533	0.358	0.279
x		71.127%	6.352	6.394	66.822%	0.548	0.529	5.834	3.997
σ		0.757%	0.177	0.059	0.461%	0.042	0.017	9.579	6.438
%RSD		1.064	2.792	0.918	0.690	7.666	3.147	164.200	161.100

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	67.492%	3.515	10.190	10.080	13.040	12.930	72.806%	73.139%
2	14:08:13	68.422%	3.584	9.751	9.980	13.680	13.310	74.404%	74.488%
3	14:08:33	68.073%	3.466	10.070	9.842	13.150	13.260	74.819%	75.319%
x		67.995%	3.522	10.000	9.967	13.290	13.170	74.010%	74.315%
σ		0.470%	0.059	0.228	0.119	0.340	0.208	1.063%	1.100%
%RSD		0.691	1.688	2.275	1.198	2.555	1.582	1.436	1.481

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:07:54	0.088	0.074	51.040	48.300	49.260	71.679%
2	14:08:13	0.062	0.070	50.440	48.000	49.190	73.172%
3	14:08:33	0.066	0.073	50.620	48.770	49.580	73.681%
x		0.072	0.072	50.700	48.360	49.340	72.844%
σ		0.014	0.002	0.305	0.386	0.212	1.041%
%RSD		19.650	2.626	0.601	0.797	0.429	1.428

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:43	72.665%	0.044	11.190	14.460	0.000	91340.000	2601.000	2574.000
2	14:12:02	73.217%	0.130	7.306	13.240	0.000	91220.000	2584.000	2534.000
3	14:12:22	67.897%	0.140	15.250	16.320	0.000	91170.000	2640.000	2623.000
x		71.260%	0.105	11.250	14.670	0.000	91240.000	2608.000	2577.000
σ		2.925%	0.053	3.973	1.550	0.000	86.760	28.710	44.490
%RSD		4.105	50.690	35.320	10.560	0.000	0.095	1.101	1.726
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:43	694.500	4518.000	0.000	3418.000	22750.000	20870.000	63.875%	16.340
2	14:12:02	693.700	4534.000	0.000	3461.000	22850.000	21010.000	62.977%	17.490
3	14:12:22	722.600	4674.000	0.000	3561.000	23160.000	21130.000	60.183%	15.930
x		703.600	4576.000	0.000	3480.000	22920.000	21000.000	62.345%	16.590
σ		16.480	85.760	0.000	73.740	213.800	132.700	1.926%	0.807
%RSD		2.343	1.874	0.000	2.119	0.933	0.632	3.089	4.864
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:43	5.810	4.788	148.900	1165.000	1189.000	2.337	8.109	35.880
2	14:12:02	7.397	4.973	146.600	1131.000	1153.000	2.242	8.256	35.210
3	14:12:22	6.484	5.177	149.900	1132.000	1196.000	2.261	8.313	34.670
x		6.563	4.979	148.500	1142.000	1179.000	2.280	8.226	35.250
σ		0.797	0.195	1.683	19.180	23.450	0.050	0.105	0.607
%RSD		12.140	3.914	1.134	1.679	1.989	2.205	1.281	1.721
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:43	35.590	16.680	16.640	3.288	-0.639	0.477	0.000	92.680
2	14:12:02	35.690	16.230	16.180	2.258	-0.666	0.305	0.000	92.570
3	14:12:22	34.630	16.900	16.090	2.702	0.194	1.532	0.000	92.180
x		35.300	16.600	16.300	2.749	-0.370	0.771	0.000	92.480
σ		0.585	0.341	0.292	0.516	0.489	0.664	0.000	0.264
%RSD		1.658	2.055	1.794	18.790	132.000	86.140	0.000	0.285
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:43	65.755%	31.370	31.590	65.776%	-0.024	-0.019	13.410	9.070
2	14:12:02	65.283%	30.370	31.140	65.082%	-0.011	-0.047	0.117	0.066
3	14:12:22	64.926%	31.400	31.210	64.542%	-0.014	-0.027	0.004	0.106
x		65.322%	31.050	31.310	65.133%	-0.016	-0.031	4.512	3.081
σ		0.416%	0.585	0.243	0.619%	0.007	0.014	7.710	5.187
%RSD		0.636	1.883	0.775	0.950	44.300	46.020	170.900	168.400
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:11:43	66.535%	0.934	19.200	19.260	46.690	48.050	73.731%	73.929%
2	14:12:02	67.163%	0.984	19.430	19.200	46.900	46.940	73.657%	74.397%
3	14:12:22	67.368%	1.003	19.340	19.120	46.770	47.630	74.378%	74.831%
x		67.022%	0.974	19.320	19.200	46.790	47.540	73.922%	74.386%
σ		0.434%	0.036	0.115	0.070	0.107	0.561	0.396%	0.452%
%RSD		0.648	3.688	0.595	0.366	0.229	1.179	0.536	0.607
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:11:43	0.148	0.131	13.820	13.470	13.610	70.763%		
2	14:12:02	0.141	0.132	14.240	13.360	13.590	71.709%		
3	14:12:22	0.130	0.109	13.550	13.140	13.360	73.056%		
x		0.140	0.124	13.870	13.320	13.520	71.842%		
σ		0.009	0.013	0.345	0.168	0.139	1.152%		
%RSD		6.626	10.260	2.486	1.263	1.031	1.604		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	76.747%	0.042	26.860	21.600	0.000	8252.000	8340.000	8270.000
2	14:15:52	71.814%	-0.000	20.890	25.440	0.000	8020.000	8070.000	7923.000
3	14:16:11	72.193%	-0.000	23.920	22.750	0.000	7936.000	8184.000	8035.000
x		73.585%	0.014	23.890	23.260	0.000	8069.000	8198.000	8076.000
σ		2.745%	0.024	2.989	1.971	0.000	163.700	135.700	177.100
%RSD		3.731	173.200	12.510	8.473	0.000	2.028	1.656	2.192

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	12.360	5557.000	0.000	4457.000	74040.000	75570.000	63.827%	0.509
2	14:15:52	11.680	5424.000	0.000	4404.000	72660.000	73160.000	63.398%	0.922
3	14:16:11	11.590	5409.000	0.000	4456.000	75520.000	73670.000	61.659%	0.669
x		11.880	5463.000	0.000	4439.000	74080.000	74130.000	62.961%	0.700
σ		0.419	81.820	0.000	30.190	1431.000	1268.000	1.148%	0.208
%RSD		3.531	1.498	0.000	0.680	1.931	1.710	1.823	29.740

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	3.240	0.553	824.900	6.967	74.300	2.596	5.726	10.000
2	14:15:52	3.227	0.696	825.900	5.752	75.520	2.513	6.014	10.230
3	14:16:11	4.336	0.601	819.000	4.363	64.100	2.623	5.807	9.826
x		3.601	0.617	823.200	5.694	71.300	2.577	5.849	10.020
σ		0.636	0.073	3.729	1.303	6.271	0.057	0.149	0.201
%RSD		17.670	11.760	0.453	22.880	8.795	2.212	2.545	2.009

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	10.010	16.740	17.840	1.199	-0.324	0.107	0.000	292.600
2	14:15:52	9.968	16.660	16.090	1.734	-1.228	0.286	0.000	297.300
3	14:16:11	9.448	16.280	16.730	1.397	-1.331	-0.201	0.000	293.000
x		9.808	16.560	16.890	1.443	-0.961	0.064	0.000	294.300
σ		0.312	0.246	0.887	0.271	0.554	0.246	0.000	2.627
%RSD		3.183	1.484	5.252	18.740	57.690	385.800	0.000	0.893

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	67.090%	11.410	11.190	67.392%	-0.049	-0.048	0.131	0.168
2	14:15:52	65.820%	10.920	11.490	66.827%	-0.036	-0.056	0.094	0.168
3	14:16:11	65.658%	11.450	11.390	66.712%	-0.041	-0.043	0.121	0.126
x		66.189%	11.260	11.360	66.977%	-0.042	-0.049	0.115	0.154
σ		0.784%	0.295	0.151	0.364%	0.007	0.007	0.019	0.024
%RSD		1.184	2.619	1.329	0.543	16.000	13.560	16.400	15.870

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	68.971%	0.537	11.420	11.420	131.700	132.000	74.431%	75.201%
2	14:15:52	69.656%	0.585	11.740	11.460	130.800	132.500	75.728%	76.308%
3	14:16:11	70.211%	0.606	11.310	11.340	128.800	129.100	77.212%	76.851%
x		69.613%	0.576	11.490	11.410	130.400	131.200	75.790%	76.120%
σ		0.621%	0.035	0.226	0.064	1.478	1.799	1.391%	0.841%
%RSD		0.892	6.157	1.966	0.560	1.133	1.371	1.836	1.105

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:15:33	0.213	0.198	0.499	0.498	0.498	73.952%
2	14:15:52	0.200	0.165	0.568	0.478	0.536	74.841%
3	14:16:11	0.205	0.182	0.524	0.498	0.539	75.448%
x		0.206	0.182	0.531	0.491	0.525	74.747%
σ		0.006	0.016	0.035	0.012	0.023	0.752%
%RSD		3.151	9.039	6.562	2.341	4.358	1.007

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	69.891%	0.319	56.190	55.540	0.000	8872.000	41360.000	41060.000
2	14:19:42	66.932%	0.191	62.640	58.270	0.000	8985.000	42190.000	40930.000
3	14:20:01	62.910%	0.303	58.820	60.590	0.000	8977.000	41790.000	41050.000
x		66.578%	0.271	59.220	58.130	0.000	8944.000	41780.000	41010.000
σ		3.504%	0.070	3.242	2.528	0.000	62.840	412.200	73.820
%RSD		5.263	25.790	5.474	4.348	0.000	0.703	0.987	0.180

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	55.630	16430.000	0.000	7379.000	294800.000	291800.000	60.610%	1.585
2	14:19:42	54.870	16370.000	0.000	7412.000	302300.000	295000.000	56.421%	0.992
3	14:20:01	56.340	16520.000	0.000	7534.000	299400.000	299500.000	55.541%	2.354
x		55.610	16440.000	0.000	7442.000	298800.000	295400.000	57.524%	1.643
σ		0.738	74.810	0.000	81.800	3758.000	3844.000	2.709%	0.683
%RSD		1.327	0.455	0.000	1.099	1.257	1.301	4.709	41.560

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	0.981	0.983	17590.000	479.000	752.600	233.500	254.300	22.280
2	14:19:42	0.495	0.858	17700.000	493.500	747.200	240.000	257.300	22.490
3	14:20:01	1.204	0.908	17660.000	475.400	741.900	231.400	243.800	22.040
x		0.893	0.916	17650.000	482.600	747.200	235.000	251.800	22.270
σ		0.363	0.063	55.490	9.572	5.334	4.473	7.083	0.225
%RSD		40.580	6.859	0.314	1.983	0.714	1.904	2.813	1.010

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	21.750	2775.000	2790.000	4.117	-0.685	0.158	0.000	1119.000
2	14:19:42	23.630	2865.000	2897.000	3.167	-0.790	0.193	0.000	1118.000
3	14:20:01	21.820	2776.000	2792.000	2.004	-0.779	0.040	0.000	1127.000
x		22.400	2805.000	2827.000	3.096	-0.751	0.130	0.000	1121.000
σ		1.067	51.750	61.170	1.058	0.058	0.080	0.000	4.979
%RSD		4.761	1.845	2.164	34.180	7.708	61.620	0.000	0.444

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	64.168%	0.439	0.376	60.886%	-0.004	-0.014	12.230	11.900
2	14:19:42	63.105%	0.465	0.380	60.415%	0.027	0.008	11.720	11.730
3	14:20:01	61.395%	0.507	0.380	58.561%	0.037	0.004	11.700	11.840
x		62.889%	0.470	0.379	59.954%	0.020	-0.001	11.880	11.830
σ		1.399%	0.034	0.002	1.229%	0.022	0.011	0.300	0.086
%RSD		2.224	7.249	0.599	2.050	108.600	1331.000	2.528	0.730

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	66.153%	0.466	5.917	6.071	622.800	627.600	72.537%	73.362%
2	14:19:42	65.613%	0.569	6.157	6.061	617.900	618.700	73.699%	74.507%
3	14:20:01	64.669%	0.603	5.916	5.995	627.800	622.300	73.138%	73.762%
x		65.478%	0.546	5.997	6.042	622.800	622.800	73.125%	73.877%
σ		0.751%	0.071	0.139	0.041	4.969	4.514	0.581%	0.582%
%RSD		1.147	13.010	2.319	0.686	0.798	0.725	0.794	0.787

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:19:22	0.764	0.802	19.370	18.760	19.100	70.892%
2	14:19:42	0.809	0.773	19.580	18.770	19.050	71.675%
3	14:20:01	0.800	0.797	19.760	18.610	19.170	71.369%
x		0.791	0.790	19.570	18.710	19.100	71.312%
σ		0.024	0.016	0.191	0.092	0.059	0.394%
%RSD		3.030	1.964	0.975	0.490	0.308	0.553

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:12	78.628%	0.081	-2.688	-1.805	0.000	1804.000	8168.000	8139.000
2	14:23:31	74.228%	0.171	-6.037	-1.631	0.000	1867.000	8562.000	8415.000
3	14:23:50	70.810%	0.224	-2.279	-1.307	0.000	1882.000	8305.000	8379.000
x		74.556%	0.159	-3.668	-1.581	0.000	1851.000	8345.000	8311.000
σ		3.920%	0.072	2.062	0.253	0.000	41.620	199.900	149.700
%RSD		5.257	45.550	56.200	15.990	0.000	2.249	2.396	1.801
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:12	11.410	3408.000	0.000	1463.000	58470.000	59400.000	65.942%	0.273
2	14:23:31	11.370	3534.000	0.000	1484.000	60150.000	59700.000	64.551%	0.146
3	14:23:50	10.860	3471.000	0.000	1464.000	58490.000	58710.000	62.266%	0.154
x		11.210	3471.000	0.000	1471.000	59040.000	59270.000	64.253%	0.191
σ		0.303	62.730	0.000	11.840	965.700	507.800	1.856%	0.071
%RSD		2.704	1.807	0.000	0.805	1.636	0.857	2.889	37.100
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:12	0.421	0.167	3559.000	90.890	148.300	48.710	53.820	4.736
2	14:23:31	0.302	0.218	3535.000	89.360	154.200	47.930	52.920	4.901
3	14:23:50	-0.034	0.076	3547.000	88.480	142.900	47.060	52.290	4.517
x		0.230	0.154	3547.000	89.580	148.500	47.900	53.010	4.718
σ		0.236	0.072	12.050	1.218	5.660	0.826	0.770	0.192
%RSD		102.600	46.510	0.340	1.360	3.812	1.724	1.453	4.075
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:12	4.811	626.600	629.100	0.587	-1.702	-0.500	0.000	214.100
2	14:23:31	5.047	631.800	649.500	0.588	-1.153	0.569	0.000	215.000
3	14:23:50	4.695	628.500	645.000	0.633	-1.814	-0.736	0.000	216.000
x		4.851	629.000	641.200	0.603	-1.557	-0.223	0.000	215.000
σ		0.179	2.628	10.740	0.026	0.354	0.695	0.000	0.962
%RSD		3.701	0.418	1.675	4.339	22.720	312.600	0.000	0.447
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:12	65.871%	0.146	0.082	66.580%	-0.044	-0.065	2.692	2.482
2	14:23:31	64.729%	0.091	0.088	65.392%	-0.063	-0.063	18.290	13.010
3	14:23:50	64.269%	0.079	0.116	64.345%	-0.049	-0.058	2.420	2.613
x		64.956%	0.106	0.095	65.439%	-0.052	-0.062	7.799	6.034
σ		0.825%	0.035	0.018	1.119%	0.010	0.003	9.082	6.039
%RSD		1.270	33.640	19.240	1.709	18.910	5.567	116.500	100.100
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:23:12	67.086%	0.031	1.246	1.252	124.400	125.400	70.898%	71.473%
2	14:23:31	67.417%	0.042	1.095	1.151	125.900	125.800	71.220%	71.921%
3	14:23:50	66.200%	0.016	1.321	1.202	125.400	125.000	71.140%	71.932%
x		66.901%	0.030	1.220	1.202	125.300	125.400	71.086%	71.775%
σ		0.629%	0.013	0.115	0.050	0.737	0.420	0.167%	0.262%
%RSD		0.940	44.390	9.443	4.195	0.588	0.335	0.236	0.365
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:23:12	0.159	0.161	3.823	3.775	3.708	71.704%		
2	14:23:31	0.146	0.161	3.921	3.707	3.773	72.123%		
3	14:23:50	0.144	0.144	3.883	3.712	3.737	71.901%		
x		0.150	0.155	3.876	3.732	3.739	71.910%		
σ		0.008	0.010	0.049	0.038	0.033	0.210%		
%RSD		5.318	6.517	1.273	1.019	0.872	0.292		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	67.618%	52.170	68.040	70.460	0.000	10720.000	67010.000	67230.000
2	14:27:20	67.451%	52.660	70.800	69.140	0.000	10950.000	70190.000	69460.000
3	14:27:39	67.830%	54.140	75.030	70.650	0.000	10750.000	68090.000	67270.000
x		67.633%	52.990	71.290	70.080	0.000	10810.000	68430.000	67990.000
σ		0.190%	1.022	3.519	0.823	0.000	125.900	1618.000	1279.000
%RSD		0.281	1.928	4.936	1.175	0.000	1.165	2.364	1.881

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	124300.000	75530.000	0.000	12800.000	493700.000	498200.000	64.461%	27.350
2	14:27:20	123300.000	75120.000	0.000	13060.000	503600.000	508000.000	63.107%	26.260
3	14:27:39	123900.000	74720.000	0.000	12780.000	502300.000	510600.000	61.565%	25.300
x		123800.000	75120.000	0.000	12880.000	499900.000	505600.000	63.044%	26.300
σ		545.900	408.000	0.000	157.200	5419.000	6540.000	1.449%	1.027
%RSD		0.441	0.543	0.000	1.221	1.084	1.293	2.298	3.905

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	1307.000	462.100	35670.000	327400.000	333400.000	798.500	1292.000	21500.000
2	14:27:20	1285.000	451.900	35520.000	327400.000	336300.000	808.900	1320.000	21740.000
3	14:27:39	1257.000	449.100	35320.000	327900.000	340300.000	820.800	1327.000	21900.000
x		1283.000	454.400	35500.000	327600.000	336700.000	809.400	1313.000	21710.000
σ		25.000	6.822	171.700	289.400	3493.000	11.170	18.680	198.400
%RSD		1.949	1.501	0.484	0.088	1.038	1.379	1.423	0.914

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	22740.000	18310.000	17200.000	30.270	0.963	13.040	0.000	2478.000
2	14:27:20	22560.000	18620.000	17670.000	28.330	1.178	11.930	0.000	2528.000
3	14:27:39	22980.000	18900.000	17730.000	28.670	1.713	11.910	0.000	2554.000
x		22760.000	18610.000	17540.000	29.090	1.285	12.300	0.000	2520.000
σ		210.700	292.200	288.600	1.037	0.386	0.648	0.000	38.260
%RSD		0.926	1.570	1.646	3.565	30.050	5.269	0.000	1.518

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	0.000	0.582	0.385	59.606%	-0.007	-0.052	65.450	63.130
2	14:27:20	0.000	0.506	0.376	59.848%	-0.022	-0.036	65.160	64.220
3	14:27:39	0.000	0.504	0.403	60.295%	-0.024	-0.026	64.930	63.520
x		0.000	0.531	0.388	59.916%	-0.018	-0.038	65.180	63.620
σ		0.000	0.044	0.014	0.350%	0.009	0.013	0.261	0.552
%RSD		0.000	8.386	3.574	0.584	53.020	35.180	0.400	0.868

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	65.242%	2.070	7.763	7.413	4678.000	4733.000	121.122%	125.073%
2	14:27:20	66.191%	1.953	7.666	7.841	4718.000	4790.000	124.161%	128.492%
3	14:27:39	65.924%	2.176	7.894	7.929	4775.000	4835.000	123.413%	128.858%
x		65.786%	2.066	7.775	7.728	4724.000	4786.000	122.898%	127.474%
σ		0.489%	0.112	0.115	0.276	48.920	51.120	1.584%	2.088%
%RSD		0.744	5.405	1.473	3.572	1.036	1.068	1.289	1.638

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:27:01	4.643	4.764	25060.000	23900.000	24820.000	69.215%
2	14:27:20	4.752	4.835	25280.000	24120.000	25040.000	70.404%
3	14:27:39	4.749	4.781	25240.000	24210.000	25190.000	70.704%
x		4.714	4.793	25200.000	24080.000	25020.000	70.108%
σ		0.062	0.037	119.100	159.300	189.800	0.787%
%RSD		1.318	0.770	0.472	0.661	0.759	1.123

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:49	79.980%	0.040	-16.530	-14.960	0.000	1224.000	16460.000	16880.000
2	14:31:08	75.278%	0.042	-16.710	-14.830	0.000	1283.000	17310.000	17500.000
3	14:31:27	71.404%	0.132	-20.110	-14.760	0.000	1252.000	17340.000	17750.000
x		75.554%	0.071	-17.780	-14.850	0.000	1253.000	17040.000	17380.000
σ		4.295%	0.053	2.013	0.105	0.000	29.170	497.000	447.800
%RSD		5.684	74.180	11.320	0.710	0.000	2.328	2.917	2.577
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:49	10.280	1098.000	0.000	3523.000	32130.000	29690.000	74.063%	-0.038
2	14:31:08	10.610	1131.000	0.000	3604.000	33260.000	30030.000	70.201%	0.004
3	14:31:27	10.290	1122.000	0.000	3601.000	32270.000	30010.000	69.526%	-0.036
x		10.390	1117.000	0.000	3576.000	32560.000	29910.000	71.263%	-0.023
σ		0.188	16.940	0.000	46.040	615.200	190.600	2.448%	0.024
%RSD		1.810	1.517	0.000	1.287	1.890	0.637	3.435	103.200
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:49	0.127	-0.007	3659.000	35660.000	35770.000	26.860	5.569	11.300
2	14:31:08	0.251	-0.021	3674.000	35290.000	35520.000	26.690	5.285	11.390
3	14:31:27	0.057	0.097	3674.000	34900.000	34620.000	26.300	5.263	11.330
x		0.145	0.023	3669.000	35290.000	35300.000	26.620	5.372	11.340
σ		0.098	0.065	8.622	378.400	607.900	0.285	0.170	0.047
%RSD		67.690	282.100	0.235	1.072	1.722	1.069	3.172	0.413
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:49	11.610	597.800	598.500	-0.151	-1.781	-1.173	0.000	127.800
2	14:31:08	10.950	610.300	607.300	-0.285	-2.686	-1.275	0.000	127.100
3	14:31:27	11.030	601.900	605.300	-0.531	-2.736	-1.700	0.000	127.500
x		11.200	603.300	603.700	-0.322	-2.401	-1.383	0.000	127.500
σ		0.361	6.393	4.609	0.193	0.538	0.280	0.000	0.324
%RSD		3.225	1.060	0.763	59.840	22.390	20.220	0.000	0.255
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:49	85.361%	0.010	0.024	71.826%	-0.058	-0.063	0.421	0.385
2	14:31:08	84.299%	0.015	0.017	71.574%	-0.022	-0.047	0.447	0.384
3	14:31:27	84.253%	0.042	0.014	70.463%	-0.067	-0.063	0.474	0.361
x		84.637%	0.023	0.018	71.288%	-0.049	-0.058	0.447	0.377
σ		0.627%	0.017	0.005	0.725%	0.024	0.009	0.026	0.014
%RSD		0.740	76.800	26.120	1.018	48.080	16.360	5.909	3.602
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:30:49	72.747%	0.001	0.004	0.008	4.128	4.504	76.115%	76.706%
2	14:31:08	71.952%	0.036	-0.004	0.008	4.546	4.903	77.423%	77.093%
3	14:31:27	72.571%	0.025	-0.004	0.020	5.160	4.723	76.855%	77.284%
x		72.423%	0.021	-0.001	0.012	4.611	4.710	76.798%	77.027%
σ		0.417%	0.018	0.005	0.007	0.519	0.200	0.655%	0.295%
%RSD		0.576	88.030	403.600	59.610	11.250	4.239	0.854	0.382
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:30:49	0.016	0.019	0.491	0.404	0.435	77.387%		
2	14:31:08	0.009	0.017	0.484	0.326	0.436	78.172%		
3	14:31:27	0.004	0.017	0.321	0.308	0.325	77.439%		
x		0.010	0.018	0.432	0.346	0.399	77.666%		
σ		0.006	0.001	0.096	0.051	0.063	0.439%		
%RSD		62.630	6.408	22.230	14.740	15.910	0.565		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	79.707%	0.079	-17.690	-14.520	0.000	1603.000	20820.000	20290.000
2	14:34:55	76.022%	0.083	-18.450	-15.160	0.000	1599.000	20540.000	20240.000
3	14:35:14	73.703%	-0.000	-19.360	-14.440	0.000	1622.000	20950.000	20930.000
x		76.478%	0.054	-18.500	-14.710	0.000	1608.000	20770.000	20490.000
σ		3.028%	0.047	0.832	0.397	0.000	12.360	212.900	383.600
%RSD		3.959	86.670	4.499	2.702	0.000	0.768	1.025	1.872

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	17.700	1345.000	0.000	4285.000	35010.000	33010.000	73.091%	-0.077
2	14:34:55	17.760	1399.000	0.000	4412.000	36140.000	33120.000	71.286%	0.003
3	14:35:14	19.110	1417.000	0.000	4504.000	36860.000	33330.000	69.736%	0.170
x		18.190	1387.000	0.000	4400.000	36000.000	33150.000	71.371%	0.032
σ		0.795	37.610	0.000	110.100	933.200	162.900	1.679%	0.126
%RSD		4.369	2.712	0.000	2.502	2.592	0.491	2.353	394.100

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	0.022	-0.022	4880.000	52550.000	52890.000	32.690	6.751	1.851
2	14:34:55	-0.086	0.061	4945.000	52830.000	53650.000	31.800	6.446	1.698
3	14:35:14	0.080	0.050	4799.000	51010.000	51590.000	31.050	6.415	1.626
x		0.005	0.030	4875.000	52130.000	52710.000	31.850	6.537	1.725
σ		0.084	0.045	73.240	977.100	1041.000	0.821	0.186	0.115
%RSD		1640.000	149.900	1.502	1.874	1.974	2.576	2.837	6.657

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	2.003	716.300	714.600	-0.364	-1.506	-0.622	0.000	155.100
2	14:34:55	1.828	710.500	716.400	-0.356	-2.102	-0.588	0.000	156.200
3	14:35:14	1.916	709.600	699.800	-0.297	-1.930	-0.965	0.000	155.200
x		1.916	712.100	710.300	-0.339	-1.846	-0.725	0.000	155.500
σ		0.087	3.612	9.107	0.037	0.307	0.209	0.000	0.650
%RSD		4.558	0.507	1.282	10.790	16.620	28.810	0.000	0.418

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	82.990%	0.032	0.024	72.214%	-0.051	-0.074	0.229	0.256
2	14:34:55	80.902%	0.065	0.004	71.221%	-0.047	-0.047	0.331	0.306
3	14:35:14	80.724%	0.027	0.001	70.965%	-0.053	-0.056	0.320	0.281
x		81.539%	0.041	0.010	71.466%	-0.050	-0.059	0.293	0.281
σ		1.260%	0.021	0.012	0.660%	0.003	0.014	0.056	0.025
%RSD		1.545	50.330	127.200	0.923	5.282	23.300	19.060	8.907

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	71.329%	-0.024	0.003	0.008	6.081	6.042	76.088%	76.069%
2	14:34:55	72.973%	-0.002	0.018	0.013	6.546	5.778	76.700%	77.500%
3	14:35:14	72.406%	-0.001	0.008	0.013	5.842	6.092	77.739%	77.366%
x		72.236%	-0.009	0.009	0.011	6.156	5.970	76.842%	76.978%
σ		0.835%	0.013	0.008	0.003	0.357	0.169	0.835%	0.791%
%RSD		1.156	137.900	80.990	23.490	5.807	2.828	1.086	1.027

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:34:36	0.007	0.004	0.132	0.123	0.133	79.893%
2	14:34:55	0.005	0.011	0.124	0.112	0.134	79.184%
3	14:35:14	0.012	0.009	0.121	0.108	0.115	78.399%
x		0.008	0.008	0.126	0.114	0.127	79.158%
σ		0.003	0.004	0.006	0.008	0.011	0.747%
%RSD		42.180	43.020	4.681	7.096	8.432	0.944

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	77.475%	0.041	-18.760	-14.350	0.000	1648.000	21280.000	21240.000
2	14:38:43	76.559%	0.041	-18.280	-14.950	0.000	1601.000	20580.000	20110.000
3	14:39:02	74.036%	0.085	-20.440	-14.910	0.000	1652.000	20850.000	20460.000
x		76.024%	0.056	-19.160	-14.740	0.000	1634.000	20910.000	20600.000
σ		1.781%	0.026	1.133	0.336	0.000	28.630	354.200	578.300
%RSD		2.343	45.900	5.915	2.277	0.000	1.752	1.695	2.807

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	44.460	1396.000	0.000	4382.000	35880.000	32690.000	73.916%	0.040
2	14:38:43	42.660	1363.000	0.000	4349.000	35390.000	32560.000	71.481%	-0.077
3	14:39:02	43.650	1356.000	0.000	4364.000	35320.000	32720.000	69.481%	0.005
x		43.590	1372.000	0.000	4365.000	35530.000	32660.000	71.626%	-0.011
σ		0.901	21.530	0.000	16.730	304.100	82.980	2.221%	0.060
%RSD		2.066	1.569	0.000	0.383	0.856	0.254	3.100	557.600

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	0.062	-0.035	4759.000	51060.000	50840.000	30.780	6.502	2.197
2	14:38:43	-0.029	0.015	4763.000	50470.000	50220.000	30.720	6.714	2.006
3	14:39:02	-0.303	-0.039	4828.000	51220.000	51680.000	31.170	7.341	2.168
x		-0.090	-0.020	4783.000	50920.000	50910.000	30.890	6.852	2.124
σ		0.190	0.030	38.820	395.200	732.400	0.248	0.436	0.103
%RSD		211.100	151.500	0.812	0.776	1.438	0.802	6.366	4.847

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	2.226	704.300	706.100	-0.271	-1.937	-0.745	0.000	153.200
2	14:38:43	2.202	689.100	691.100	-0.118	-1.896	-0.558	0.000	151.800
3	14:39:02	1.979	707.500	706.900	0.110	-1.854	-0.449	0.000	152.700
x		2.136	700.300	701.400	-0.093	-1.896	-0.584	0.000	152.600
σ		0.136	9.842	8.898	0.192	0.041	0.150	0.000	0.699
%RSD		6.372	1.405	1.269	206.200	2.180	25.670	0.000	0.458

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	80.791%	0.032	0.014	71.528%	-0.042	-0.047	0.357	0.257
2	14:38:43	81.908%	0.021	0.004	72.117%	-0.051	-0.069	0.367	0.349
3	14:39:02	80.768%	0.027	0.018	71.658%	-0.044	-0.076	0.277	0.297
x		81.156%	0.027	0.012	71.768%	-0.046	-0.064	0.334	0.301
σ		0.652%	0.006	0.007	0.309%	0.005	0.015	0.049	0.046
%RSD		0.803	20.950	58.750	0.431	10.880	23.980	14.740	15.270

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	71.357%	0.000	-0.008	-0.005	6.041	6.008	76.925%	77.089%
2	14:38:43	73.130%	-0.042	-0.010	-0.007	5.945	6.119	77.588%	77.929%
3	14:39:02	72.736%	-0.036	-0.014	-0.005	5.972	5.621	77.328%	77.368%
x		72.408%	-0.026	-0.010	-0.006	5.986	5.916	77.280%	77.462%
σ		0.931%	0.023	0.003	0.002	0.050	0.262	0.334%	0.428%
%RSD		1.286	88.200	30.370	27.600	0.829	4.420	0.432	0.552

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:38:24	0.010	0.002	0.165	0.112	0.138	77.355%
2	14:38:43	0.004	0.004	0.125	0.122	0.126	77.614%
3	14:39:02	0.006	0.004	0.145	0.085	0.107	78.464%
x		0.007	0.003	0.145	0.106	0.124	77.811%
σ		0.003	0.001	0.020	0.019	0.016	0.580%
%RSD		41.000	33.880	13.670	17.790	12.970	0.745

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:12	77.274%	0.041	-18.750	-15.610	0.000	1562.000	19980.000	19600.000
2	14:42:31	75.470%	-0.000	-19.260	-14.540	0.000	1544.000	19740.000	19470.000
3	14:42:51	76.469%	0.041	-20.740	-15.980	0.000	1571.000	19990.000	19530.000
x		76.405%	0.027	-19.590	-15.370	0.000	1559.000	19900.000	19530.000
σ		0.904%	0.024	1.033	0.745	0.000	14.040	140.700	67.840
%RSD		1.183	86.610	5.275	4.845	0.000	0.901	0.707	0.347
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:12	26.670	1318.000	0.000	4145.000	34310.000	31410.000	74.088%	0.078
2	14:42:31	26.640	1307.000	0.000	4191.000	33570.000	31160.000	73.086%	0.512
3	14:42:51	26.950	1311.000	0.000	4217.000	34120.000	31820.000	69.443%	0.129
x		26.750	1312.000	0.000	4184.000	34000.000	31460.000	72.206%	0.240
σ		0.170	5.350	0.000	36.770	385.300	331.100	2.444%	0.237
%RSD		0.637	0.408	0.000	0.879	1.133	1.052	3.385	98.970
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:12	0.103	0.086	4670.000	50010.000	50030.000	30.460	6.709	1.597
2	14:42:31	0.325	0.081	4546.000	48500.000	49760.000	29.570	6.473	1.600
3	14:42:51	0.051	0.089	4604.000	49610.000	49970.000	29.840	6.978	1.619
x		0.160	0.085	4606.000	49370.000	49920.000	29.960	6.720	1.605
σ		0.145	0.004	61.940	783.500	143.800	0.455	0.253	0.012
%RSD		90.860	4.746	1.345	1.587	0.288	1.519	3.759	0.755
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:12	1.921	676.500	678.800	-0.090	-1.638	-0.551	0.000	145.800
2	14:42:31	1.645	665.400	665.300	-0.071	-2.050	-0.017	0.000	146.400
3	14:42:51	1.647	676.000	680.000	-0.143	-2.627	-1.375	0.000	147.900
x		1.738	672.600	674.700	-0.101	-2.105	-0.648	0.000	146.700
σ		0.159	6.258	8.198	0.038	0.497	0.684	0.000	1.089
%RSD		9.122	0.930	1.215	37.130	23.590	105.600	0.000	0.742
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:12	82.291%	0.032	0.001	72.988%	-0.062	-0.050	0.319	0.343
2	14:42:31	81.448%	0.043	0.017	72.685%	-0.055	-0.060	0.231	0.228
3	14:42:51	81.132%	0.032	0.018	71.688%	-0.048	-0.051	0.235	0.275
x		81.624%	0.035	0.012	72.454%	-0.055	-0.054	0.262	0.282
σ		0.599%	0.006	0.010	0.680%	0.007	0.006	0.050	0.058
%RSD		0.734	17.480	81.870	0.939	13.160	10.880	18.970	20.570
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:42:12	73.150%	-0.010	0.016	0.025	6.134	5.773	77.499%	76.960%
2	14:42:31	73.766%	-0.004	0.017	0.005	5.558	5.450	78.062%	77.612%
3	14:42:51	73.470%	-0.027	0.006	0.027	5.498	5.615	78.029%	77.403%
x		73.462%	-0.014	0.013	0.019	5.730	5.613	77.863%	77.325%
σ		0.308%	0.012	0.006	0.012	0.351	0.162	0.316%	0.333%
%RSD		0.419	87.050	48.680	64.150	6.127	2.878	0.406	0.430
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:42:12	0.003	0.000	1.216	1.033	1.141	80.347%		
2	14:42:31	0.006	0.000	1.251	1.090	1.184	79.566%		
3	14:42:51	0.010	-0.001	1.299	1.084	1.185	79.321%		
x		0.006	-0.000	1.255	1.069	1.170	79.745%		
σ		0.004	0.000	0.042	0.031	0.025	0.536%		
%RSD		58.930	2388.000	3.314	2.929	2.135	0.672		

CCV 1487954 3/20/2015 2:45:49 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	90.614%	102.800	77.210	81.010	0.000	48960.000	49150.000	48840.000
2	14:46:09	85.569%	100.300	77.100	75.410	0.000	48960.000	50040.000	49410.000
3	14:46:28	86.285%	97.440	74.390	74.360	0.000	48850.000	48640.000	48160.000
x		87.489%	100.186%	76.234%	76.925%	0.000	97.841%	98.549%	97.604%
σ		2.730%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.120	2.687	2.099	4.646	0.000	0.134	1.440	1.285

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	492.800	4849.000	0.000	48590.000	48620.000	48670.000	84.118%	97.630
2	14:46:09	508.100	4988.000	0.000	48360.000	48820.000	48600.000	81.958%	97.500
3	14:46:28	491.900	4819.000	0.000	48320.000	49460.000	49300.000	80.207%	94.000
x		99.520%	97.709%	0.000	96.843%	97.932%	97.715%	82.094%	96.378%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.959%	n/a
%RSD		1.834	1.838	0.000	0.297	0.900	0.785	2.386	2.141

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	97.350	98.440	471.500	24420.000	24270.000	98.640	100.700	101.600
2	14:46:09	97.590	96.510	473.700	24490.000	24390.000	96.990	97.770	99.660
3	14:46:28	99.580	98.080	477.700	24480.000	24360.000	98.730	98.530	100.700
x		98.174%	97.679%	94.859%	97.855%	97.352%	98.119%	98.990%	100.626%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		1.248	1.048	0.663	0.155	0.256	0.996	1.526	0.945

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	103.100	101.700	99.800	101.500	100.700	102.900	0.000	96.280
2	14:46:09	99.360	100.500	102.300	101.700	102.900	103.600	0.000	98.000
3	14:46:28	99.930	102.100	100.100	98.660	100.900	98.350	0.000	97.570
x		100.793%	101.435%	100.724%	100.625%	101.519%	101.621%	0.000	97.283%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		1.994	0.861	1.371	1.697	1.183	2.810	0.000	0.924

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	77.341%	98.160	96.500	76.377%	96.760	98.530	100.600	100.300
2	14:46:09	76.122%	99.340	100.500	75.048%	98.830	100.100	98.490	98.620
3	14:46:28	75.712%	100.400	101.400	74.319%	99.530	98.850	99.570	98.990
x		76.392%	99.298%	99.490%	75.248%	98.373%	99.171%	99.547%	99.307%
σ		0.848%	n/a	n/a	1.044%	n/a	n/a	n/a	n/a
%RSD		1.110	1.132	2.643	1.387	1.460	0.848	1.054	0.889

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	74.950%	96.810	97.470	97.530	97.510	96.730	76.774%	76.981%
2	14:46:09	74.668%	98.310	99.110	97.610	97.650	98.470	77.497%	77.949%
3	14:46:28	74.435%	98.500	98.430	98.220	98.030	98.510	77.846%	77.057%
x		74.684%	97.875%	98.336%	97.784%	97.731%	97.903%	77.373%	77.329%
σ		0.258%	n/a	n/a	n/a	n/a	n/a	0.547%	0.539%
%RSD		0.345	0.944	0.840	0.389	0.279	1.036	0.707	0.697

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:49	101.900	101.800	103.500	103.800	103.700	78.004%
2	14:46:09	103.000	102.700	104.000	105.100	104.700	77.982%
3	14:46:28	104.800	104.000	105.600	106.500	105.600	77.874%
x		103.265%	102.856%	104.344%	105.120%	104.706%	77.953%
σ		n/a	n/a	n/a	n/a	n/a	0.070%
%RSD		1.427	1.095	1.056	1.317	0.915	0.089

CCB5 3/20/2015 2:52:19 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	106.381%	-0.000	-21.320	-16.610	0.000	-18.480	1.235	1.575
2	14:52:57	102.832%	-0.000	-21.550	-17.320	0.000	-17.270	1.504	1.207
3	14:53:16	100.315%	-0.000	-21.340	-17.050	0.000	-16.750	1.596	1.418
x		103.176%	-0.000	-21.410	-16.990	0.000	-17.500	1.445	1.400
σ		3.048%	0.000	0.128	0.357	0.000	0.891	0.188	0.184
%RSD		2.954	0.000	0.596	2.104	0.000	5.090	12.980	13.170

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	0.572	9.389	0.000	5.797	8.405	-2.005	98.661%	0.011
2	14:52:57	0.498	8.934	0.000	4.807	2.754	-0.642	99.183%	0.040
3	14:53:16	0.496	8.770	0.000	5.063	8.504	-1.948	98.234%	-0.077
x		0.522	9.031	0.000	5.223	6.554	-1.532	98.693%	-0.009
σ		0.044	0.321	0.000	0.514	3.291	0.771	0.476%	0.061
%RSD		8.393	3.552	0.000	9.834	50.220	50.350	0.482	689.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	0.073	-0.022	0.278	6.929	5.056	0.002	0.015	0.100
2	14:52:57	-0.029	-0.024	0.289	3.240	3.822	-0.003	0.039	0.066
3	14:53:16	0.072	-0.033	0.239	1.980	4.886	-0.001	0.023	0.078
x		0.039	-0.027	0.269	4.050	4.588	-0.000	0.025	0.081
σ		0.059	0.006	0.026	2.572	0.669	0.003	0.012	0.017
%RSD		150.600	21.040	9.743	63.520	14.580	651.900	47.990	21.130

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	0.100	0.104	0.222	0.260	-0.207	1.100	0.000	0.001
2	14:52:57	0.055	0.142	0.166	0.098	0.031	0.422	0.000	0.008
3	14:53:16	-0.023	0.130	0.141	0.164	0.081	0.861	0.000	0.007
x		0.044	0.126	0.176	0.174	-0.032	0.794	0.000	0.005
σ		0.062	0.020	0.042	0.082	0.154	0.344	0.000	0.004
%RSD		141.400	15.530	23.520	46.910	483.700	43.250	0.000	78.530

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	91.246%	0.098	0.160	92.232%	-0.039	-0.070	0.121	0.081
2	14:52:57	90.318%	0.122	0.084	91.594%	-0.036	-0.054	0.058	0.063
3	14:53:16	90.060%	0.104	0.107	91.019%	-0.046	-0.047	0.132	0.111
x		90.541%	0.108	0.117	91.615%	-0.040	-0.057	0.104	0.085
σ		0.624%	0.012	0.039	0.607%	0.005	0.012	0.040	0.024
%RSD		0.689	11.510	33.320	0.662	12.660	20.960	38.330	28.280

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	87.202%	-0.004	0.056	0.061	-0.003	0.006	87.190%	85.548%
2	14:52:57	87.512%	-0.011	0.041	0.051	0.037	0.029	87.415%	86.659%
3	14:53:16	88.418%	-0.017	0.043	0.048	0.013	-0.003	88.362%	86.495%
x		87.711%	-0.011	0.047	0.053	0.016	0.011	87.656%	86.234%
σ		0.632%	0.006	0.008	0.007	0.020	0.016	0.622%	0.599%
%RSD		0.721	59.690	17.440	13.450	126.600	155.800	0.710	0.695

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	14:52:38	0.029	0.037	0.181	0.178	0.182	84.193%
2	14:52:57	0.028	0.027	0.212	0.162	0.191	85.478%
3	14:53:16	0.039	0.025	0.226	0.177	0.207	86.677%
x		0.032	0.030	0.206	0.172	0.193	85.450%
σ		0.006	0.007	0.023	0.009	0.013	1.242%
%RSD		19.120	22.340	11.100	5.355	6.613	1.454

180-41948-C-5-A @10 3/20/2015 2:56:09 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:56:28	81.741%	0.039	-19.780	-15.960	0.000	1487.000	19170.000	18930.000
2	14:56:48	78.200%	-0.000	-19.620	-15.940	0.000	1438.000	18380.000	18290.000
3	14:57:07	74.830%	0.042	-20.700	-15.770	0.000	1464.000	19090.000	18800.000
x		78.257%	0.027	-20.040	-15.890	0.000	1463.000	18880.000	18670.000
σ		3.456%	0.023	0.583	0.103	0.000	24.380	435.200	342.100
%RSD		4.416	86.820	2.911	0.650	0.000	1.666	2.305	1.832
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:56:28	42.730	1276.000	0.000	4053.000	32380.000	30250.000	74.350%	0.000
2	14:56:48	41.350	1252.000	0.000	4008.000	33320.000	30130.000	75.443%	0.037
3	14:57:07	41.270	1259.000	0.000	4028.000	33200.000	29540.000	73.786%	0.001
x		41.780	1263.000	0.000	4030.000	32970.000	29970.000	74.526%	0.013
σ		0.822	12.160	0.000	22.510	509.400	376.800	0.842%	0.021
%RSD		1.967	0.963	0.000	0.559	1.545	1.257	1.130	168.200
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:56:28	-0.074	0.038	4480.000	48190.000	48730.000	29.560	6.437	2.074
2	14:56:48	-0.011	0.059	4380.000	46830.000	47130.000	28.560	6.584	2.108
3	14:57:07	0.042	0.009	4305.000	45690.000	45870.000	27.590	6.130	1.926
x		-0.014	0.035	4388.000	46900.000	47240.000	28.570	6.384	2.036
σ		0.058	0.025	87.560	1249.000	1430.000	0.986	0.232	0.097
%RSD		405.500	71.050	1.995	2.663	3.028	3.449	3.629	4.748
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:56:28	2.079	654.500	648.800	-0.220	-1.908	-0.759	0.000	140.500
2	14:56:48	2.083	623.300	636.100	-0.316	-1.180	-0.780	0.000	138.700
3	14:57:07	1.671	631.300	626.600	-0.656	-1.264	-1.321	0.000	140.500
x		1.945	636.400	637.200	-0.397	-1.450	-0.953	0.000	139.900
σ		0.237	16.230	11.100	0.229	0.398	0.319	0.000	1.045
%RSD		12.190	2.550	1.742	57.630	27.460	33.430	0.000	0.747
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:56:28	84.128%	0.072	0.049	74.308%	-0.047	-0.048	0.345	0.263
2	14:56:48	82.168%	0.074	0.034	72.715%	-0.041	-0.064	0.204	0.308
3	14:57:07	82.712%	0.047	0.030	72.946%	-0.057	-0.066	0.224	0.241
x		83.003%	0.065	0.038	73.323%	-0.048	-0.059	0.258	0.271
σ		1.012%	0.015	0.010	0.861%	0.008	0.010	0.077	0.034
%RSD		1.219	23.280	26.320	1.174	16.650	16.640	29.720	12.710
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:56:28	72.161%	0.007	0.032	0.036	4.988	5.512	76.845%	76.260%
2	14:56:48	74.158%	-0.002	0.031	0.025	5.822	5.359	77.683%	77.311%
3	14:57:07	74.110%	0.019	0.019	0.035	5.399	5.116	77.969%	77.979%
x		73.476%	0.008	0.027	0.032	5.403	5.329	77.499%	77.184%
σ		1.139%	0.010	0.007	0.006	0.417	0.200	0.584%	0.867%
%RSD		1.550	127.500	26.270	19.180	7.720	3.749	0.753	1.123
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	14:56:28	0.034	0.024	0.106	0.064	0.094	84.128%		
2	14:56:48	0.014	0.020	0.106	0.075	0.096	82.837%		
3	14:57:07	0.019	0.019	0.089	0.083	0.086	82.165%		
x		0.022	0.021	0.101	0.074	0.092	83.043%		
σ		0.010	0.003	0.010	0.010	0.005	0.998%		
%RSD		46.690	13.610	9.758	13.030	5.976	1.202		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:17	78.776%	0.120	-20.460	-16.550	0.000	1588.000	20300.000	20310.000
2	15:00:36	77.139%	0.041	-19.770	-15.480	0.000	1558.000	19840.000	19720.000
3	15:00:55	70.596%	0.179	-17.830	-14.730	0.000	1601.000	20190.000	20230.000
x		75.503%	0.113	-19.350	-15.590	0.000	1582.000	20110.000	20090.000
σ		4.328%	0.069	1.365	0.915	0.000	22.060	238.500	321.800
%RSD		5.733	61.110	7.055	5.870	0.000	1.394	1.186	1.602
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:17	24.780	1324.000	0.000	4215.000	34080.000	31560.000	77.099%	0.035
2	15:00:36	25.610	1334.000	0.000	4294.000	34930.000	31820.000	73.913%	0.001
3	15:00:55	25.270	1318.000	0.000	4282.000	34950.000	32370.000	67.732%	-0.035
x		25.220	1325.000	0.000	4264.000	34650.000	31920.000	72.915%	0.000
σ		0.414	7.894	0.000	42.480	494.400	414.000	4.763%	0.035
%RSD		1.642	0.596	0.000	0.996	1.427	1.297	6.532	24530.000
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:17	-0.128	-0.015	4543.000	48620.000	48610.000	29.420	6.465	1.690
2	15:00:36	0.115	-0.017	4564.000	48670.000	49110.000	29.840	6.594	1.650
3	15:00:55	0.105	-0.008	4660.000	50070.000	50540.000	30.400	6.354	1.702
x		0.031	-0.013	4589.000	49120.000	49420.000	29.890	6.471	1.681
σ		0.138	0.005	62.380	823.400	1002.000	0.490	0.120	0.027
%RSD		446.500	34.000	1.359	1.676	2.027	1.639	1.857	1.632
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:17	1.539	660.900	663.000	-0.392	-1.726	-1.173	0.000	147.200
2	15:00:36	1.701	665.700	668.300	-0.052	-1.324	-0.271	0.000	146.100
3	15:00:55	1.573	696.700	692.300	0.005	-1.624	0.046	0.000	148.500
x		1.604	674.400	674.500	-0.146	-1.558	-0.466	0.000	147.200
σ		0.086	19.410	15.630	0.215	0.209	0.633	0.000	1.198
%RSD		5.334	2.878	2.318	146.800	13.420	135.800	0.000	0.814
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:17	83.212%	0.373	0.271	74.124%	-0.045	-0.071	0.274	0.242
2	15:00:36	82.695%	0.266	0.344	72.736%	-0.059	-0.051	0.187	0.230
3	15:00:55	81.158%	0.338	0.330	72.870%	-0.050	-0.065	0.447	0.307
x		82.355%	0.325	0.315	73.244%	-0.051	-0.063	0.303	0.260
σ		1.068%	0.055	0.039	0.766%	0.007	0.010	0.132	0.041
%RSD		1.297	16.790	12.360	1.046	13.380	16.260	43.660	15.920
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:00:17	73.824%	0.020	0.010	0.025	5.785	5.637	76.718%	77.254%
2	15:00:36	73.624%	-0.019	0.019	0.037	5.533	5.787	77.592%	77.920%
3	15:00:55	72.477%	0.038	0.010	0.018	5.666	5.722	77.610%	76.861%
x		73.308%	0.013	0.013	0.027	5.661	5.715	77.307%	77.345%
σ		0.727%	0.029	0.006	0.010	0.126	0.075	0.510%	0.536%
%RSD		0.991	224.600	42.480	36.800	2.230	1.319	0.659	0.692
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:00:17	0.018	0.009	0.083	0.072	0.082	80.667%		
2	15:00:36	0.007	0.014	0.092	0.063	0.077	79.979%		
3	15:00:55	0.014	0.012	0.100	0.067	0.099	78.448%		
x		0.013	0.012	0.092	0.067	0.086	79.698%		
σ		0.005	0.003	0.008	0.004	0.011	1.136%		
%RSD		41.190	23.350	9.182	6.646	13.340	1.425		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:06	78.998%	0.080	-20.860	-16.200	0.000	1598.000	20730.000	20150.000
2	15:04:26	76.512%	0.041	-20.140	-15.840	0.000	1563.000	20080.000	19960.000
3	15:04:50	75.506%	0.042	-20.080	-15.900	0.000	1554.000	20060.000	19630.000
x		77.005%	0.054	-20.360	-15.980	0.000	1572.000	20290.000	19910.000
σ		1.797%	0.022	0.431	0.193	0.000	23.680	382.000	260.500
%RSD		2.334	40.740	2.118	1.208	0.000	1.507	1.882	1.308
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:06	47.720	1353.000	0.000	4201.000	33620.000	31140.000	75.203%	0.114
2	15:04:26	47.500	1336.000	0.000	4283.000	35130.000	31190.000	72.676%	0.239
3	15:04:50	47.310	1318.000	0.000	4245.000	34210.000	32070.000	70.376%	-0.036
x		47.510	1336.000	0.000	4243.000	34320.000	31470.000	72.752%	0.105
σ		0.209	17.340	0.000	41.410	760.300	521.100	2.414%	0.138
%RSD		0.439	1.298	0.000	0.976	2.215	1.656	3.319	130.700
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:06	0.259	-0.045	4618.000	50090.000	50630.000	30.870	7.000	2.226
2	15:04:26	-0.034	0.003	4630.000	50030.000	50610.000	30.250	6.737	2.131
3	15:04:50	-0.059	-0.030	4637.000	49460.000	49900.000	30.220	6.790	1.886
x		0.055	-0.024	4628.000	49860.000	50380.000	30.450	6.842	2.081
σ		0.177	0.025	9.318	348.500	412.000	0.370	0.139	0.175
%RSD		318.900	102.000	0.201	0.699	0.818	1.216	2.032	8.416
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:06	2.506	684.800	686.100	-0.094	-1.585	-1.579	0.000	146.400
2	15:04:26	2.411	670.900	672.600	0.034	-1.272	-0.277	0.000	146.100
3	15:04:50	2.090	678.800	679.600	-0.164	-2.065	-1.222	0.000	147.000
x		2.336	678.100	679.400	-0.075	-1.641	-1.026	0.000	146.500
σ		0.218	6.968	6.707	0.100	0.400	0.673	0.000	0.460
%RSD		9.314	1.028	0.987	134.200	24.350	65.590	0.000	0.314
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:06	82.632%	0.031	0.040	73.496%	-0.062	-0.058	0.294	0.321
2	15:04:26	82.262%	0.053	0.014	72.469%	-0.053	-0.058	0.283	0.259
3	15:04:50	81.293%	0.032	0.017	72.320%	-0.060	-0.072	0.166	0.277
x		82.062%	0.039	0.024	72.762%	-0.059	-0.063	0.248	0.286
σ		0.692%	0.012	0.014	0.640%	0.005	0.008	0.071	0.032
%RSD		0.843	31.890	59.220	0.879	8.194	12.990	28.550	11.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:04:06	72.612%	0.035	0.006	0.016	5.545	5.590	75.350%	75.482%
2	15:04:26	72.231%	-0.006	0.022	0.016	5.379	5.773	77.211%	76.621%
3	15:04:50	72.123%	-0.014	0.010	0.003	5.577	5.907	76.740%	76.674%
x		72.322%	0.005	0.013	0.011	5.500	5.757	76.433%	76.259%
σ		0.257%	0.027	0.008	0.007	0.106	0.159	0.968%	0.673%
%RSD		0.355	542.800	64.440	64.050	1.934	2.765	1.266	0.883
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:04:06	0.006	0.007	0.069	0.055	0.067	80.477%		
2	15:04:26	0.012	0.004	0.059	0.028	0.048	78.938%		
3	15:04:50	0.009	0.005	0.070	0.061	0.078	78.569%		
x		0.009	0.006	0.066	0.048	0.064	79.328%		
σ		0.003	0.001	0.006	0.018	0.015	1.012%		
%RSD		32.200	25.080	8.672	36.970	23.280	1.276		

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	79.894%	-0.000	-18.510	-16.350	0.000	1551.000	19930.000	19620.000
2	15:08:21	75.778%	-0.000	-18.650	-15.280	0.000	1550.000	19910.000	19870.000
3	15:08:40	71.765%	0.044	-21.010	-15.730	0.000	1564.000	19680.000	19630.000
x		75.812%	0.015	-19.390	-15.790	0.000	1555.000	19840.000	19710.000
σ		4.065%	0.025	1.404	0.538	0.000	7.900	140.000	139.000
%RSD		5.362	173.200	7.239	3.409	0.000	0.508	0.706	0.706

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	18.620	1312.000	0.000	4198.000	33750.000	31040.000	74.882%	-0.000
2	15:08:21	18.800	1314.000	0.000	4283.000	34470.000	31910.000	72.022%	0.003
3	15:08:40	18.840	1292.000	0.000	4121.000	34040.000	31070.000	71.499%	0.043
x		18.760	1306.000	0.000	4201.000	34090.000	31340.000	72.801%	0.015
σ		0.117	12.050	0.000	81.030	363.800	492.600	1.821%	0.024
%RSD		0.625	0.922	0.000	1.929	1.067	1.572	2.502	161.400

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	-0.216	-0.029	4512.000	48800.000	48880.000	29.130	6.995	1.523
2	15:08:21	-0.213	0.016	4536.000	48760.000	49360.000	29.150	6.938	1.501
3	15:08:40	-0.122	-0.007	4516.000	47570.000	48540.000	28.920	6.492	1.580
x		-0.184	-0.007	4521.000	48380.000	48920.000	29.060	6.808	1.535
σ		0.053	0.022	12.750	701.500	409.700	0.126	0.276	0.041
%RSD		28.910	341.000	0.282	1.450	0.837	0.432	4.046	2.660

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	1.717	660.900	669.800	-0.033	-2.326	-0.646	0.000	144.500
2	15:08:21	1.643	667.700	676.800	-0.253	-1.494	-1.292	0.000	145.000
3	15:08:40	1.769	664.300	666.000	0.121	-2.032	0.381	0.000	146.600
x		1.710	664.300	670.900	-0.055	-1.951	-0.519	0.000	145.300
σ		0.063	3.414	5.509	0.188	0.421	0.843	0.000	1.070
%RSD		3.712	0.514	0.821	343.000	21.610	162.500	0.000	0.736

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	82.819%	0.026	-0.003	73.948%	-0.057	-0.068	0.395	0.356
2	15:08:21	81.646%	0.064	0.001	72.225%	-0.055	-0.055	0.198	0.243
3	15:08:40	79.870%	0.033	0.004	71.136%	-0.042	-0.043	0.275	0.275
x		81.445%	0.041	0.001	72.436%	-0.051	-0.055	0.289	0.291
σ		1.485%	0.020	0.004	1.418%	0.008	0.012	0.100	0.059
%RSD		1.823	49.930	443.000	1.958	16.060	22.030	34.420	20.120

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	73.558%	0.015	-0.004	0.033	5.833	5.852	76.199%	76.105%
2	15:08:21	73.210%	-0.037	-0.000	0.015	5.466	5.746	76.726%	76.716%
3	15:08:40	72.530%	0.001	0.008	0.028	5.931	5.997	76.884%	76.591%
x		73.099%	-0.007	0.001	0.025	5.743	5.865	76.603%	76.471%
σ		0.522%	0.027	0.006	0.009	0.245	0.126	0.359%	0.323%
%RSD		0.715	392.600	458.800	35.600	4.273	2.147	0.468	0.422

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:08:01	0.005	-0.002	0.064	0.054	0.053	80.153%
2	15:08:21	0.006	-0.000	0.023	0.035	0.044	80.099%
3	15:08:40	0.006	0.004	0.046	0.043	0.057	78.863%
x		0.006	0.001	0.044	0.044	0.051	79.705%
σ		0.001	0.003	0.021	0.010	0.007	0.730%
%RSD		11.740	574.200	47.190	21.770	12.790	0.915

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Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:51	75.072%	0.042	-17.160	-14.810	0.000	1556.000	19830.000	19960.000
2	15:12:10	73.306%	0.129	-21.280	-16.260	0.000	1559.000	19740.000	19570.000
3	15:12:29	71.826%	0.088	-16.610	-16.270	0.000	1512.000	19210.000	19100.000
x		73.401%	0.086	-18.350	-15.780	0.000	1543.000	19600.000	19540.000
σ		1.625%	0.043	2.551	0.840	0.000	26.230	336.800	429.600
%RSD		2.214	50.470	13.900	5.321	0.000	1.701	1.719	2.198
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:51	45.640	1354.000	0.000	4139.000	33030.000	31010.000	74.170%	0.155
2	15:12:10	44.980	1305.000	0.000	4159.000	33280.000	30520.000	71.596%	0.244
3	15:12:29	42.770	1276.000	0.000	4087.000	33120.000	31090.000	68.977%	0.131
x		44.470	1312.000	0.000	4128.000	33140.000	30880.000	71.581%	0.176
σ		1.505	39.650	0.000	37.080	126.400	309.700	2.596%	0.059
%RSD		3.386	3.022	0.000	0.898	0.382	1.003	3.627	33.640
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:51	0.121	0.025	4480.000	48530.000	48540.000	29.020	6.431	2.099
2	15:12:10	-0.046	0.051	4558.000	48680.000	49310.000	29.490	6.699	1.949
3	15:12:29	0.193	0.119	4573.000	49400.000	49250.000	29.760	6.023	2.113
x		0.089	0.065	4537.000	48870.000	49030.000	29.420	6.385	2.054
σ		0.123	0.048	50.030	462.500	426.600	0.371	0.340	0.091
%RSD		137.600	74.450	1.103	0.947	0.870	1.262	5.332	4.409
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:51	2.079	655.100	650.800	-0.108	-1.876	-0.237	0.000	143.300
2	15:12:10	2.158	660.300	660.600	-0.536	-1.964	-1.030	0.000	146.000
3	15:12:29	2.200	659.500	659.500	-0.221	-1.490	-0.458	0.000	144.900
x		2.146	658.300	657.000	-0.288	-1.777	-0.575	0.000	144.700
σ		0.062	2.819	5.394	0.222	0.252	0.409	0.000	1.344
%RSD		2.867	0.428	0.821	77.040	14.210	71.100	0.000	0.928
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:51	81.783%	0.075	-0.006	72.203%	-0.055	-0.060	0.278	0.296
2	15:12:10	80.661%	0.011	0.008	71.260%	-0.053	-0.060	0.260	0.218
3	15:12:29	80.180%	0.022	0.028	71.196%	-0.053	-0.060	0.267	0.264
x		80.874%	0.036	0.010	71.553%	-0.053	-0.060	0.268	0.259
σ		0.822%	0.034	0.017	0.564%	0.001	0.000	0.009	0.039
%RSD		1.017	95.990	171.600	0.788	2.167	0.164	3.399	15.180
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:11:51	71.759%	-0.000	0.000	0.008	5.612	5.514	76.171%	75.824%
2	15:12:10	72.020%	0.015	-0.008	0.016	5.338	5.507	76.365%	76.623%
3	15:12:29	72.756%	-0.028	0.000	0.023	5.564	5.727	76.007%	76.640%
x		72.179%	-0.004	-0.002	0.016	5.505	5.583	76.181%	76.362%
σ		0.517%	0.022	0.005	0.007	0.146	0.125	0.179%	0.466%
%RSD		0.716	497.200	195.000	47.600	2.653	2.234	0.235	0.611
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:11:51	0.002	0.002	0.077	0.057	0.067	80.668%		
2	15:12:10	0.001	-0.001	0.067	0.033	0.053	79.195%		
3	15:12:29	0.004	0.005	0.066	0.052	0.056	78.891%		
x		0.002	0.002	0.070	0.047	0.059	79.585%		
σ		0.002	0.003	0.006	0.013	0.008	0.950%		
%RSD		74.630	163.100	8.210	26.430	12.890	1.194		

180-41828-A-29-B @10 3/20/2015 3:15:21 PM

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	85.240%	5.814	-13.490	-7.408	0.000	1143.000	7223.000	7077.000
2	15:15:59	81.874%	6.247	-12.670	-9.025	0.000	1077.000	6952.000	6891.000
3	15:16:18	78.300%	5.471	-13.200	-8.184	0.000	1144.000	7191.000	7113.000
x		81.805%	5.844	-13.120	-8.205	0.000	1121.000	7122.000	7027.000
σ		3.470%	0.389	0.414	0.809	0.000	38.760	148.400	119.300
%RSD		4.242	6.653	3.156	9.854	0.000	3.457	2.083	1.698

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	13210.000	8335.000	0.000	1347.000	50990.000	51290.000	80.787%	2.247
2	15:15:59	13150.000	8178.000	0.000	1308.000	50960.000	50690.000	77.321%	2.237
3	15:16:18	13350.000	8246.000	0.000	1363.000	52890.000	51850.000	76.102%	3.031
x		13240.000	8253.000	0.000	1339.000	51610.000	51280.000	78.070%	2.505
σ		106.000	79.020	0.000	28.720	1105.000	577.900	2.431%	0.456
%RSD		0.801	0.958	0.000	2.145	2.142	1.127	3.113	18.190

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	127.200	46.310	3500.000	33180.000	33460.000	83.330	141.500	2390.000
2	15:15:59	130.200	47.140	3595.000	34310.000	34010.000	85.980	139.000	2363.000
3	15:16:18	130.000	46.640	3579.000	34040.000	33910.000	83.630	141.700	2390.000
x		129.100	46.700	3558.000	33840.000	33800.000	84.310	140.700	2381.000
σ		1.677	0.414	50.670	589.400	292.500	1.450	1.528	15.740
%RSD		1.299	0.887	1.424	1.742	0.865	1.720	1.086	0.661

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	2411.000	2081.000	2084.000	3.105	-0.800	0.491	0.000	225.800
2	15:15:59	2375.000	2077.000	2078.000	3.580	-0.346	1.310	0.000	228.100
3	15:16:18	2397.000	2063.000	2091.000	3.476	-1.018	1.947	0.000	229.400
x		2394.000	2074.000	2084.000	3.387	-0.722	1.249	0.000	227.800
σ		18.470	9.284	6.316	0.250	0.343	0.730	0.000	1.813
%RSD		0.771	0.448	0.303	7.381	47.540	58.440	0.000	0.796

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	0.000	0.069	0.039	77.705%	-0.029	-0.044	6.612	6.589
2	15:15:59	0.000	0.059	0.033	76.684%	-0.040	-0.055	7.043	6.644
3	15:16:18	0.000	0.054	0.037	76.283%	-0.047	-0.060	7.015	7.089
x		0.000	0.061	0.036	76.891%	-0.039	-0.053	6.890	6.774
σ		0.000	0.007	0.003	0.733%	0.009	0.008	0.241	0.274
%RSD		0.000	12.040	7.952	0.954	23.310	16.010	3.501	4.051

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	76.781%	0.178	0.883	0.829	553.600	560.400	85.184%	85.224%
2	15:15:59	76.572%	0.171	0.912	0.890	561.900	562.400	84.753%	85.683%
3	15:16:18	76.957%	0.140	0.860	0.828	562.000	561.000	85.809%	86.008%
x		76.770%	0.163	0.885	0.849	559.200	561.300	85.249%	85.638%
σ		0.193%	0.020	0.026	0.036	4.830	0.999	0.531%	0.394%
%RSD		0.251	12.450	2.942	4.206	0.864	0.178	0.623	0.460

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:40	0.449	0.422	2443.000	2320.000	2388.000	81.186%
2	15:15:59	0.451	0.477	2470.000	2347.000	2407.000	81.644%
3	15:16:18	0.425	0.462	2486.000	2369.000	2435.000	81.426%
x		0.442	0.454	2466.000	2346.000	2410.000	81.419%
σ		0.014	0.028	21.640	24.480	23.540	0.230%
%RSD		3.245	6.231	0.877	1.044	0.977	0.282

CRI 1495535 3/20/2015 3:25:59 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	114.861%	0.963	-16.290	-11.940	0.000	79.810	96.710	97.200
2	15:26:38	108.558%	1.102	-15.300	-11.800	0.000	82.350	98.980	96.520
3	15:26:57	108.667%	1.016	-15.870	-12.320	0.000	82.240	96.330	95.490
x		110.695%	102.704%	-316.404%	-240.417%	0.000	81.466%	97.342%	96.406%
σ		3.608%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.260	6.855	3.120	2.242	0.000	1.764	1.473	0.893

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	33.060	512.900	0.000	106.000	97.530	98.300	107.566%	4.818
2	15:26:38	33.180	510.500	0.000	105.100	101.900	102.300	105.990%	5.569
3	15:26:57	32.300	507.000	0.000	105.100	120.300	105.400	103.646%	4.635
x		109.489%	102.025%	0.000	105.366%	106.576%	101.973%	105.734%	100.147%
σ		n/a	n/a	0.000	n/a	n/a	n/a	1.972%	n/a
%RSD		1.447	0.576	0.000	0.485	11.330	3.473	1.865	9.888

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	0.988	1.965	5.091	53.760	50.880	0.471	1.109	2.173
2	15:26:38	0.954	2.007	4.846	52.430	47.970	0.478	0.994	2.064
3	15:26:57	0.879	1.914	5.044	53.080	51.860	0.478	1.036	2.100
x		94.051%	98.105%	99.879%	106.178%	100.481%	95.141%	104.608%	105.626%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		5.968	2.385	2.605	1.258	4.025	0.909	5.543	2.641

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	2.199	6.691	6.547	1.188	4.846	5.262	0.000	4.706
2	15:26:38	2.144	5.712	6.273	1.025	4.879	4.838	0.000	4.653
3	15:26:57	2.420	6.320	6.634	1.054	5.217	4.939	0.000	4.770
x		112.725%	124.815%	129.692%	108.908%	99.618%	100.256%	0.000	94.191%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		6.488	7.918	2.911	7.990	4.124	4.415	0.000	1.238

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	101.221%	4.662	4.655	98.678%	0.908	0.903	1.054	1.086
2	15:26:38	101.376%	4.713	4.505	97.611%	0.856	0.965	0.997	1.007
3	15:26:57	100.165%	4.789	5.044	97.171%	0.872	0.953	1.119	1.022
x		100.921%	94.427%	94.698%	97.820%	87.844%	94.054%	105.659%	103.831%
σ		0.659%	n/a	n/a	0.775%	n/a	n/a	n/a	n/a
%RSD		0.653	1.349	5.876	0.792	3.003	3.497	5.815	4.028

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	92.908%	5.794	1.947	1.924	9.648	9.897	90.337%	89.006%
2	15:26:38	93.948%	4.654	1.813	1.912	9.699	9.093	91.829%	90.254%
3	15:26:57	92.697%	4.930	2.024	1.833	9.735	10.130	91.616%	90.277%
x		93.184%	102.523%	96.404%	94.489%	96.941%	97.054%	91.261%	89.846%
σ		0.670%	n/a	n/a	n/a	n/a	n/a	0.807%	0.727%
%RSD		0.719	11.610	5.552	2.623	0.447	5.594	0.884	0.809

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:26:18	1.042	1.031	1.173	1.097	1.147	92.084%
2	15:26:38	1.073	0.989	1.227	1.114	1.170	92.143%
3	15:26:57	1.009	1.055	1.262	1.136	1.185	92.106%
x		104.131%	102.482%	122.081%	111.559%	116.722%	92.111%
σ		n/a	n/a	n/a	n/a	n/a	0.030%
%RSD		3.087	3.277	3.692	1.727	1.646	0.032

CCV 1487954 3/20/2015 3:29:57 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	96.138%	102.700	81.950	76.280	0.000	49490.000	50250.000	49460.000
2	15:30:16	92.985%	97.510	80.640	75.880	0.000	48460.000	49300.000	48530.000
3	15:30:35	88.397%	103.100	79.950	75.950	0.000	49200.000	49760.000	49030.000
x		92.507%	101.109%	80.849%	76.039%	0.000	98.099%	99.540%	98.013%
σ		3.893%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		4.208	3.089	1.256	0.284	0.000	1.085	0.962	0.946

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	501.200	4968.000	0.000	48600.000	48240.000	48610.000	89.135%	96.200
2	15:30:16	503.800	4968.000	0.000	49070.000	49540.000	49860.000	85.944%	99.860
3	15:30:35	500.800	4990.000	0.000	48190.000	48880.000	49510.000	84.525%	99.820
x		100.383%	99.505%	0.000	97.244%	97.771%	98.653%	86.535%	98.630%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.361%	n/a
%RSD		0.328	0.254	0.000	0.901	1.337	1.314	2.729	2.131

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	98.080	98.620	477.100	24860.000	24520.000	100.800	105.400	101.900
2	15:30:16	98.610	100.800	484.900	25050.000	24700.000	101.900	100.900	101.300
3	15:30:35	98.900	99.120	478.700	24790.000	24580.000	99.140	101.200	101.200
x		98.530%	99.525%	96.048%	99.613%	98.409%	100.640%	102.508%	101.448%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.418	1.170	0.848	0.533	0.374	1.403	2.471	0.365

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	102.700	102.400	100.800	102.300	102.900	103.400	0.000	96.750
2	15:30:16	103.800	100.800	101.300	99.680	100.300	100.800	0.000	96.730
3	15:30:35	102.200	100.800	99.990	98.590	102.100	101.900	0.000	96.770
x		102.896%	101.312%	100.703%	100.188%	101.768%	102.038%	0.000	96.751%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.787	0.906	0.673	1.898	1.312	1.238	0.000	0.024

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	79.136%	99.390	96.530	78.126%	97.610	98.190	98.600	98.910
2	15:30:16	78.124%	100.400	99.830	76.699%	98.400	98.460	99.000	98.480
3	15:30:35	77.375%	100.500	99.670	76.338%	97.610	97.910	96.640	99.080
x		78.212%	100.084%	98.675%	77.054%	97.875%	98.188%	98.083%	98.822%
σ		0.884%	n/a	n/a	0.946%	n/a	n/a	n/a	n/a
%RSD		1.130	0.606	1.886	1.227	0.467	0.276	1.286	0.313

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	74.985%	98.320	98.820	97.620	95.240	97.630	76.923%	76.155%
2	15:30:16	74.958%	97.630	97.840	97.220	98.840	96.520	77.312%	76.424%
3	15:30:35	74.777%	97.730	97.700	97.680	95.790	97.390	77.383%	76.572%
x		74.907%	97.893%	98.122%	97.509%	96.622%	97.182%	77.206%	76.384%
σ		0.113%	n/a	n/a	n/a	n/a	n/a	0.248%	0.211%
%RSD		0.151	0.381	0.621	0.255	2.009	0.603	0.321	0.276

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:29:57	97.080	96.860	97.830	98.240	97.840	81.848%
2	15:30:16	98.290	99.230	100.600	100.300	99.880	81.143%
3	15:30:35	100.000	101.000	101.700	102.500	101.300	80.159%
x		98.456%	99.036%	100.057%	100.359%	99.661%	81.050%
σ		n/a	n/a	n/a	n/a	n/a	0.848%
%RSD		1.490	2.108	2.001	2.121	1.728	1.047

CCB6 3/20/2015 3:36:27 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	106.637%	0.030	-21.770	-17.910	0.000	-18.920	1.485	1.140
2	15:37:05	105.368%	0.090	-21.010	-17.810	0.000	-18.560	2.039	1.394
3	15:37:24	103.107%	-0.000	-21.250	-17.350	0.000	-17.560	1.445	1.525
x		105.037%	0.040	-21.340	-17.690	0.000	-18.350	1.656	1.353
σ		1.788%	0.046	0.392	0.298	0.000	0.708	0.332	0.196
%RSD		1.702	114.900	1.837	1.686	0.000	3.856	20.060	14.490

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	0.548	5.240	0.000	9.198	0.003	1.370	98.066%	-0.048
2	15:37:05	0.517	4.827	0.000	4.965	11.080	-0.688	99.533%	0.039
3	15:37:24	0.639	5.423	0.000	5.485	14.090	-1.038	98.504%	-0.048
x		0.568	5.163	0.000	6.549	8.391	-0.118	98.701%	-0.019
σ		0.064	0.305	0.000	2.308	7.418	1.301	0.754%	0.050
%RSD		11.200	5.915	0.000	35.250	88.400	1098.000	0.763	269.200

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	0.066	0.014	0.093	5.407	2.794	0.017	0.015	0.064
2	15:37:05	0.010	-0.033	0.114	4.385	2.320	-0.001	0.015	0.041
3	15:37:24	-0.015	-0.029	0.113	2.087	2.186	0.006	-0.009	0.020
x		0.021	-0.016	0.107	3.959	2.433	0.007	0.007	0.042
σ		0.042	0.026	0.012	1.700	0.320	0.009	0.014	0.022
%RSD		202.400	162.600	11.360	42.950	13.150	125.800	206.900	53.210

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	0.056	0.073	0.407	-0.039	-0.016	0.340	0.000	0.020
2	15:37:05	-0.018	0.034	0.300	0.179	-0.196	0.806	0.000	0.009
3	15:37:24	0.009	-0.055	0.377	0.188	-0.230	0.958	0.000	0.014
x		0.016	0.017	0.361	0.109	-0.147	0.701	0.000	0.014
σ		0.037	0.065	0.055	0.129	0.115	0.322	0.000	0.005
%RSD		240.300	379.600	15.330	117.900	78.290	45.930	0.000	36.040

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	90.854%	0.080	0.099	92.887%	-0.057	-0.054	0.079	0.068
2	15:37:05	90.159%	0.062	0.092	91.978%	-0.055	-0.051	0.055	0.036
3	15:37:24	90.640%	0.043	0.091	92.751%	-0.028	-0.057	0.024	0.018
x		90.551%	0.062	0.094	92.538%	-0.047	-0.054	0.052	0.041
σ		0.356%	0.018	0.004	0.490%	0.016	0.003	0.027	0.025
%RSD		0.393	29.310	4.688	0.530	34.860	5.436	52.430	61.820

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	86.612%	0.017	0.040	0.034	0.038	0.002	85.409%	84.989%
2	15:37:05	88.190%	-0.005	0.024	0.069	0.005	0.002	86.773%	85.879%
3	15:37:24	87.817%	-0.016	0.057	0.042	0.013	0.001	88.139%	86.494%
x		87.540%	-0.001	0.040	0.048	0.019	0.002	86.774%	85.787%
σ		0.825%	0.017	0.017	0.018	0.017	0.000	1.365%	0.757%
%RSD		0.942	1227.000	41.180	37.760	91.020	16.960	1.573	0.882

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:36:46	0.027	0.034	0.113	0.095	0.107	86.046%
2	15:37:05	0.029	0.038	0.109	0.077	0.111	87.588%
3	15:37:24	0.031	0.026	0.135	0.114	0.124	88.236%
x		0.029	0.033	0.119	0.095	0.114	87.290%
σ		0.002	0.006	0.014	0.019	0.009	1.125%
%RSD		6.906	17.760	11.910	19.520	7.451	1.289

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:38	105.169%	-0.000	-22.210	-17.440	0.000	-22.040	0.480	0.072
2	15:40:57	106.007%	-0.000	-22.070	-18.000	0.000	-21.240	0.782	0.197
3	15:41:16	106.256%	-0.000	-21.920	-17.860	0.000	-20.590	0.545	0.379
x		105.811%	-0.000	-22.070	-17.770	0.000	-21.290	0.603	0.216
σ		0.570%	0.000	0.143	0.291	0.000	0.730	0.159	0.154
%RSD		0.538	0.000	0.648	1.639	0.000	3.428	26.390	71.500
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:38	0.347	4.394	0.000	6.978	-0.327	-4.484	104.544%	-0.077
2	15:40:57	0.301	4.326	0.000	4.152	-5.651	-3.977	103.709%	-0.049
3	15:41:16	0.202	4.008	0.000	3.603	-0.198	-3.989	101.891%	-0.077
x		0.283	4.243	0.000	4.911	-2.058	-4.150	103.381%	-0.068
σ		0.074	0.206	0.000	1.811	3.112	0.289	1.356%	0.016
%RSD		26.170	4.854	0.000	36.880	151.200	6.963	1.312	23.800
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:38	-0.018	-0.025	0.017	2.483	0.967	-0.003	0.020	-0.010
2	15:40:57	-0.022	-0.005	0.048	1.658	-0.734	0.002	0.059	0.038
3	15:41:16	-0.054	0.001	0.036	1.545	0.428	0.001	-0.010	0.057
x		-0.031	-0.010	0.033	1.895	0.220	-0.000	0.023	0.028
σ		0.020	0.014	0.016	0.512	0.870	0.002	0.034	0.035
%RSD		63.300	140.100	47.340	27.010	394.800	255500.000	149.100	122.600
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:38	0.042	0.134	-0.036	-0.032	0.003	0.433	0.000	0.002
2	15:40:57	-0.034	0.064	0.278	-0.066	0.149	0.237	0.000	-0.005
3	15:41:16	0.020	0.108	0.226	0.066	-0.518	0.718	0.000	0.002
x		0.009	0.102	0.156	-0.011	-0.122	0.463	0.000	-0.000
σ		0.039	0.035	0.168	0.069	0.350	0.242	0.000	0.004
%RSD		423.800	34.480	107.800	641.500	286.500	52.310	0.000	2085.000
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:38	92.592%	0.042	0.089	94.637%	-0.055	-0.048	0.078	0.055
2	15:40:57	93.342%	0.029	0.043	95.502%	-0.041	-0.045	0.092	0.070
3	15:41:16	93.085%	0.011	0.054	94.604%	-0.058	-0.059	0.024	0.025
x		93.006%	0.027	0.062	94.915%	-0.051	-0.051	0.065	0.050
σ		0.381%	0.016	0.024	0.509%	0.009	0.007	0.036	0.023
%RSD		0.409	57.240	38.600	0.536	18.380	14.520	56.190	45.200
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:40:38	89.779%	-0.003	0.012	0.010	-0.019	-0.017	87.128%	86.426%
2	15:40:57	90.379%	-0.014	0.016	0.020	0.028	-0.008	88.768%	87.721%
3	15:41:16	90.307%	-0.034	0.021	0.047	-0.019	-0.012	89.014%	88.283%
x		90.155%	-0.017	0.016	0.026	-0.003	-0.012	88.303%	87.477%
σ		0.328%	0.015	0.005	0.019	0.027	0.004	1.025%	0.952%
%RSD		0.363	91.340	28.690	74.010	884.600	35.780	1.161	1.089
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:40:38	0.030	0.015	0.069	0.055	0.060	89.788%		
2	15:40:57	0.022	0.016	0.059	0.057	0.070	89.970%		
3	15:41:16	0.018	0.015	0.062	0.073	0.072	90.144%		
x		0.024	0.016	0.064	0.062	0.067	89.967%		
σ		0.006	0.001	0.005	0.010	0.006	0.178%		
%RSD		25.020	4.314	8.328	16.670	9.187	0.198		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	88.421%	52.190	989.600	920.200	0.000	49840.000	49600.000	48130.000
2	15:44:47	89.025%	50.870	981.700	896.800	0.000	48560.000	48240.000	48050.000
3	15:45:06	86.197%	52.280	962.800	929.000	0.000	48700.000	49160.000	48540.000
x		87.881%	51.780	978.000	915.300	0.000	49030.000	49000.000	48240.000
σ		1.489%	0.789	13.730	16.640	0.000	705.100	697.300	264.300
%RSD		1.695	1.525	1.404	1.818	0.000	1.438	1.423	0.548

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	2029.000	9833.000	0.000	48870.000	49400.000	49710.000	82.687%	1011.000
2	15:44:47	2032.000	9692.000	0.000	49340.000	49640.000	49920.000	79.933%	1011.000
3	15:45:06	2019.000	9662.000	0.000	48870.000	49410.000	49400.000	81.409%	1010.000
x		2026.000	9729.000	0.000	49030.000	49480.000	49680.000	81.343%	1010.000
σ		6.704	91.290	0.000	267.300	133.400	259.100	1.378%	0.457
%RSD		0.331	0.938	0.000	0.545	0.270	0.522	1.694	0.045

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	508.400	201.200	488.500	1002.000	1037.000	515.800	522.200	261.500
2	15:44:47	511.400	202.300	494.200	1050.000	1031.000	510.600	517.200	254.300
3	15:45:06	504.100	200.500	477.700	969.000	1028.000	501.700	507.500	248.200
x		508.000	201.400	486.800	1007.000	1032.000	509.400	515.600	254.700
σ		3.669	0.905	8.374	40.460	4.594	7.122	7.474	6.673
%RSD		0.722	0.449	1.720	4.018	0.445	1.398	1.450	2.620

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	263.900	524.800	513.800	38.820	8.724	11.160	0.000	1008.000
2	15:44:47	259.700	521.500	514.700	39.100	10.130	9.875	0.000	1008.000
3	15:45:06	249.700	508.900	514.700	39.530	10.210	9.859	0.000	1009.000
x		257.800	518.400	514.400	39.150	9.689	10.300	0.000	1008.000
σ		7.325	8.398	0.478	0.355	0.837	0.748	0.000	0.796
%RSD		2.842	1.620	0.093	0.907	8.635	7.259	0.000	0.079

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	74.726%	1024.000	1033.000	74.181%	46.630	46.650	49.410	44.440
2	15:44:47	75.266%	1030.000	1037.000	73.645%	46.780	47.470	51.030	44.410
3	15:45:06	74.849%	1041.000	1053.000	73.384%	47.410	47.000	50.860	43.950
x		74.947%	1032.000	1041.000	73.736%	46.940	47.040	50.430	44.270
σ		0.283%	8.718	10.840	0.406%	0.415	0.410	0.892	0.275
%RSD		0.378	0.845	1.041	0.551	0.884	0.873	1.768	0.621

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	71.426%	2139.000	520.600	514.800	1948.000	1970.000	74.121%	74.338%
2	15:44:47	71.418%	2153.000	519.400	516.300	1958.000	1979.000	75.605%	75.424%
3	15:45:06	72.599%	2133.000	515.600	511.000	1945.000	1965.000	76.115%	75.812%
x		71.814%	2142.000	518.500	514.000	1950.000	1972.000	75.281%	75.191%
σ		0.679%	10.080	2.636	2.753	6.528	7.030	1.036%	0.764%
%RSD		0.946	0.470	0.508	0.536	0.335	0.357	1.376	1.016

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:27	51.570	51.520	20.730	21.080	20.980	74.748%
2	15:44:47	52.420	52.750	21.450	21.580	21.320	74.729%
3	15:45:06	52.890	52.410	21.350	21.390	21.420	75.043%
x		52.300	52.230	21.180	21.350	21.240	74.840%
σ		0.668	0.634	0.394	0.254	0.233	0.176%
%RSD		1.277	1.214	1.862	1.189	1.097	0.236

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:16	90.774%	51.750	943.000	895.100	0.000	50040.000	50370.000	48880.000
2	15:48:36	89.436%	48.340	941.300	931.100	0.000	49780.000	49810.000	49130.000
3	15:48:55	85.626%	51.890	987.700	907.900	0.000	49950.000	49900.000	48880.000
x		88.612%	50.660	957.300	911.400	0.000	49920.000	50030.000	48960.000
σ		2.671%	2.012	26.280	18.250	0.000	127.600	301.300	143.900
%RSD		3.014	3.972	2.745	2.003	0.000	0.256	0.602	0.294
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:16	1980.000	9751.000	0.000	49970.000	50560.000	50650.000	81.387%	1012.000
2	15:48:36	2008.000	9821.000	0.000	48590.000	49860.000	50330.000	82.340%	998.500
3	15:48:55	2000.000	9702.000	0.000	49540.000	49240.000	49220.000	78.899%	1018.000
x		1996.000	9758.000	0.000	49370.000	49880.000	50070.000	80.876%	1010.000
σ		14.600	59.920	0.000	706.700	659.200	746.700	1.777%	10.000
%RSD		0.731	0.614	0.000	1.431	1.321	1.491	2.197	0.991
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:16	507.500	200.400	486.400	1032.000	1050.000	515.800	528.300	259.600
2	15:48:36	488.100	192.800	467.200	948.600	990.000	492.000	485.200	244.800
3	15:48:55	499.500	198.300	490.800	1032.000	1056.000	516.700	519.100	254.700
x		498.400	197.200	481.500	1004.000	1032.000	508.200	510.900	253.000
σ		9.740	3.897	12.570	47.980	36.520	14.010	22.700	7.511
%RSD		1.954	1.976	2.611	4.779	3.539	2.758	4.442	2.968
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:16	263.100	517.500	516.300	40.420	10.170	10.800	0.000	997.400
2	15:48:36	255.500	503.300	504.000	38.900	9.893	10.440	0.000	996.800
3	15:48:55	252.900	508.100	511.900	38.790	9.315	11.810	0.000	999.400
x		257.200	509.700	510.700	39.370	9.793	11.020	0.000	997.900
σ		5.292	7.251	6.234	0.911	0.437	0.710	0.000	1.389
%RSD		2.058	1.423	1.221	2.314	4.462	6.447	0.000	0.139
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:16	74.318%	1041.000	1055.000	73.729%	46.820	46.350	50.000	41.390
2	15:48:36	74.988%	1051.000	1060.000	73.720%	45.920	46.880	50.790	43.170
3	15:48:55	74.774%	1059.000	1066.000	72.956%	46.830	46.640	49.310	43.200
x		74.694%	1050.000	1061.000	73.468%	46.520	46.620	50.030	42.590
σ		0.342%	9.383	5.465	0.444%	0.520	0.267	0.744	1.037
%RSD		0.458	0.893	0.515	0.604	1.119	0.573	1.487	2.436
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:48:16	71.739%	2172.000	521.300	517.700	1926.000	1946.000	74.227%	73.562%
2	15:48:36	71.692%	2141.000	522.500	519.200	1934.000	1936.000	74.466%	74.770%
3	15:48:55	72.015%	2146.000	522.800	521.500	1935.000	1932.000	75.531%	75.347%
x		71.815%	2153.000	522.200	519.400	1932.000	1938.000	74.741%	74.560%
σ		0.175%	16.630	0.785	1.888	4.876	7.305	0.694%	0.911%
%RSD		0.243	0.772	0.150	0.363	0.252	0.377	0.929	1.222
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:48:16	51.520	50.980	20.200	20.890	20.800	74.135%		
2	15:48:36	51.680	51.430	20.910	21.530	21.070	74.721%		
3	15:48:55	52.010	51.460	20.940	20.770	20.770	75.327%		
x		51.740	51.290	20.680	21.060	20.880	74.728%		
σ		0.251	0.265	0.414	0.407	0.163	0.596%		
%RSD		0.486	0.517	2.003	1.933	0.780	0.798		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	83.889%	0.038	80.950	86.090	0.000	37060.000	17990.000	17570.000
2	15:52:24	82.515%	-0.000	81.960	80.320	0.000	35410.000	17600.000	17130.000
3	15:52:43	81.636%	-0.000	80.290	74.170	0.000	34520.000	16420.000	16630.000
x		82.680%	0.013	81.070	80.190	0.000	35660.000	17340.000	17110.000
σ		1.135%	0.022	0.839	5.960	0.000	1291.000	819.000	468.900
%RSD		1.373	173.200	1.035	7.432	0.000	3.620	4.724	2.740

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	1.375	14990.000	0.000	2185.000	59170.000	59970.000	75.577%	0.572
2	15:52:24	1.615	14830.000	0.000	2174.000	59810.000	59420.000	75.355%	0.690
3	15:52:43	1.397	14170.000	0.000	2116.000	58170.000	58350.000	75.113%	0.577
x		1.463	14660.000	0.000	2159.000	59050.000	59250.000	75.348%	0.613
σ		0.133	433.600	0.000	37.150	826.600	823.800	0.232%	0.066
%RSD		9.074	2.957	0.000	1.721	1.400	1.390	0.308	10.850

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	4.081	3.270	0.449	0.662	60.490	0.047	-0.335	1.545
2	15:52:24	3.811	3.198	0.523	-2.791	58.660	0.047	-0.373	1.708
3	15:52:43	4.006	3.046	0.498	-2.666	65.330	0.065	-0.364	1.638
x		3.966	3.171	0.490	-1.598	61.490	0.053	-0.357	1.630
σ		0.139	0.114	0.038	1.959	3.444	0.010	0.020	0.081
%RSD		3.512	3.605	7.695	122.500	5.601	19.180	5.512	4.997

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	1.631	3.579	3.217	1.043	-0.518	2.448	0.000	424.600
2	15:52:24	1.411	3.260	3.648	0.802	-0.673	2.147	0.000	428.300
3	15:52:43	1.493	3.205	3.448	0.951	-0.376	2.370	0.000	424.600
x		1.512	3.348	3.438	0.932	-0.522	2.322	0.000	425.800
σ		0.111	0.202	0.216	0.122	0.148	0.156	0.000	2.123
%RSD		7.362	6.033	6.277	13.030	28.420	6.735	0.000	0.499

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	74.174%	8.924	9.160	73.638%	-0.052	-0.069	0.082	0.066
2	15:52:24	73.105%	8.530	8.431	72.792%	-0.046	-0.057	0.015	0.023
3	15:52:43	72.814%	8.233	8.277	72.142%	-0.058	-0.061	-0.033	-0.041
x		73.364%	8.563	8.623	72.857%	-0.052	-0.062	0.021	0.016
σ		0.716%	0.346	0.471	0.750%	0.006	0.006	0.058	0.053
%RSD		0.976	4.046	5.468	1.029	11.520	9.995	269.600	338.900

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	71.682%	1.328	0.937	0.951	50.360	50.260	73.756%	73.732%
2	15:52:24	73.081%	1.114	0.864	0.871	49.700	50.630	74.860%	74.470%
3	15:52:43	71.871%	1.030	0.776	0.863	50.050	50.090	74.870%	74.664%
x		72.211%	1.157	0.859	0.895	50.040	50.330	74.496%	74.289%
σ		0.759%	0.154	0.080	0.049	0.334	0.273	0.641%	0.492%
%RSD		1.051	13.290	9.355	5.472	0.666	0.543	0.860	0.662

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:52:04	0.045	0.041	0.195	0.153	0.165	68.631%
2	15:52:24	0.031	0.032	0.184	0.194	0.197	70.122%
3	15:52:43	0.040	0.025	0.196	0.184	0.210	71.159%
x		0.039	0.033	0.192	0.177	0.190	69.970%
σ		0.007	0.008	0.007	0.022	0.023	1.271%
%RSD		18.680	23.920	3.727	12.150	12.070	1.816

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:52	89.450%	-0.000	13.830	12.640	0.000	10590.000	8646.000	8678.000
2	15:56:11	88.525%	-0.000	9.581	11.800	0.000	10310.000	8456.000	8400.000
3	15:56:31	87.464%	-0.000	9.627	12.580	0.000	10210.000	8373.000	8384.000
x		88.480%	-0.000	11.010	12.340	0.000	10370.000	8492.000	8487.000
σ		0.994%	0.000	2.441	0.466	0.000	195.700	140.200	165.000
%RSD		1.123	0.000	22.160	3.777	0.000	1.886	1.651	1.944
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:52	470.200	556.200	0.000	1516.000	35280.000	32010.000	82.589%	0.168
2	15:56:11	463.300	394.300	0.000	1490.000	34170.000	32050.000	81.650%	0.241
3	15:56:31	461.600	384.700	0.000	1458.000	35440.000	31510.000	80.609%	0.102
x		465.000	445.100	0.000	1488.000	34960.000	31860.000	81.616%	0.171
σ		4.530	96.370	0.000	28.840	692.700	303.400	0.990%	0.070
%RSD		0.974	21.650	0.000	1.938	1.981	0.952	1.213	40.900
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:52	-0.580	-1.963	6.814	30.800	66.820	0.027	0.488	1.044
2	15:56:11	-0.441	-1.836	6.633	28.970	57.480	0.035	0.279	1.168
3	15:56:31	-0.490	-1.811	6.521	28.650	62.990	0.022	0.446	1.111
x		-0.504	-1.870	6.656	29.470	62.430	0.028	0.404	1.108
σ		0.071	0.082	0.148	1.159	4.696	0.007	0.111	0.062
%RSD		14.020	4.363	2.220	3.933	7.521	24.410	27.340	5.593
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:52	1.248	17.600	18.280	0.705	-0.666	0.207	0.000	165.700
2	15:56:11	1.291	18.280	18.210	0.960	-0.429	0.705	0.000	164.600
3	15:56:31	1.137	17.420	17.610	0.636	-0.639	0.292	0.000	163.800
x		1.225	17.770	18.040	0.767	-0.578	0.401	0.000	164.700
σ		0.080	0.450	0.367	0.171	0.130	0.266	0.000	0.940
%RSD		6.517	2.533	2.036	22.250	22.450	66.340	0.000	0.570
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:52	77.519%	1.955	1.874	78.061%	-0.059	-0.069	-0.014	0.003
2	15:56:11	78.074%	2.036	1.828	78.224%	-0.047	-0.071	-0.012	-0.014
3	15:56:31	78.072%	1.855	1.744	78.279%	-0.064	-0.054	0.108	0.073
x		77.889%	1.948	1.816	78.188%	-0.057	-0.064	0.027	0.021
σ		0.320%	0.091	0.066	0.114%	0.009	0.009	0.070	0.046
%RSD		0.410	4.662	3.638	0.145	15.090	14.090	254.900	219.800
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:55:52	75.918%	0.472	0.440	0.414	21.320	20.580	76.127%	76.066%
2	15:56:11	76.199%	0.549	0.480	0.391	19.990	20.550	78.733%	77.977%
3	15:56:31	77.288%	0.560	0.409	0.442	20.230	21.250	79.873%	78.862%
x		76.468%	0.527	0.443	0.416	20.510	20.790	78.244%	77.635%
σ		0.724%	0.048	0.035	0.026	0.710	0.399	1.920%	1.429%
%RSD		0.946	9.080	7.990	6.153	3.460	1.916	2.454	1.841
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	15:55:52	0.035	0.030	0.211	0.124	0.164	74.119%		
2	15:56:11	0.025	0.036	0.159	0.135	0.153	75.991%		
3	15:56:31	0.027	0.027	0.146	0.122	0.148	76.875%		
x		0.029	0.031	0.172	0.127	0.155	75.662%		
σ		0.005	0.004	0.034	0.007	0.008	1.407%		
%RSD		17.790	14.180	20.010	5.677	5.172	1.860		

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	94.700%	-0.000	-11.820	-9.425	0.000	2058.000	1682.000	1671.000
2	15:59:59	93.513%	-0.000	-15.380	-8.116	0.000	2037.000	1660.000	1621.000
3	16:00:18	87.784%	-0.000	-13.810	-9.503	0.000	2063.000	1717.000	1694.000
x		91.999%	-0.000	-13.670	-9.015	0.000	2053.000	1686.000	1662.000
σ		3.698%	0.000	1.781	0.779	0.000	13.960	28.730	36.930
%RSD		4.020	0.000	13.030	8.647	0.000	0.680	1.704	2.222

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	97.860	86.230	0.000	276.900	6627.000	6135.000	87.626%	0.022
2	15:59:59	95.340	80.730	0.000	284.400	6749.000	6144.000	85.111%	0.127
3	16:00:18	97.690	84.800	0.000	283.100	7025.000	6124.000	84.696%	0.025
x		96.960	83.920	0.000	281.400	6800.000	6134.000	85.811%	0.058
σ		1.413	2.853	0.000	4.010	203.800	9.537	1.585%	0.060
%RSD		1.457	3.400	0.000	1.425	2.997	0.156	1.848	102.400

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	-0.005	-0.355	2.711	20.350	28.000	0.035	0.099	1.306
2	15:59:59	-0.042	-0.359	2.915	20.480	24.430	0.044	0.158	1.162
3	16:00:18	0.025	-0.311	2.820	19.210	24.700	0.048	0.102	1.426
x		-0.007	-0.342	2.815	20.010	25.710	0.042	0.120	1.298
σ		0.033	0.027	0.102	0.697	1.989	0.007	0.033	0.132
%RSD		466.400	7.831	3.616	3.482	7.736	15.340	27.850	10.150

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	1.472	3.979	4.192	0.161	-1.418	0.654	0.000	33.090
2	15:59:59	1.339	4.528	4.174	0.005	-0.431	-0.123	0.000	32.490
3	16:00:18	1.288	4.167	4.153	-0.017	-0.928	-0.639	0.000	32.780
x		1.366	4.224	4.173	0.050	-0.926	-0.036	0.000	32.790
σ		0.095	0.279	0.019	0.097	0.493	0.651	0.000	0.298
%RSD		6.964	6.605	0.464	194.400	53.290	1797.000	0.000	0.908

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	79.106%	0.692	0.631	80.569%	-0.066	-0.074	0.067	0.042
2	15:59:59	79.085%	0.754	0.667	80.817%	-0.052	-0.068	0.028	0.022
3	16:00:18	77.706%	0.646	0.642	79.230%	-0.066	-0.044	0.092	0.082
x		78.632%	0.698	0.646	80.205%	-0.061	-0.062	0.062	0.049
σ		0.802%	0.054	0.019	0.854%	0.008	0.016	0.032	0.031
%RSD		1.020	7.742	2.884	1.064	13.500	25.340	51.580	63.270

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	77.358%	0.493	0.235	0.276	4.445	4.300	77.541%	77.350%
2	15:59:59	77.783%	0.433	0.237	0.267	3.975	4.255	77.808%	77.766%
3	16:00:18	77.697%	0.459	0.239	0.246	4.646	4.383	77.727%	77.731%
x		77.613%	0.462	0.237	0.263	4.355	4.313	77.692%	77.616%
σ		0.225%	0.030	0.002	0.015	0.344	0.065	0.137%	0.230%
%RSD		0.289	6.541	0.956	5.795	7.904	1.498	0.176	0.297

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	15:59:40	0.014	0.019	1.062	1.032	1.043	82.998%
2	15:59:59	0.023	0.012	1.175	0.965	1.111	82.542%
3	16:00:18	0.021	0.019	1.109	1.033	1.094	82.704%
x		0.019	0.016	1.115	1.010	1.083	82.748%
σ		0.005	0.004	0.057	0.039	0.035	0.231%
%RSD		25.440	24.390	5.069	3.844	3.244	0.279

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	89.159%	103.300	76.320	77.190	0.000	50140.000	50740.000	50030.000
2	16:03:36	87.296%	100.800	79.340	86.250	0.000	49840.000	49590.000	49110.000
3	16:03:55	83.706%	105.400	91.130	80.950	0.000	50140.000	50190.000	49610.000
x		86.720%	103.153%	82.265%	81.465%	0.000	100.083%	100.350%	99.167%
σ		2.772%	n/a	n/a	n/a	0.000	n/a	n/a	n/a
%RSD		3.196	2.229	9.514	5.583	0.000	0.348	1.154	0.932

Run	Time	27Al	28Si	37Cl	39K	43Ca	44Ca	45Sc	47Ti
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	516.700	5120.000	0.000	48250.000	48820.000	49050.000	84.578%	97.300
2	16:03:36	504.400	5017.000	0.000	48690.000	49060.000	49220.000	81.648%	97.510
3	16:03:55	515.600	5002.000	0.000	48950.000	49320.000	49700.000	80.703%	97.500
x		102.442%	100.927%	0.000	97.256%	98.135%	98.650%	82.309%	97.435%
σ		n/a	n/a	0.000	n/a	n/a	n/a	2.020%	n/a
%RSD		1.327	1.279	0.000	0.726	0.510	0.681	2.455	0.121

Run	Time	51V	52Cr	55Mn	56Fe	57Fe	59Co	60Ni	63Cu
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	97.840	98.920	476.900	24830.000	24400.000	101.300	100.100	102.200
2	16:03:36	97.890	97.980	481.600	24820.000	24600.000	100.300	103.100	100.800
3	16:03:55	99.320	99.490	484.900	25050.000	24840.000	100.600	99.030	100.800
x		98.350%	98.797%	96.222%	99.608%	98.449%	100.752%	100.731%	101.252%
σ		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
%RSD		0.854	0.770	0.840	0.522	0.887	0.497	2.094	0.780

Run	Time	65Cu	66Zn	68Zn	75As	78Se	82Se	83Kr	88Sr
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	103.200	100.900	101.900	99.530	103.300	102.600	0.000	96.840
2	16:03:36	101.800	100.700	101.900	101.200	101.100	105.200	0.000	96.820
3	16:03:55	101.300	99.930	100.400	100.400	103.900	104.300	0.000	97.850
x		102.110%	100.517%	101.394%	100.376%	102.802%	104.046%	0.000	97.172%
σ		n/a	n/a	n/a	n/a	n/a	n/a	0.000	n/a
%RSD		0.948	0.522	0.829	0.854	1.434	1.264	0.000	0.602

Run	Time	89Y	95Mo	98Mo	103Rh	107Ag	109Ag	111Cd	114Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	73.156%	98.630	97.810	72.224%	97.510	98.410	100.600	99.230
2	16:03:36	73.797%	99.170	98.350	72.944%	97.700	97.610	98.510	98.210
3	16:03:55	73.018%	100.800	100.600	72.609%	97.000	98.670	98.990	100.400
x		73.324%	99.524%	98.907%	72.592%	97.403%	98.231%	99.379%	99.279%
σ		0.416%	n/a	n/a	0.360%	n/a	n/a	n/a	n/a
%RSD		0.567	1.122	1.477	0.496	0.373	0.563	1.125	1.103

Run	Time	115In	118Sn	121Sb	123Sb	135Ba	137Ba	159Tb	165Ho
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	70.363%	97.810	98.480	97.880	95.090	96.730	73.006%	72.450%
2	16:03:36	70.642%	99.070	98.970	98.070	98.100	95.850	73.145%	72.802%
3	16:03:55	70.493%	99.520	98.370	97.620	96.280	97.330	73.858%	73.551%
x		70.499%	98.798%	98.608%	97.856%	96.490%	96.635%	73.336%	72.934%
σ		0.139%	n/a	n/a	n/a	n/a	n/a	0.457%	0.562%
%RSD		0.198	0.898	0.327	0.235	1.571	0.773	0.623	0.771

Run	Time	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb
1	16:03:17	92.700	92.390	93.610	93.760	92.860	82.408%
2	16:03:36	95.310	94.230	95.590	96.450	95.430	81.117%
3	16:03:55	97.370	97.380	98.660	98.320	97.900	80.089%
x		95.127%	94.665%	95.954%	96.176%	95.394%	81.205%
σ		n/a	n/a	n/a	n/a	n/a	1.162%
%RSD		2.461	2.670	2.654	2.387	2.640	1.431

CCB7 3/20/2015 4:09:46 PM QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

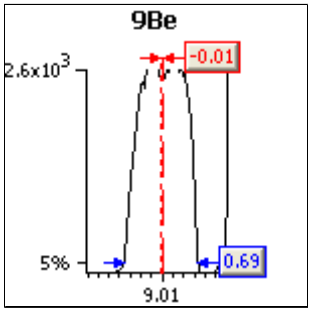
Run	Time	6Li	9Be	10B	11B	13C	23Na	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:05	96.167%	-0.000	-20.730	-16.430	0.000	-18.350	1.298	1.277
2	16:10:25	93.808%	-0.000	-19.820	-15.890	0.000	-17.740	1.878	1.912
3	16:10:44	96.303%	-0.000	-19.090	-16.680	0.000	-17.090	1.579	1.542
x		95.426%	-0.000	-19.880	-16.330	0.000	-17.730	1.585	1.577
σ		1.403%	0.000	0.823	0.404	0.000	0.633	0.290	0.319
%RSD		1.470	0.000	4.142	2.473	0.000	3.570	18.300	20.210
Run	**Time**	**27Al**	**28Si**	**37Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:05	0.740	4.370	0.000	5.723	6.679	-1.554	90.017%	0.084
2	16:10:25	0.842	4.110	0.000	5.490	-5.651	-1.947	88.948%	-0.045
3	16:10:44	0.612	3.893	0.000	8.403	-2.535	0.477	88.999%	-0.077
x		0.732	4.124	0.000	6.539	-0.502	-1.008	89.321%	-0.013
σ		0.115	0.239	0.000	1.619	6.411	1.301	0.603%	0.085
%RSD		15.730	5.794	0.000	24.760	1276.000	129.000	0.675	679.800
Run	**Time**	**51V**	**52Cr**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**63Cu**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:05	-0.005	-0.002	0.030	1.032	3.633	0.001	-0.007	0.053
2	16:10:25	-0.010	-0.037	0.075	-1.580	1.263	0.009	0.021	0.013
3	16:10:44	0.022	0.022	0.038	-0.966	2.139	0.007	-0.007	-0.049
x		0.002	-0.006	0.048	-0.505	2.345	0.006	0.002	0.006
σ		0.017	0.030	0.024	1.366	1.198	0.004	0.016	0.051
%RSD		738.800	535.400	50.040	270.700	51.090	69.140	631.200	923.400
Run	**Time**	**65Cu**	**66Zn**	**68Zn**	**75As**	**78Se**	**82Se**	**83Kr**	**88Sr**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:05	0.020	0.211	0.268	0.027	-0.702	0.241	0.000	0.011
2	16:10:25	0.021	0.164	0.299	0.033	-0.504	0.560	0.000	0.004
3	16:10:44	-0.077	0.115	0.317	0.012	-0.628	0.278	0.000	0.009
x		-0.012	0.163	0.295	0.024	-0.612	0.360	0.000	0.008
σ		0.056	0.048	0.025	0.011	0.100	0.174	0.000	0.003
%RSD		463.800	29.530	8.405	45.770	16.350	48.450	0.000	42.410
Run	**Time**	**89Y**	**95Mo**	**98Mo**	**103Rh**	**107Ag**	**109Ag**	**111Cd**	**114Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:05	79.566%	0.179	0.226	82.183%	-0.046	-0.065	0.040	0.033
2	16:10:25	79.925%	0.231	0.170	81.869%	-0.039	-0.055	0.108	0.076
3	16:10:44	81.484%	0.162	0.187	82.042%	-0.035	-0.036	0.031	0.037
x		80.325%	0.191	0.194	82.031%	-0.040	-0.052	0.060	0.048
σ		1.019%	0.036	0.028	0.157%	0.006	0.015	0.042	0.024
%RSD		1.269	18.790	14.660	0.192	14.040	28.630	70.740	49.050
Run	**Time**	**115In**	**118Sn**	**121Sb**	**123Sb**	**135Ba**	**137Ba**	**159Tb**	**165Ho**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:10:05	78.124%	0.177	0.136	0.144	0.008	-0.006	77.049%	76.398%
2	16:10:25	78.676%	0.180	0.113	0.112	-0.001	0.004	78.270%	77.810%
3	16:10:44	78.273%	0.250	0.083	0.126	0.017	0.004	79.254%	77.977%
x		78.358%	0.203	0.111	0.127	0.008	0.001	78.191%	77.395%
σ		0.286%	0.041	0.026	0.016	0.009	0.006	1.105%	0.867%
%RSD		0.364	20.310	23.820	12.530	108.900	753.400	1.413	1.121
Run	**Time**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**		
		ppb	ppb	ppb	ppb	ppb	ppb		
1	16:10:05	0.032	0.030	0.065	0.067	0.064	81.119%		
2	16:10:25	0.034	0.029	0.085	0.021	0.071	81.754%		
3	16:10:44	0.022	0.034	0.072	0.041	0.062	82.325%		
x		0.029	0.031	0.074	0.043	0.066	81.733%		
σ		0.006	0.003	0.010	0.023	0.005	0.604%		
%RSD		21.400	8.493	13.560	53.540	6.973	0.739		

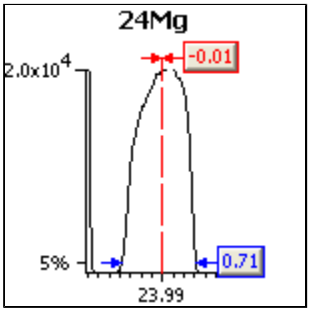
Performance Report

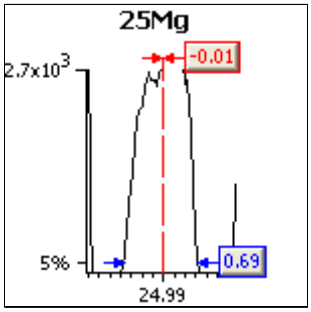
Sample details
Sample name : ITUNE
Acquired at : 3/20/2015 8:29:12 AM
Report name : EPA ILMO5.2/6020A 2.1 [3/15/2013 11:49:53 AM]

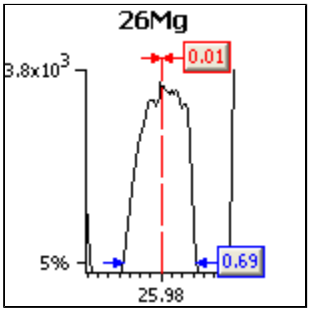
Mass Calibration verification

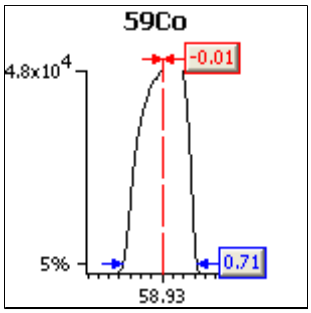
Acquisition parameters
Sweeps : 25
Dwell : 2.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 5% of the peak maximum

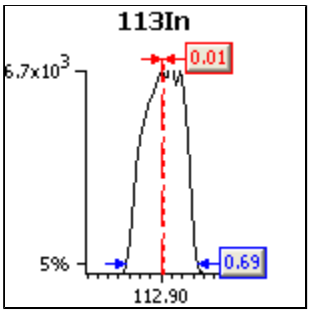


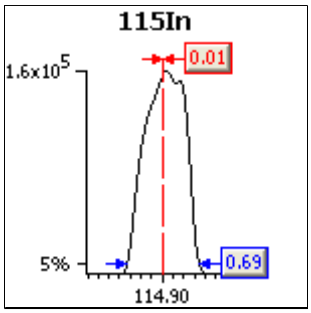


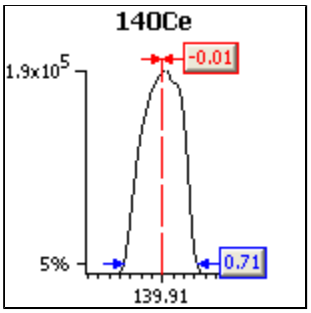


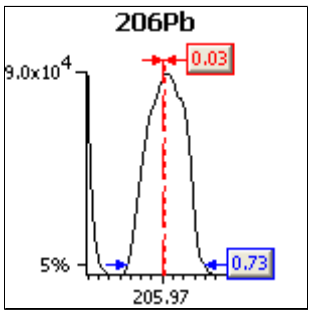


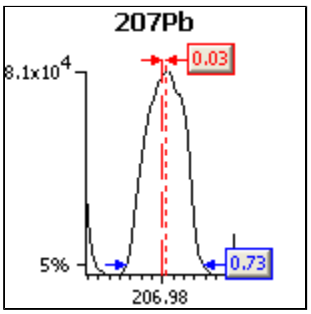


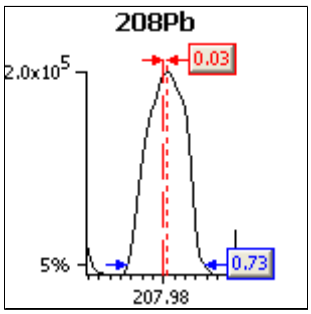












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.90	0.45	0.10	0.69	-0.01
24Mg	0.90	0.45	0.10	0.71	-0.01
25Mg	0.90	0.45	0.10	0.69	-0.01
26Mg	0.90	0.45	0.10	0.69	0.01
59Co	0.90	0.45	0.10	0.71	-0.01
113In	0.90	0.45	0.10	0.69	0.01
115In	0.90	0.45	0.10	0.69	0.01
140Ce	0.90	0.45	0.10	0.71	-0.01
206Pb	0.90	0.45	0.10	0.73	0.03
207Pb	0.90	0.45	0.10	0.73	0.03
208Pb	0.90	0.45	0.10	0.73	0.03

Sample details
Sample name : ITUNE
Acquired at : 3/20/2015 8:29:12 AM
Report name : EPA ILMO5.2/6020A 2.1 [3/15/2013 11:49:53 AM]

Tune conditions

Major	
Extraction	-165
Lens 1	2.9
Focus	23.9
D1	-38.4
Pole Bias	3.0
Hexapole Bias	-3.0
Nebuliser	0.86
Sampling Depth	200

Minor	
Lens 2	-20.4
Lens 3	-181.2
Forward power	1404
Horizontal	71
Vertical	500
D2	-160
DA	-80.0
Cool	13.0
Auxiliary	0.90

Global	
Standard resolution	n/a
High resolution	n/a
Analogue Detector	n/a
PC Detector	n/a

Add. Gases	
He/H2	0.00
He/NH3	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 150

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	56Ar O	59Co	137Ba++
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	-	5.0%	-
	Countrate	-	>500	>500	>500	>500	-	>5000	-
1	8:30:00 AM	0	2614	20121	2564	3210	192967	47738	4
2	8:31:25 AM	0	2708	19575	2654	3036	181065	46849	3
3	8:32:50 AM	0	2620	19744	2603	3029	175014	46443	1
4	8:34:15 AM	0	2585	19944	2578	3202	174170	47092	2
5	8:35:41 AM	0	2583	20127	2622	3166	173731	47213	2
x		0	2622	19902	2604	3128	179389	47067	2
σ		0.19	50.74	240.96	35.53	89.24	8147.85	476.46	1.01
%RSD		145.774	1.935	1.211	1.364	2.853	4.542	1.012	42.127

Run	Time	138Ba++	101Bkg	113In	115In	138Ba	140Ce	156Ce O	206Pb
Dwell (mSecs)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Limits	%RSD	-	-	5.0%	5.0%	-	5.0%	-	5.0%
	Countrate	-	-	>200	>5000	-	>10000	-	>500
1	8:30:00 AM	24	0	6853	159619	1952	193021	1284	89681
2	8:31:25 AM	20	0	6879	159521	1966	192563	1268	89065
3	8:32:50 AM	18	0	6817	158748	1933	192075	1253	89125
4	8:34:15 AM	23	0	6862	158122	1903	191010	1235	87895
5	8:35:41 AM	19	0	6952	157626	1833	190409	1267	88438
x		21	0	6873	158727	1918	191815	1261	88841
σ		2.36	0.06	49.75	866.94	52.58	1084.92	18.55	688.03
%RSD		11.347	55.902	0.724	0.546	2.742	0.566	1.471	0.774

Run	Time	207Pb	208Pb	220Bkg
Dwell (mSecs)		0.0	0.0	0.0
Limits	%RSD	5.0%	5.0%	-
	Countrate	>500	>500	<2500
1	8:30:00 AM	80675	191794	0
2	8:31:25 AM	80454	191531	0
3	8:32:50 AM	80460	190993	0
4	8:34:15 AM	79832	189179	0
5	8:35:41 AM	79750	188263	0
x		80234	190352	0
σ		415.16	1550.72	0.06
%RSD		0.517	0.815	69.722

Ratio results

Run	Time	156Ce O/140Ce
Ratio limits		<0.0500
1	8:30:00 AM	0
2	8:31:25 AM	0

3	8:32:50 AM	0
4	8:34:15 AM	0
5	8:35:41 AM	0
x		0.0066
σ		0.00
%RSD		1.2641

Result : The performance report passed.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 135569 Batch Start Date: 03/16/15 11:00 Batch Analyst: Baikadi, Ashwin

Batch Method: 3005A Batch End Date: 03/16/15 15:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTAPITTICPMS 00020	MTAPITTMSA 00023	MTAPITTMSC 00029	
MB 180-135569/1		3005A, 6020A		50 mL	50 mL				
LCS 180-135569/2		3005A, 6020A		50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41935-B-1	HD-COD-SW-6-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-2	HD-COD-SW-7-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-3	HD-COD-SW-8-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-4	HD-COD-SW-9-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-5	HD-COD-SW-10-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-6	HD-COD-SW-11-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-7	HD-COD-SW-12-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-8	HD-COD-SW-13-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-9	HD-COD-SW-15-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-10	HD-COD-SW-16-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-11	HD-COD-SW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-11 MS	HD-COD-SW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41935-B-11 MSD	HD-COD-SW-17-0/1-0	3005A, 6020A	T	50 mL	50 mL	0.5 mL	0.5 mL	0.5 mL	
180-41935-B-12	HD-COD-SW-20-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-13	HD-COD-SW-26-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-14	HD-COD-SW-27-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-15	HD-COD-SW-28-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-16	HD-COD-SW-29-0/1-0	3005A, 6020A	T	50 mL	50 mL				
180-41935-B-17	HD-QC1-0/1-1	3005A, 6020A	T	50 mL	50 mL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 135569 Batch Start Date: 03/16/15 11:00 Batch Analyst: Baikadi, Ashwin

Batch Method: 3005A Batch End Date: 03/16/15 15:00

Batch Notes	
Batch Comment	METALS C4
First End time	15:00
Lot # of hydrochloric acid	2.5mL 1452458
Lot # of Nitric Acid	1mL1472455
Hot Block ID number	#5
Oven, Bath or Block Temperature 1	95
Pipette ID	L1201611U
Person who witnessed spiking	AB
First Start time	11:00
ID number of the thermometer	IP4-14 CF=+1.0 E5
Digestion Tube/Cup Lot #	1408268
Uncorrected Temperature	95 Celsius

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41935-1

SDG No.:

Project: Harley Davidson

Client Sample ID	Lab Sample ID
HD-COD-SW-6-0/1-0	180-41935-1
HD-COD-SW-7-0/1-0	180-41935-2
HD-COD-SW-8-0/1-0	180-41935-3
HD-COD-SW-9-0/1-0	180-41935-4
HD-COD-SW-10-0/1-0	180-41935-5
HD-COD-SW-11-0/1-0	180-41935-6
HD-COD-SW-12-0/1-0	180-41935-7
HD-COD-SW-13-0/1-0	180-41935-8
HD-COD-SW-15-0/1-0	180-41935-9
HD-COD-SW-16-0/1-0	180-41935-10
HD-COD-SW-17-0/1-0	180-41935-11
HD-COD-SW-20-0/1-0	180-41935-12
HD-COD-SW-26-0/1-0	180-41935-13
HD-COD-SW-27-0/1-0	180-41935-14
HD-COD-SW-28-0/1-0	180-41935-15
HD-COD-SW-29-0/1-0	180-41935-16
HD-QC1-0/1-1	180-41935-17

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-6-0/1-0 Lab Sample ID: 180-41935-1

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:25

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	95	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	95	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-7-0/1-0 Lab Sample ID: 180-41935-2

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 12:25

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	64	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	64	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-8-0/1-0 Lab Sample ID: 180-41935-3

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 08:50

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	68	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	68	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-9-0/1-0 Lab Sample ID: 180-41935-4

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 12:50

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	91	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	91	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-10-0/1-0 Lab Sample ID: 180-41935-5

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 10:05

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	180	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	180	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-11-0/1-0 Lab Sample ID: 180-41935-6

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 13:15

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	160	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	160	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-12-0/1-0 Lab Sample ID: 180-41935-7

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 13:40

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	160	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	160	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-13-0/1-0 Lab Sample ID: 180-41935-8

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 10:15

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	54	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	54	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-15-0/1-0 Lab Sample ID: 180-41935-9

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 14:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	200	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	200	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-16-0/1-0 Lab Sample ID: 180-41935-10

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 10:40

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	70	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	70	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-17-0/1-0 Lab Sample ID: 180-41935-11

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	76	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	76	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-20-0/1-0 Lab Sample ID: 180-41935-12

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:30

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	91	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	91	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-26-0/1-0 Lab Sample ID: 180-41935-13

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 11:55

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	72	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	72	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-27-0/1-0 Lab Sample ID: 180-41935-14

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 14:10

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	64	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	64	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-28-0/1-0 Lab Sample ID: 180-41935-15

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 13:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	95	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	95	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-COD-SW-29-0/1-0 Lab Sample ID: 180-41935-16

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 09:25

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	89	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	89	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: HD-QC1-0/1-1 Lab Sample ID: 180-41935-17

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG ID.:

Matrix: Water Date Sampled: 03/10/2015 08:00

Reporting Basis: WET Date Received: 03/11/2015 08:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Total Alkalinity as CaCO3 to pH 4.5	210	5.0	0.41	mg/L		B	1	SM 2320B
	Bicarbonate Alkalinity as CaCO3	210	5.0	0.41	mg/L		B	1	SM 2320B
	Carbonate Alkalinity as CaCO3	5.0	5.0	0.41	mg/L	U		1	SM 2320B

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Analyst: CLL Batch Start Date: 03/21/2015

Reporting Units: mg/L Analytical Batch No.: 136070

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	CCV	09:33	Total Alkalinity as CaCO3 to pH 4.5	132	125	105	80-120		WALK125PPMCCV_00082
14	CCB	09:33	Total Alkalinity as CaCO3 to pH 4.5	2.06				J	
			Bicarbonate Alkalinity as CaCO3	2.06				J	
			Carbonate Alkalinity as CaCO3	5.0				U	
24	CCV	09:33	Total Alkalinity as CaCO3 to pH 4.5	132	125	105	80-120		WALK125PPMCCV_00082
25	CCB	09:33	Total Alkalinity as CaCO3 to pH 4.5	2.06				J	
			Bicarbonate Alkalinity as CaCO3	2.06				J	
			Carbonate Alkalinity as CaCO3	5.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 136070 Date: 03/21/2015 09:33							
SM 2320B	MB 180-136070/2	Total Alkalinity as CaCO3 to pH 4.5	2.06	J	mg/L	5.0	1
SM 2320B	MB 180-136070/2	Bicarbonate Alkalinity as CaCO3	2.06	J	mg/L	5.0	1
SM 2320B	MB 180-136070/2	Carbonate Alkalinity as CaCO3	5.0	U	mg/L	5.0	1

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 136070 Date: 03/21/2015 09:33								
SM 2320B	HD-COD-SW-6-0/1-0	180-41935-1	Total Alkalinity as CaCO3 to pH 4.5	95	mg/L			
SM 2320B	HD-COD-SW-6-0/1-0	180-41935-1 DU	Total Alkalinity as CaCO3 to pH 4.5	96.8	mg/L	2	20	
SM 2320B	HD-COD-SW-6-0/1-0	180-41935-1	Bicarbonate Alkalinity as CaCO3	95	mg/L			
SM 2320B	HD-COD-SW-6-0/1-0	180-41935-1 DU	Bicarbonate Alkalinity as CaCO3	96.8	mg/L	2	20	
SM 2320B	HD-COD-SW-6-0/1-0	180-41935-1	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	HD-COD-SW-6-0/1-0	180-41935-1 DU	Carbonate Alkalinity as CaCO3	5.0	mg/L	NC	20	U
Batch ID: 136070 Date: 03/21/2015 09:33								
SM 2320B	HD-COD-SW-17-0/1-0	180-41935-11	Total Alkalinity as CaCO3 to pH 4.5	76	mg/L			
SM 2320B	HD-COD-SW-17-0/1-0	180-41935-11 DU	Total Alkalinity as CaCO3 to pH 4.5	76.2	mg/L	0	20	
SM 2320B	HD-COD-SW-17-0/1-0	180-41935-11	Bicarbonate Alkalinity as CaCO3	76	mg/L			
SM 2320B	HD-COD-SW-17-0/1-0	180-41935-11 DU	Bicarbonate Alkalinity as CaCO3	76.2	mg/L	0	20	
SM 2320B	HD-COD-SW-17-0/1-0	180-41935-11	Carbonate Alkalinity as CaCO3	5.0	mg/L			U
SM 2320B	HD-COD-SW-17-0/1-0	180-41935-11 DU	Carbonate Alkalinity as CaCO3	5.0	mg/L	NC	20	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 136070 Date: 03/21/2015 09:33											
						LCS Source: WALK250PPMPi_00091					
SM 2320B	LCS 180-136070/1	Total Alkalinity as CaCO3 to pH 4.5	253		mg/L	250	101	80-120			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41935-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2320B MDL Date: 01/27/2011 15:49

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Bicarbonate Alkalinity as CaCO3		5	0.4111
Carbonate Alkalinity as CaCO3		5	0.4111
Total Alkalinity as CaCO3 to pH 4.5		5	0.4111

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job Number: 180-41935-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: SM 2320B XMDL Date: 01/27/2011 15:49

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Bicarbonate Alkalinity as CaCO3		5	0.4111
Carbonate Alkalinity as CaCO3		5	0.4111
Total Alkalinity as CaCO3 to pH 4.5		5	0.4111

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Instrument ID: NOEQUIP Analysis Method: SM 2320B

Start Date: 03/21/2015 09:33 End Date: 03/21/2015 09:33

Lab Sample Id	D/F	Type	Time	Analytes																										
				Alk	BALKCC	CarAlk																								
LCS 180-136070/1	1	T	09:33	X																										
MB 180-136070/2	1	T	09:33	X	X	X																								
180-41935-1	1	T	09:33	X	X	X																								
180-41935-1 DU	1	T	09:33	X	X	X																								
180-41935-2	1	T	09:33	X	X	X																								
180-41935-3	1	T	09:33	X	X	X																								
180-41935-4	1	T	09:33	X	X	X																								
180-41935-5	1	T	09:33	X	X	X																								
180-41935-6	1	T	09:33	X	X	X																								
180-41935-7	1	T	09:33	X	X	X																								
180-41935-8	1	T	09:33	X	X	X																								
180-41935-9	1	T	09:33	X	X	X																								
CCV 180-136070/13	1		09:33	X																										
CCB 180-136070/14	1		09:33	X	X	X																								
180-41935-10	1	T	09:33	X	X	X																								
180-41935-11	1	T	09:33	X	X	X																								
180-41935-11 DU	1	T	09:33	X	X	X																								
180-41935-12	1	T	09:33	X	X	X																								
180-41935-13	1	T	09:33	X	X	X																								
180-41935-14	1	T	09:33	X	X	X																								
180-41935-15	1	T	09:33	X	X	X																								
180-41935-16	1	T	09:33	X	X	X																								
180-41935-17	1	T	09:33	X	X	X																								
CCV 180-136070/24	1		09:33	X																										
CCB 180-136070/25	1		09:33	X	X	X																								

Prep Types:
T = Total/NA

FORM XIII-IN

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

PITTSBURGH
ALKALINITY LOGSHEET
Method 2320B
NB-2015-012

Alk# 032115ALK

Analyst: C Lobenyde
Reviewed By: SelDRC
pH Meter ID: Acumet XL S/N#94102132
pH 4 Start: 4.02

Date: 3-21-15
Date: —
AD Batch: 136070
pH 4 End: 4.05

Job Number(s): 41935

Calculations:

$$\text{Alkalinity as } CaCO_3 \text{ mg/L} = \frac{\text{(mL of } H_2SO_4\text{) (N)(50,000)}}{\text{mL of Sample}}$$

Alkalinity Relationships:

P = Phenolphthalein Alkalinity (pH 8.3)

T = Total Alkalinity

OH^- = Hydroxide Alkalinity as $CaCO_3$

$CO_3^{\ 2}$ = Carbonate Alkalinity as $CaCO_3$

HCO_3 = Bicarbonate Concentration as $CaCO_3$

Results	OH^-	$CO_3^{\ 2}$	HCO_3	Results	OH^-	$CO_3^{\ 2}$	HCO_3
P = 0	0	0	T	P = ½T	0	2P	0
P < ½T	0	2P	T-2P	P > ½T	2P-T	2(T-P)	0
				P = T	T	0	0

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Pittsburgh
ALKALINITY LOGSHEET
Method 2320B
NB-2015-012

Sample ID	pH	Sample Volume	mL to pH 8.3	Ttl mL pH 4.5	N	T	P	OH^-	CO_3^{2}	HCO_3
LCS	10.87	50	6.5	12.3	.0206	253.38				
MB	5.49		0	0.1		2.06				
180-41935-1	7.73		0	4.6		94.76				
1X	7.71		0	4.7		96.82				
2	7.04		0	3.1		63.86				
3	6.99		0	3.3		67.98				
4	7.17		0	4.4		90.64				
5	7.92		0	8.5		175.1				
6	7.92		0	7.7		158.62				
7	7.52		0	8.0		164.8				
8	7.00		0	2.6		53.56				
9	7.27		0	9.7		199.82				
CCV	10.79		3.2	6.4		131.84				
CCB	5.63		0	0.1		2.06				
180-41935-10	7.09		0	3.4		70.04				
11	7.09		0	3.7		76.22				
11X	7.07		0	3.7		76.22				
12	7.51		0	4.4		90.64				
13	7.00		0	3.5		72.1				
14	7.16		0	3.1		63.86				
15	7.37		0	4.6		94.76				
16	7.26		0	4.3		88.58				
17	7.29		0	10.0		206				
CCV	10.74		3.3	6.4		131.84				
CCB	5.54	↓	0	0.1	↓	2.06				

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 136070 Batch Start Date: 03/21/15 05:33 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
LCS 180-136070/1		SM 2320B		50 mL	10.87 SU	0 mL	6.5 mL	6.5 mL	0 mL
MB 180-136070/2		SM 2320B		50 mL	5.49 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-1	HD-COD-SW-6-0/1-0	SM 2320B	T	50 mL	7.73 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-1 DU	HD-COD-SW-6-0/1-0	SM 2320B	T	50 mL	7.71 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-2	HD-COD-SW-7-0/1-0	SM 2320B	T	50 mL	7.04 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-3	HD-COD-SW-8-0/1-0	SM 2320B	T	50 mL	6.99 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-4	HD-COD-SW-9-0/1-0	SM 2320B	T	50 mL	7.17 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-5	HD-COD-SW-10-0/1-0	SM 2320B	T	50 mL	7.92 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-6	HD-COD-SW-11-0/1-0	SM 2320B	T	50 mL	7.92 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-7	HD-COD-SW-12-0/1-0	SM 2320B	T	50 mL	7.52 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-8	HD-COD-SW-13-0/1-0	SM 2320B	T	50 mL	7.00 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-9	HD-COD-SW-15-0/1-0	SM 2320B	T	50 mL	7.27 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-136070/13		SM 2320B		50 mL	10.79 SU	0 mL	3.2 mL	3.2 mL	0 mL
CCB 180-136070/14		SM 2320B		50 mL	5.63 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-10	HD-COD-SW-16-0/1-0	SM 2320B	T	50 mL	7.09 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-11	HD-COD-SW-17-0/1-0	SM 2320B	T	50 mL	7.09 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-11 DU	HD-COD-SW-17-0/1-0	SM 2320B	T	50 mL	7.07 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-12	HD-COD-SW-20-0/1-0	SM 2320B	T	50 mL	7.51 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-13	HD-COD-SW-26-0/1-0	SM 2320B	T	50 mL	7.00 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-14	HD-COD-SW-27-0/1-0	SM 2320B	T	50 mL	7.16 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-15	HD-COD-SW-28-0/1-0	SM 2320B	T	50 mL	7.37 SU	0 mL	0 mL	0 mL	0 mL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 136070 Batch Start Date: 03/21/15 05:33 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	Initial pH	BuretStart1	BuretStop1	TitrantVolume1	BuretStart2
180-41935-A-16	HD-COD-SW-29-0/1-0	SM 2320B	T	50 mL	7.26 SU	0 mL	0 mL	0 mL	0 mL
180-41935-A-17	HD-QC1-0/1-1	SM 2320B	T	50 mL	7.29 SU	0 mL	0 mL	0 mL	0 mL
CCV 180-136070/24		SM 2320B		50 mL	10.74 SU	0 mL	3.3 mL	3.3 mL	0 mL
CCB 180-136070/25		SM 2320B		50 mL	5.54 SU	0 mL	0 mL	0 mL	0 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
LCS 180-136070/1		SM 2320B		5.8 mL	5.8 mL	Case 4	238.96 mg/L	14.42 mg/L	0 mg/L
MB 180-136070/2		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.06 mg/L
180-41935-A-1	HD-COD-SW-6-0/1-0	SM 2320B	T	4.6 mL	4.6 mL	Case 1	0 mg/L	0 mg/L	94.76 mg/L
180-41935-A-1 DU	HD-COD-SW-6-0/1-0	SM 2320B	T	4.7 mL	4.7 mL	Case 1	0 mg/L	0 mg/L	96.82 mg/L
180-41935-A-2	HD-COD-SW-7-0/1-0	SM 2320B	T	3.1 mL	3.1 mL	Case 1	0 mg/L	0 mg/L	63.86 mg/L
180-41935-A-3	HD-COD-SW-8-0/1-0	SM 2320B	T	3.3 mL	3.3 mL	Case 1	0 mg/L	0 mg/L	67.98 mg/L
180-41935-A-4	HD-COD-SW-9-0/1-0	SM 2320B	T	4.4 mL	4.4 mL	Case 1	0 mg/L	0 mg/L	90.64 mg/L
180-41935-A-5	HD-COD-SW-10-0/1-0	SM 2320B	T	8.5 mL	8.5 mL	Case 1	0 mg/L	0 mg/L	175.1 mg/L
180-41935-A-6	HD-COD-SW-11-0/1-0	SM 2320B	T	7.7 mL	7.7 mL	Case 1	0 mg/L	0 mg/L	158.62 mg/L
180-41935-A-7	HD-COD-SW-12-0/1-0	SM 2320B	T	8.0 mL	8 mL	Case 1	0 mg/L	0 mg/L	164.8 mg/L
180-41935-A-8	HD-COD-SW-13-0/1-0	SM 2320B	T	2.6 mL	2.6 mL	Case 1	0 mg/L	0 mg/L	53.56 mg/L
180-41935-A-9	HD-COD-SW-15-0/1-0	SM 2320B	T	9.7 mL	9.7 mL	Case 1	0 mg/L	0 mg/L	199.82 mg/L
CCV 180-136070/13		SM 2320B		3.2 mL	3.2 mL	Case 3	131.84 mg/L	0 mg/L	0 mg/L
CCB 180-136070/14		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.06 mg/L
180-41935-A-10	HD-COD-SW-16-0/1-0	SM 2320B	T	3.4 mL	3.4 mL	Case 1	0 mg/L	0 mg/L	70.04 mg/L
180-41935-A-11	HD-COD-SW-17-0/1-0	SM 2320B	T	3.7 mL	3.7 mL	Case 1	0 mg/L	0 mg/L	76.22 mg/L

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 136070 Batch Start Date: 03/21/15 05:33 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	BuretStop2	TitrantVolume2	CalcMsg	carb	hydr	bCarb
180-41935-A-11 DU	HD-COD-SW-17-0/1-0	SM 2320B	T	3.7 mL	3.7 mL	Case 1	0 mg/L	0 mg/L	76.22 mg/L
180-41935-A-12	HD-COD-SW-20-0/1-0	SM 2320B	T	4.4 mL	4.4 mL	Case 1	0 mg/L	0 mg/L	90.64 mg/L
180-41935-A-13	HD-COD-SW-26-0/1-0	SM 2320B	T	3.5 mL	3.5 mL	Case 1	0 mg/L	0 mg/L	72.1 mg/L
180-41935-A-14	HD-COD-SW-27-0/1-0	SM 2320B	T	3.1 mL	3.1 mL	Case 1	0 mg/L	0 mg/L	63.86 mg/L
180-41935-A-15	HD-COD-SW-28-0/1-0	SM 2320B	T	4.6 mL	4.6 mL	Case 1	0 mg/L	0 mg/L	94.76 mg/L
180-41935-A-16	HD-COD-SW-29-0/1-0	SM 2320B	T	4.3 mL	4.3 mL	Case 1	0 mg/L	0 mg/L	88.58 mg/L
180-41935-A-17	HD-QC1-0/1-1	SM 2320B	T	10.0 mL	10 mL	Case 1	0 mg/L	0 mg/L	206 mg/L
CCV 180-136070/24		SM 2320B		3.1 mL	3.1 mL	Case 4	127.72 mg/L	4.12 mg/L	0 mg/L
CCB 180-136070/25		SM 2320B		0.1 mL	0.1 mL	Case 1	0 mg/L	0 mg/L	2.06 mg/L

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00082	WALK250PPMPi 00091	
LCS 180-136070/1		SM 2320B		133.9 mg/L	253.38 mg/L	50 mL		50 mL	
MB 180-136070/2		SM 2320B		0 mg/L	2.06 mg/L	50 mL			
180-41935-A-1	HD-COD-SW-6-0/1-0	SM 2320B	T	0 mg/L	94.76 mg/L	50 mL			
180-41935-A-1 DU	HD-COD-SW-6-0/1-0	SM 2320B	T	0 mg/L	96.82 mg/L	50 mL			
180-41935-A-2	HD-COD-SW-7-0/1-0	SM 2320B	T	0 mg/L	63.86 mg/L	50 mL			
180-41935-A-3	HD-COD-SW-8-0/1-0	SM 2320B	T	0 mg/L	67.98 mg/L	50 mL			
180-41935-A-4	HD-COD-SW-9-0/1-0	SM 2320B	T	0 mg/L	90.64 mg/L	50 mL			
180-41935-A-5	HD-COD-SW-10-0/1-0	SM 2320B	T	0 mg/L	175.1 mg/L	50 mL			
180-41935-A-6	HD-COD-SW-11-0/1-0	SM 2320B	T	0 mg/L	158.62 mg/L	50 mL			
180-41935-A-7	HD-COD-SW-12-0/1-0	SM 2320B	T	0 mg/L	164.8 mg/L	50 mL			
180-41935-A-8	HD-COD-SW-13-0/1-0	SM 2320B	T	0 mg/L	53.56 mg/L	50 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 136070 Batch Start Date: 03/21/15 05:33 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	pAlk	tAlk	FinalAmount	WALK125PPMCCV 00082	WALK250PPMPi 00091	
180-41935-A-9	HD-COD-SW-15-0/1 -0	SM 2320B	T	0 mg/L	199.82 mg/L	50 mL			
CCV 180-136070/13		SM 2320B		65.92 mg/L	131.84 mg/L	50 mL	50 mL		
CCB 180-136070/14		SM 2320B		0 mg/L	2.06 mg/L	50 mL			
180-41935-A-10	HD-COD-SW-16-0/1 -0	SM 2320B	T	0 mg/L	70.04 mg/L	50 mL			
180-41935-A-11	HD-COD-SW-17-0/1 -0	SM 2320B	T	0 mg/L	76.22 mg/L	50 mL			
180-41935-A-11 DU	HD-COD-SW-17-0/1 -0	SM 2320B	T	0 mg/L	76.22 mg/L	50 mL			
180-41935-A-12	HD-COD-SW-20-0/1 -0	SM 2320B	T	0 mg/L	90.64 mg/L	50 mL			
180-41935-A-13	HD-COD-SW-26-0/1 -0	SM 2320B	T	0 mg/L	72.1 mg/L	50 mL			
180-41935-A-14	HD-COD-SW-27-0/1 -0	SM 2320B	T	0 mg/L	63.86 mg/L	50 mL			
180-41935-A-15	HD-COD-SW-28-0/1 -0	SM 2320B	T	0 mg/L	94.76 mg/L	50 mL			
180-41935-A-16	HD-COD-SW-29-0/1 -0	SM 2320B	T	0 mg/L	88.58 mg/L	50 mL			
180-41935-A-17	HD-QC1-0/1-1	SM 2320B	T	0 mg/L	206 mg/L	50 mL			
CCV 180-136070/24		SM 2320B		67.98 mg/L	131.84 mg/L	50 mL	50 mL		
CCB 180-136070/25		SM 2320B		0 mg/L	2.06 mg/L	50 mL			

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GENERAL CHEMISTRY BATCH WORKSHEET

Lab Name: TestAmerica Pittsburgh Job No.: 180-41935-1

SDG No.:

Batch Number: 136070 Batch Start Date: 03/21/15 05:33 Batch Analyst: Loheyde, Cheryl

Batch Method: SM 2320B Batch End Date:

Batch Notes	
Batch Comment	PH 4 START: 4.02 PH 4 END: 4.05
pH Buffer 1 ID	1179927
pH Buffer 2 ID	1282792
pH Buffer 3 ID	1393069
pH Buffer 4 ID	1500550
pH Buffer 5 ID	1511948
Sulfuric Acid Lot Number	1504514
Sulfuric Acid Vendor	RICCA
Nominal Amount Used	50 mL
Normality of first Titrant	.0206 N

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

Do Not Lift Using This Tag

ORIGIN ID:KPDA (610) 337-9992
SAMPLE RECEIPT
TEST AMERICA
1008 WEST 9TH AVE

KING OF PRUSSIA, PA 19406
UNITED STATES US

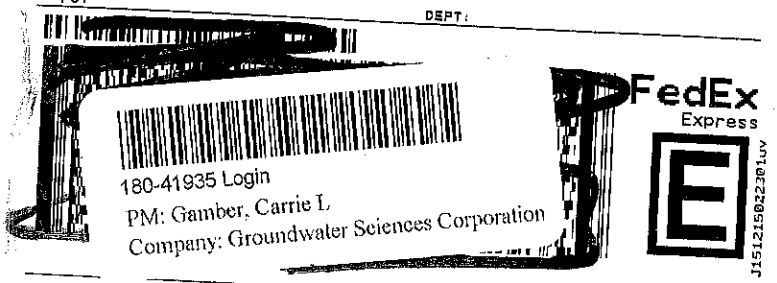
SHIP DATE: 10MAR15
ACTWGT: 61.0 LB
CAD: 8490299/INET3610

BILL RECIPIENT

TO SAMPLE RECEIPT
TEST AMERICA - PITTSBURGH
301 ALPHA DR

PITTSBURGH PA 15238
(412) 963-7058
INV:
PO: REF:
DEPT:

537J1/879A/EE48



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TRK# 0201 7730 9389 0881

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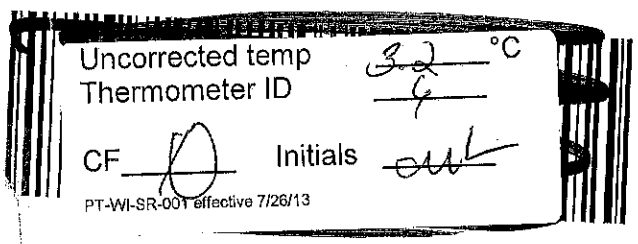

TestAmerica Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2470

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer S. Reese	Site Contact: Jennifer S. Reese	DateSubmitted: 3/10/15	COC No: TAP201503[illegible]
Groundwater Sciences Corporation	Tel/Fax: 717-901-8181 / (717) 657-1611	Lab Contact: Carrie Gamber	Carrier: FEDEX	1 of 2 COCs
2601 Market Place St. Suite 310	Analysis Turnaround Time			Job No. 10012[illegible]
Harrisburg, PA 17110	Calendar (C) or Work Days (W)			Container No. 1
(717) 901-8180 Phone	TAT if different from Below; Standard			SDG No.
(717) 657-1611 FAX	2 weeks			
Project Name: SPBA VI Water Sampling	1 week			
Site: Harley-Davidson, York PA	5 days			
Quote # 18000557	1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO4, Cl, NO3 2320B/300.0	Total Na, Ca, K, and Mg (SW846 6020A)	Sample Specific Notes:
HD-COD-SW-6-0/1-0	3/10/15	1125	GW	W	5	X	X	X	
HD-COD-SW-7-0/1-0	3/10/15	1225	GW	W	5	X	X	X	
HD-COD-SW-8-0/1-0	3/10/15	0850	GW	W	5	X	X	X	
HD-COD-SW-9-0/1-0	3/10/15	1250	GW	W	5	X	X	X	
HD-COD-SW-10-0/1-0	3/10/15	1005	GW	W	5	X	X	X	
HD-COD-SW-11-0/1-0	3/10/15	1315	GW	W	5	X	X	X	
HD-COD-SW-12-0/1-0	3/10/15	1340	GW	W	5	X	X	X	
HD-COD-SW-13-0/1-0	3/10/15	1015	GW	W	5	X	X	X	
HD-COD-SW-15-0/1-0	3/10/15	1400	GW	W	5	X	X	X	
HD-COD-SW-16-0/1-0	3/10/15	1040	GW	W	5	X	X	X	
HD-COD-SW-17-0/1-0	3/10/15	11:00	GW	W	5	X	X	X	
HD-COD-SW-17-0/1-0MS	3/10/15	1100	GW	W	5	X	X	X	
HD-COD-SW-17-0/1-0MSD	3/10/15	1100	GW	W	5	X	X	X	
HD-COD-SW-20-0/1-0	3/10/15	1130	GW	W	5	X	X	X	
HD-COD-SW-26-0/1-0	3/10/15	1155	GW	W	5	X	X	X	
HD-COD-SW-27-0/1-0	3/10/15	1410	GW	W	5	X	X	X	
Number of Containers						3	1	1	
Preservation Used: 1=Ice, 2=HCL, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Unpreserved, 7=Na2S2O3						2	1	4	
Field Filter						N	N	N	

Possible Hazard Identification
■ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments: **CLP Like Deliverables**

Relinquished by (Print and Sign):	Company: GSC	Date/Time: 3/10/15 1500	Received by:	Company: T.A.	Date/Time: 3/10/15 15:00
Relinquished by:	Company: TA	Date/Time: 3/10/15 1640	Received by:	Company: TA	Date/Time: 3/11/15 0950
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

TestAmerica Pittsburgh
301 Alpha Drive
Pittsburgh, PA 15238
phone 412.963.7058 fax 412.963.2470

Chain of Custody Record

TestAmerica — THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jennifer S. Reese	Site Contact: Jennifer S. Reese	DateSubmitted: 3/10/15	COC No: TAP20150310.02
Groundwater Sciences Corporation	Tel/Fax: 717-901-8181 / (717) 657-1611	Lab Contact: Carrie Gamber	Carrier: FEDEX	2 of 2 COCs
2601 Market Place St. Suite 310	Analysis Turnaround Time			Job No: 10012?6.0003
Harrisburg, PA 17110	Calendar (C) or Work Days (W)			
(717) 901-8180 Phone	TAT if different from Below: Standard			Container No. 1
(717) 657-1611 FAX	■ 2 weeks			SDG No.
Project Name: SFBA VI Water Sampling	☐ 1 week			
Site: Harley-Davidson, York PA	■ 5 days (WBF)			
Quote # 18000557	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	VOCs (8260C)	Alkalinity (Carb/Bicarb), SO4, CL, NO3 2320B/300.0	Total Na, Ca, K, and Mg (SW846 6020A)	Sample Specific Notes:
HD-COD-SW-28-0/1-0	3/10/15	1300	GW	W	5	X	X	X	
HD-COD-SW-29-0/1-0	3/10/15	0925	GW	W	5	X	X	X	
HD-QC1-0/1-1	3/10/15	0800	GW	W	5	X	X	X	
HD-QC1-0/1-2	3/10/15	1200	Tripblank	W	2	X			
Number of Containers						3	1	1	
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Unpreserved 7=Na2S2O3						2	1	4	
Field Filter						N	N	N	

Possible Hazard Identification
■ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For ____ Months*

Special Instructions/QC Requirements & Comments: **CLP Like Deliverables**

Relinquished by (Print and Sign):	Company: GSC	Date/Time: 3/10/15 1500	Received by:	Company: TA	Date/Time: 3/10/15 1500
Relinquished by:	Company: TA	Date/Time: 3/10/15 1640	Received by:	Company: TA PH	Date/Time: 3/11/15 0930
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Login Sample Receipt Checklist

Client: Groundwater Sciences Corporation

Job Number: 180-41935-1

Login Number: 41935

List Source: TestAmerica Pittsburgh

List Number: 1

Creator: Kovitch, Christina M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	