



11/01/11

Technical Report for

LT Environmental

Baseline Sampling

NEP 0605

Accutest Job Number: D28729

Sampling Date: 10/18/11


Report to:

LT Environmental
4600 West 60th Avenue
Arvada, CO 80003
bforkner@ltenv.com; skahn@ltenv.com;
jevans@ltenv.com
ATTN: Brett Forkner

Total number of pages in report: **62**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

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Test results relate only to samples analyzed.

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Sample Summary

LT Environmental

Job No: D28729

Baseline Sampling
Project No: NEP 0605

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
D28729-1	10/18/11	16:57 BS	10/19/11	AQ	Ground Water	HELLING 83508
D28729-1F	10/18/11	16:57 BS	10/19/11	AQ	Groundwater Filtered	HELLING 83508

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: LT Environmental

Job No D28729

Site: Strear 03-73 HN (Noble)

Report Dat 11/1/2011 3:48:01 PM

On 10/19/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 3.9 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D28729 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ

Batch ID: V7V519

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28769-1MS, D28769-1MSD were used as the QC samples indicated.

Volatiles by GC By Method RSK175 MOD

Matrix AQ

Batch ID: GFB174

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28809-1MS, D28809-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP6082

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28769-1MS, D28769-1MSD were used as the QC samples for the metals analysis.
- The matrix spike duplicate (MSD) recovery(s) of Potassium are outside control limits. Probable cause due to matrix interference.
- The matrix spike (MS) recovery(s) of Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Metals By Method SW846 6020

Matrix AQ

Batch ID: MP6066

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28740-1MS, D28740-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ

Batch ID: GP5735

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28694-1MS, D28694-1MSD were used as the QC samples for the anions analysis.
- D28729-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D28729-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2320B

Matrix AQ

Batch ID: GN12169

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28680-4DUP, D28680-4MS, D28680-4MSD were used as the QC samples for the Alkalinity, Total as CaCO₃ analysis.
- The matrix spike duplicate (MSD) recovery(s) of Alkalinity, Total as CaCO₃ are outside control limits. Probable cause due to matrix interference.

Matrix AQ

Batch ID: GN12171

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix AQ

Batch ID: GN12172

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM20 2510B

Matrix AQ

Batch ID: GP5760

- Sample(s) D28693-1DUP were used as the QC samples for the Specific Conductivity analysis.

Wet Chemistry By Method SM20 2540C

Matrix AQ

Batch ID: GN12100

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28729-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

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Client Sample ID:	HELLING 83508	Date Sampled:	10/18/11
Lab Sample ID:	D28729-1	Date Received:	10/19/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	Baseline Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	7V09764.D	1	10/22/11	BR	n/a	n/a	V7V519
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	4.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		67-131%
2037-26-5	Toluene-D8	102%		65-130%
460-00-4	4-Bromofluorobenzene	86%		65-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	HELLING 83508	Date Sampled:	10/18/11
Lab Sample ID:	D28729-1	Date Received:	10/19/11
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	RSK175 MOD		
Project:	Baseline Sampling		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FB05054.D	1	10/24/11	CS	n/a	n/a	GFB174
Run #2							

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	0.00197	0.00080	0.00080	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
74-98-6	Propane	98%		70-130%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: HELLING 83508
Lab Sample ID: D28729-1
Matrix: AQ - Ground Water
Project: Baseline Sampling

Date Sampled: 10/18/11
Date Received: 10/19/11
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	364	5.0	mg/l	1	10/25/11	JK	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	10/25/11	JK	SM20 2320B
Alkalinity, Total as CaCO ₃	364	5.0	mg/l	1	10/25/11	JK	SM20 2320B
Chloride	21.3	1.0	mg/l	2	10/19/11 14:45	JML	EPA 300/SW846 9056
Nitrogen, Nitrate ^a	< 0.090	0.090	mg/l	2	10/19/11 14:45	JML	EPA 300/SW846 9056
Nitrogen, Nitrite ^a	< 0.12	0.12	mg/l	2	10/19/11 14:45	JML	EPA 300/SW846 9056
Solids, Total Dissolved	812	10	mg/l	1	10/20/11	JD	SM20 2540C
Specific Conductivity	1110	1.0	umhos/cm	1	10/24/11	CJ	SM20 2510B
Sulfate	279	10	mg/l	20	10/19/11 16:51	JML	EPA 300/SW846 9056
pH	7.22		su	1	10/19/11	JD	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	HELLING 83508	Date Sampled:	10/18/11
Lab Sample ID:	D28729-1F	Date Received:	10/19/11
Matrix:	AQ - Groundwater Filtered	Percent Solids:	n/a
Project:	Baseline Sampling		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	41900	400	ug/l	1	10/21/11	10/21/11 JB	SW846 6010B ¹	SW846 3010A ⁵
Iron	198	70	ug/l	1	10/21/11	10/21/11 JB	SW846 6010B ¹	SW846 3010A ⁵
Magnesium	21700	200	ug/l	1	10/21/11	10/21/11 JB	SW846 6010B ¹	SW846 3010A ⁵
Manganese	95.6	5.0	ug/l	1	10/21/11	10/21/11 JB	SW846 6010B ¹	SW846 3010A ⁵
Potassium	3850	1000	ug/l	1	10/21/11	10/24/11 JB	SW846 6010B ²	SW846 3010A ⁵
Selenium	< 0.0020	0.0020	mg/l	5	10/21/11	10/28/11 GJ	SW846 6020 ³	SW846 3010A ⁴
Sodium	225000	400	ug/l	1	10/21/11	10/24/11 JB	SW846 6010B ²	SW846 3010A ⁵

(1) Instrument QC Batch: MA1912

(2) Instrument QC Batch: MA1915

(3) Instrument QC Batch: MA1928

(4) Prep QC Batch: MP6066

(5) Prep QC Batch: MP6082

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

4036 Youngfield Street, Wheat Ridge, CO 80033
 TEL: 303-425-6021 FAX: 303-425-6854
 www.accutest.com

FED-EX Tracking #	Bottle Order Control #
Accutest Quote #	Accutest Job # D28729

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)												Matrix Codes	
Company Name LT Environmental		Project Name: Baseline Sampling															
Street Address 4800 West 60th Ave		Street															
City Denver		City CO															
Project Contact bforkner@ltenv.com		Project # NEP 0605															
Phone # 303-962-5538		Client Purchase Order #															
Sample(s) Name(s) Brian Christopher		Project Manager Brett Forkner															
Field ID / Point of Collection Holling 83508		MECH/DI/Vial #															
Date 10/18/11		Time 1657															
Matrix BC GW		# of bottles 16															
HCl		NaOH															
HNO3		H2SO4															
NONE		On Water															
MECH		ENCORE															
Dissolved Metals (SW 610/6020)		Anions 300.1															
TDS (Method 2540C)		pH (SM 4500-HB)															
Specific Conductance (Method 2510B)		Alkalinity (HC3 & CO3) (Method 2320B)															
NO3 as N, NO2 as N (EPA 300.0)		Dissolved Methane (RSK 175)															
BTEX (Method 8260E)																	
LAB USE ONLY																	
Turnaround Time (Business days)		Approved By (Accutest PM): / Date:															
<input type="checkbox"/> Std. 15 Business Days <input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day Emergency <input type="checkbox"/> 2 Day Emergency <input type="checkbox"/> 1 Day Emergency		<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> COMMEN <input type="checkbox"/> COMMEN+ <input type="checkbox"/> Commercial "A" = Results Only <input type="checkbox"/> Commercial "B" = Results + QC Summary <input type="checkbox"/> Commercial BN = Results/QC/Narrative (+ = chromatograms)		<input type="checkbox"/> State Forms Required <input type="checkbox"/> Send Forms to State <input type="checkbox"/> Report by Fax <input checked="" type="checkbox"/> Report by PDF <input checked="" type="checkbox"/> EDD Format												Metals - calcium, iron, magnesium, manganese, potassium, selenium, sodium Anions - Chloride, Sulfate	
Emergency & Rush T/A data available VIA Lablink		Sample Custody must be documented below each time samples change possession, including courier delivery.															
Relinquished By: 1		Date Time: 10/19/11 0810															
Relinquished By: 3		Date Time:															
Relinquished By: 5		Date Time:															
Custody Seal # FedEx		Preserved where applicable															
On Ice <input checked="" type="checkbox"/>		Cooler Temp. 3.9															

D28729: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D28729

Client: LTE

Immediate Client Services Action Required: No

Date / Time Received: 10/19/2011 12:42:00 P

No. Coolers: 1

Client Service Action Required at Login: No

Project: BASELINE SAMPLING

Airbill #'s: Fedex

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Cooler temp verification:			Infrared gun
3. Cooler media:			Ice (bag)

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:			Intact

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume rec'd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

GC/MS Volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D28729**Account:** LTENCODE LT Environmental**Project:** Baseline Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V519-MB	7V09750.D	1	10/22/11	BR	n/a	n/a	V7V519

The QC reported here applies to the following samples:**Method:** SW846 8260B

D28729-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.25	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	4.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Limits
17060-07-0	1,2-Dichloroethane-D4	92% 67-131%
2037-26-5	Toluene-D8	102% 65-130%
460-00-4	4-Bromofluorobenzene	88% 65-130%

Blank Spike Summary

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Job Number: D28729

Account: LTENCODE LT Environmental

Project: Baseline Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V7V519-BS	7V09751.D	1	10/22/11	BR	n/a	n/a	V7V519

The QC reported here applies to the following samples:

Method: SW846 8260B

D28729-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	47.1	94	70-130
100-41-4	Ethylbenzene	50	48.5	97	70-130
108-88-3	Toluene	50	48.9	98	70-130
1330-20-7	Xylene (total)	150	146	97	56-138

CAS No.	Surrogate Recoveries	BSP	Limits
17060-07-0	1,2-Dichloroethane-D4	89%	67-131%
2037-26-5	Toluene-D8	101%	65-130%
460-00-4	4-Bromofluorobenzene	100%	65-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D28729

Account: LTENCODE LT Environmental

Project: Baseline Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D28769-1MS	7V09755.D	100	10/22/11	BR	n/a	n/a	V7V519
D28769-1MSD	7V09756.D	100	10/22/11	BR	n/a	n/a	V7V519
D28769-1	7V09754.D	50	10/22/11	BR	n/a	n/a	V7V519

The QC reported here applies to the following samples:

Method: SW846 8260B

D28729-1

CAS No.	Compound	D28769-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	5680	5000	10400	94	10800	102	4	61-133/30
100-41-4	Ethylbenzene	176	5000	4860	94	5050	97	4	70-130/30
108-88-3	Toluene	8340	5000	12500	83	12900	91	3	70-130/30
1330-20-7	Xylene (total)	4420	15000	18500	94	19400	100	5	56-138/30

CAS No.	Surrogate Recoveries	MS	MSD	D28769-1	Limits
17060-07-0	1,2-Dichloroethane-D4	93%	97%	92%	67-131%
2037-26-5	Toluene-D8	94%	95%	100%	65-130%
460-00-4	4-Bromofluorobenzene	94%	100%	89%	65-130%

GC/MS Volatiles

Raw Data



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V7102211.S\
Data File : 7V09764.D
Acq On : 22 Oct 2011 4:51 pm
Operator : BrianR
Sample : D28729-1
Misc : MS2856,V7V519,,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 25 09:43:25 2011
Quant Method : C:\MSDCHEM\1\METHODS\V7hsl518tvh518water.m
Quant Title : 8260
QLast Update : Sat Oct 22 14:18:36 2011
Response via : Initial Calibration

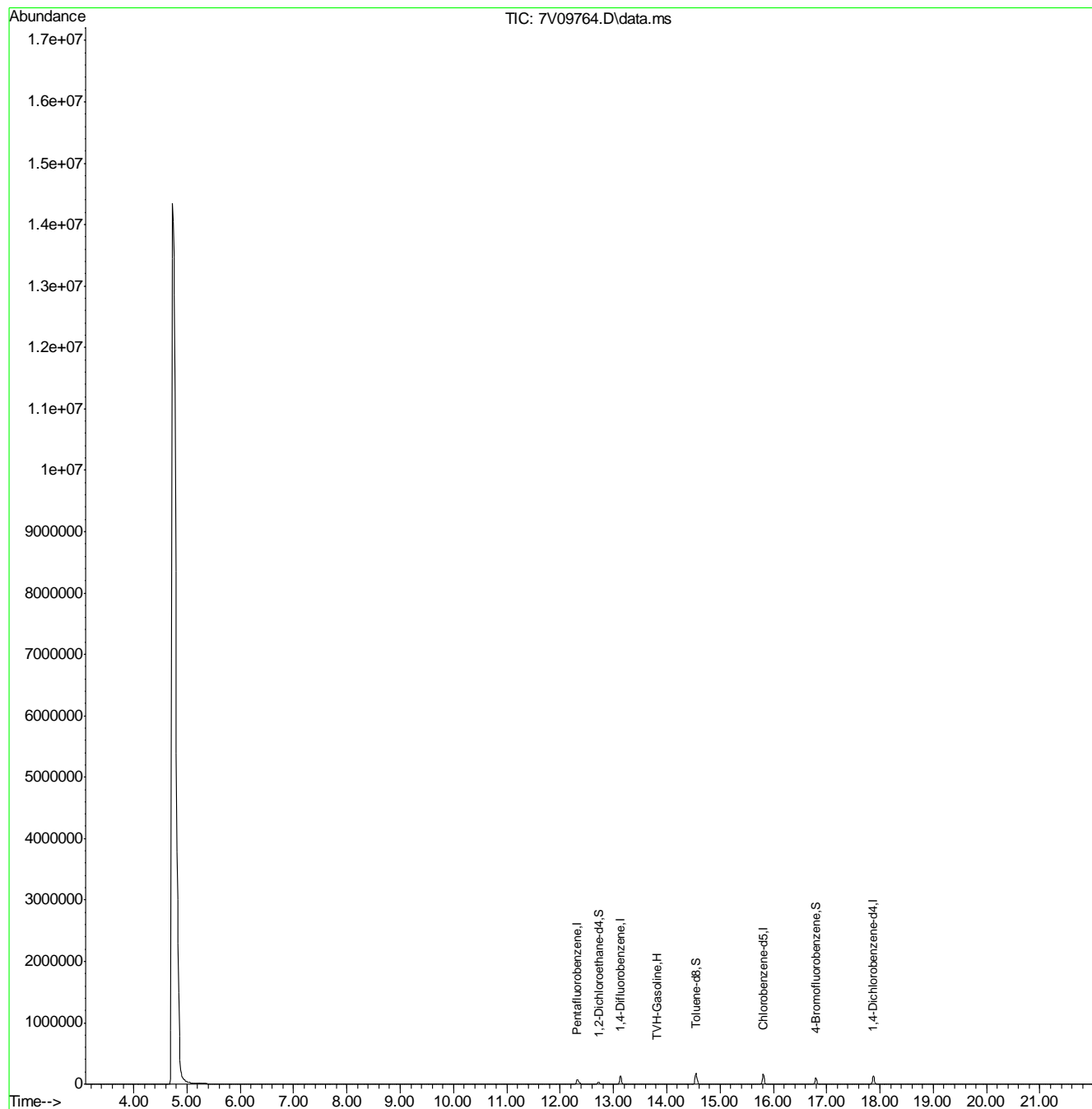
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
2) Pentafluorobenzene	12.322	168	96560	50.00	ug/l	0.00
31) 1,4-Difluorobenzene	13.133	114	145220	50.00	ug/l	0.01
48) Chlorobenzene-d5	15.808	117	126499	50.00	ug/l	0.00
63) 1,4-Dichlorobenzene-d4	17.877	152	50719	50.00	ug/l	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	12.722	102	5551	47.29	ug/l	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	94.58%	
55) Toluene-d8	14.551	98	155333	50.93	ug/l	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	101.86%	
59) 4-Bromofluorobenzene	16.791	95	42683	42.94	ug/l	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	85.88%	
Target Compounds						
1) TVH-Gasoline	13.819	TIC	50411m	8.57	ug/l	Qvalue

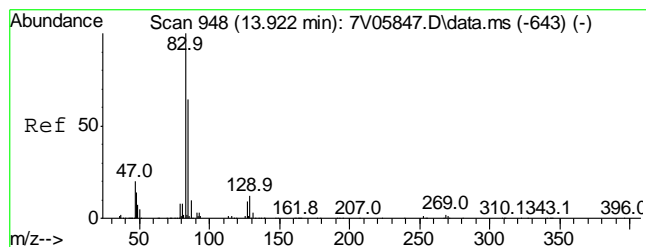
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V7102211.S\
Data File : 7V09764.D
Acq On : 22 Oct 2011 4:51 pm
Operator : BrianR
Sample : D28729-1
Misc : MS2856,V7V519,,,,,1
ALS Vial : 17 Sample Multiplier: 1

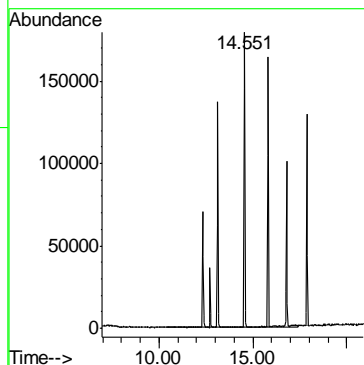
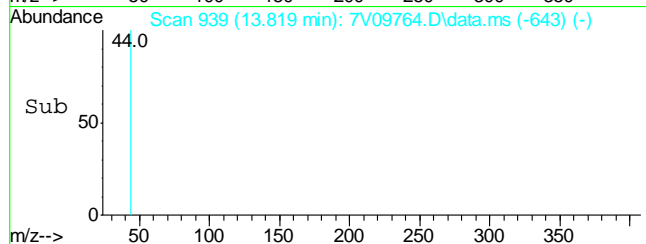
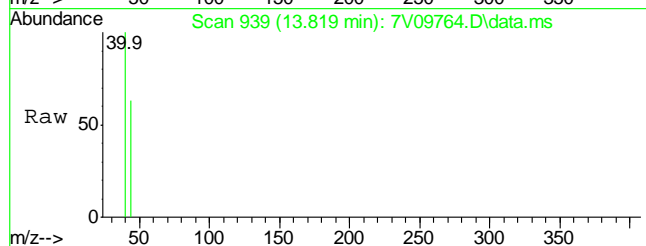
Quant Time: Oct 25 09:43:25 2011
Quant Method : C:\MSDCHEM\1\METHODS\V7hs1518tvh518water.m
Quant Title : 8260
QLast Update : Sat Oct 22 14:18:36 2011
Response via : Initial Calibration





#1
TVH-Gasoline
Concen: 8.57 ug/l m
RT: 13.819 min Scan# 939
Delta R.T. 0.000 min
Lab File: 7V09764.D
Acq: 22 Oct 2011 4:51 pm

Tgt Ion:TIC Resp: 50411



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V7102211.S\
Data File : 7V09750.D
Acq On : 22 Oct 2011 9:09 am
Operator : BrianR
Sample : MB
Misc : MS2856,V7V519,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 25 09:10:44 2011
Quant Method : C:\MSDCHEM\1\METHODS\V7hsl518tvh518water.m
Quant Title : 8260
QLast Update : Sat Oct 22 14:18:36 2011
Response via : Initial Calibration

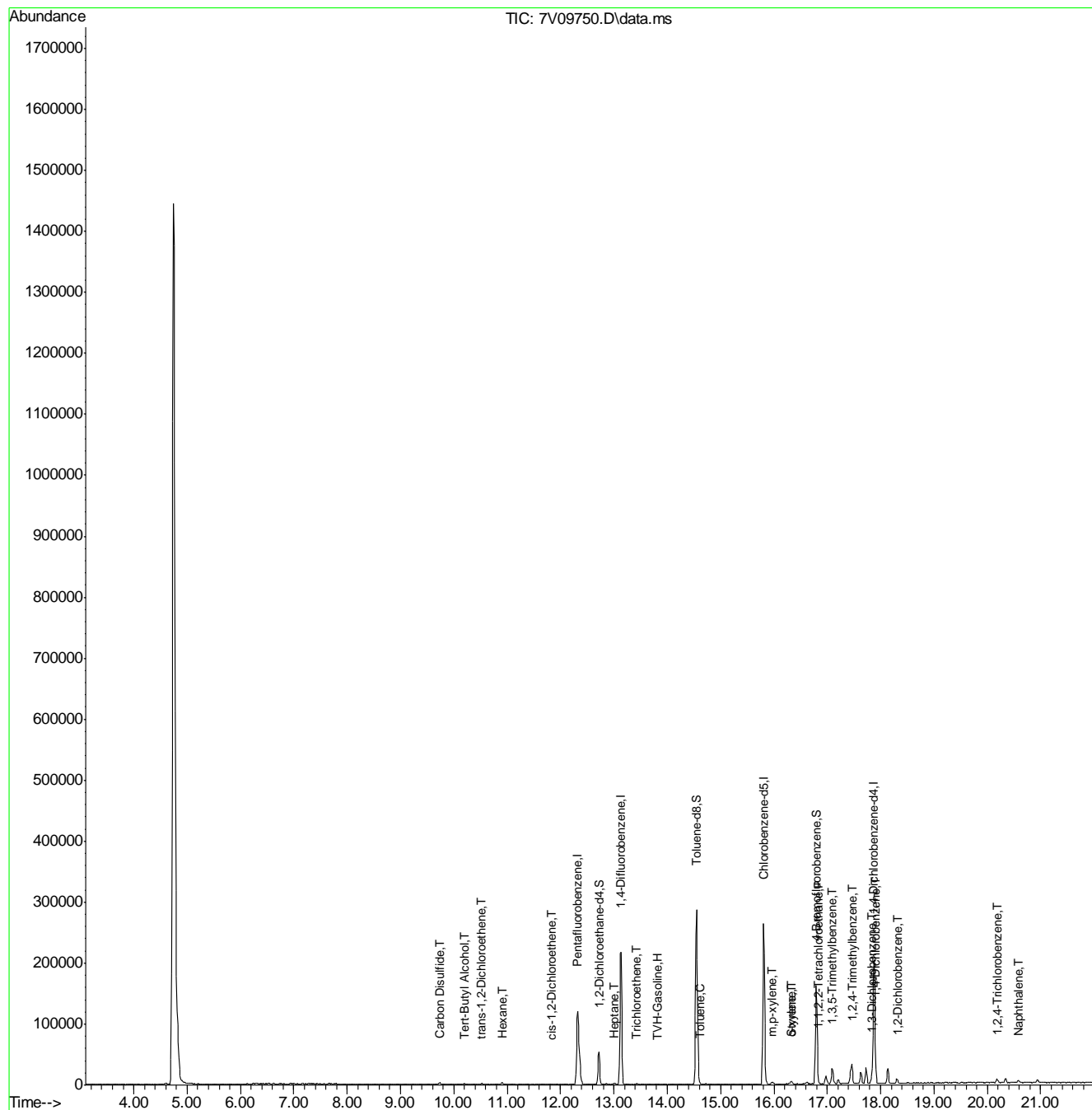
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
2) Pentafluorobenzene	12.322	168	161805	50.00	ug/l	0.00
31) 1,4-Difluorobenzene	13.134	114	241523	50.00	ug/l	0.01
48) Chlorobenzene-d5	15.808	117	204918	50.00	ug/l	0.00
63) 1,4-Dichlorobenzene-d4	17.877	152	83547	50.00	ug/l	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	12.722	102	9082	46.17	ug/l	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	92.34%	
55) Toluene-d8	14.551	98	251906	50.99	ug/l	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	101.98%	
59) 4-Bromofluorobenzene	16.791	95	70772	43.95	ug/l	0.00
Spiked Amount	50.000	Range 70 - 130	Recovery	=	87.90%	
Target Compounds						
1) TVH-Gasoline	13.819	TIC	220474m	37.48	ug/l	Qvalue
17) Carbon Disulfide	9.739	76	6311	1.13	ug/l #	91
18) Tert-Butyl Alcohol	10.196	59	2097	48.92	ug/l #	72
21) trans-1,2-Dichloroethene	10.516	96	1205	0.77	ug/l #	80
24) cis-1,2-Dichloroethene	11.831	96	604	0.38	ug/l #	64
37) Hexane	10.905	57	2083	0.67	ug/l	100
39) Heptane	13.008	43	2309	0.53	ug/l #	72
43) Trichloroethene	13.431	95	676	0.41	ug/l #	74
56) Toluene	14.608	92	910	0.25	ug/l	99
60) Styrene	16.323	104	2605	0.63	ug/l #	68
61) m,p-xylene	15.968	106	2176	0.73	ug/l #	81
62) o-xylene	16.334	106	1035	0.37	ug/l	86
64) 1,1,2,2-Tetrachloroethane	16.826	83	230	0.47	ug/l #	77
65) 1,3,5-Trimethylbenzene	17.088	105	20556	5.10	ug/l	99
66) 1,2,4-Trimethylbenzene	17.466	105	23129	6.69	ug/l #	85
67) 1,3-Dichlorobenzene	17.831	146	6667	2.36	ug/l	95
68) 1,4-Dichlorobenzene	17.900	146	6871	2.67	ug/l	92
69) 1,2-Dichlorobenzene	18.311	146	5492	2.59	ug/l	97
71) 1,2,4-Trichlorobenzene	20.186	180	4628	7.14	ug/l	91
72) Naphthalene	20.586	128	6675	6.83	ug/l	100

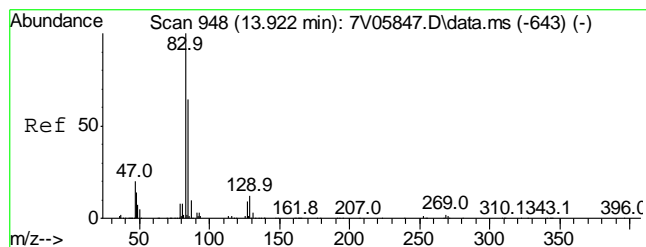
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\V7102211.S\
Data File : 7V09750.D
Acq On : 22 Oct 2011 9:09 am
Operator : BrianR
Sample : MB
Misc : MS2856,V7V519,,,,,1
ALS Vial : 3 Sample Multiplier: 1

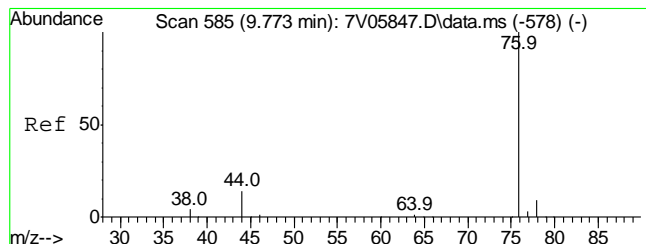
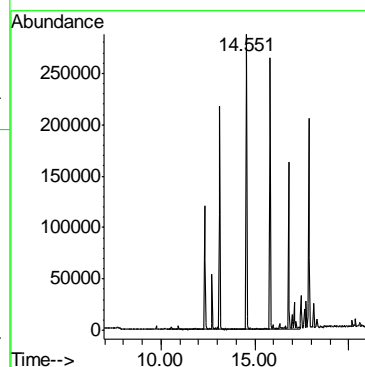
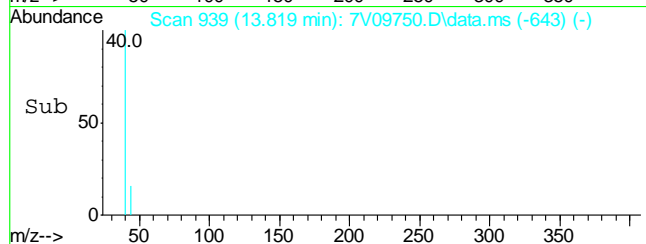
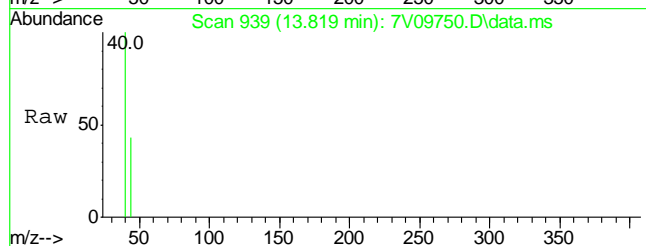
Quant Time: Oct 25 09:10:44 2011
Quant Method : C:\MSDCHEM\1\METHODS\V7hs1518tvh518water.m
Quant Title : 8260
QLast Update : Sat Oct 22 14:18:36 2011
Response via : Initial Calibration





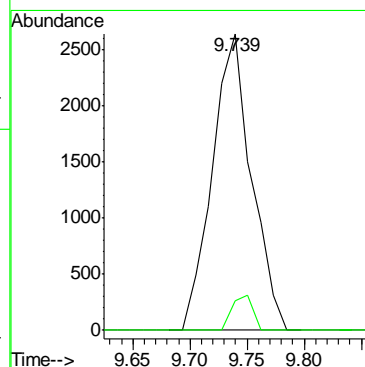
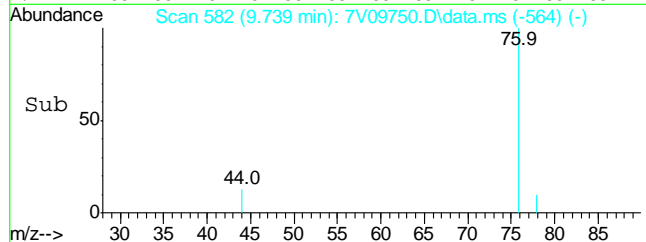
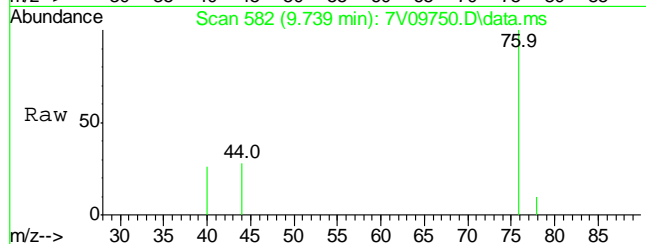
#1
TVH-Gasoline
Concen: 37.48 ug/l m
RT: 13.819 min Scan# 939
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

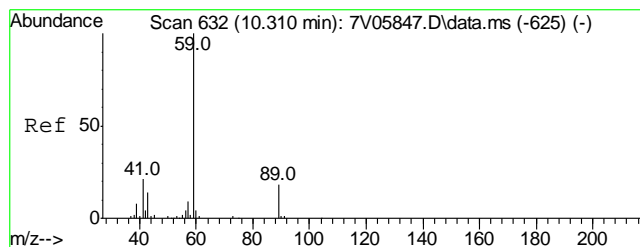
Tgt Ion:TIC Resp: 220474



#17
Carbon Disulfide
Concen: 1.13 ug/l
RT: 9.739 min Scan# 582
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

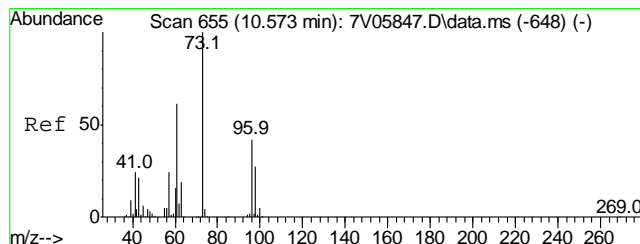
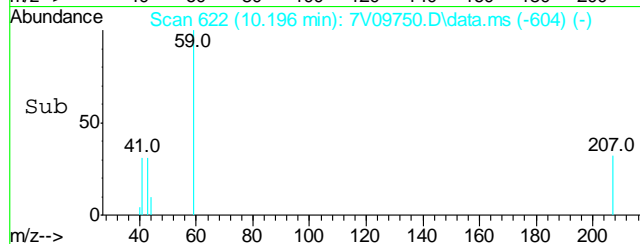
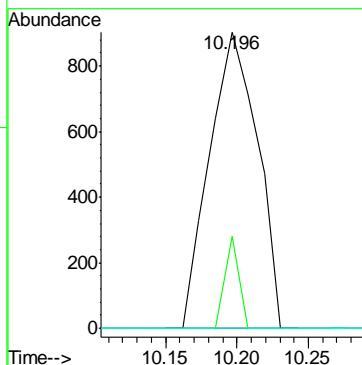
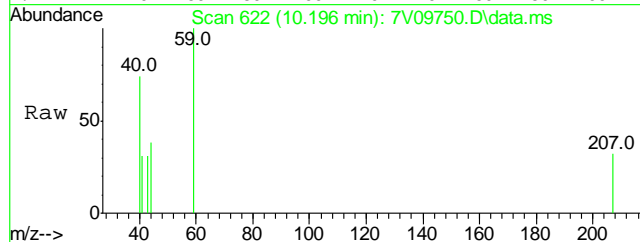
Tgt Ion: 76 Resp: 6311
Ion Ratio Lower Upper
76 100
78 6.3 7.8 11.6#





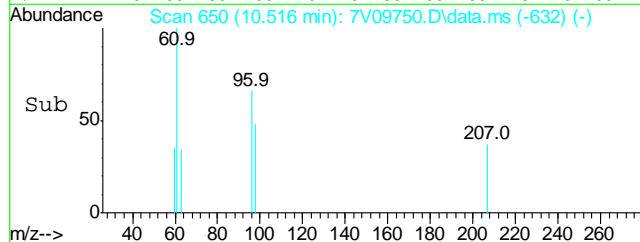
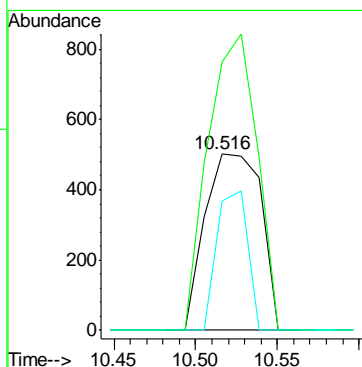
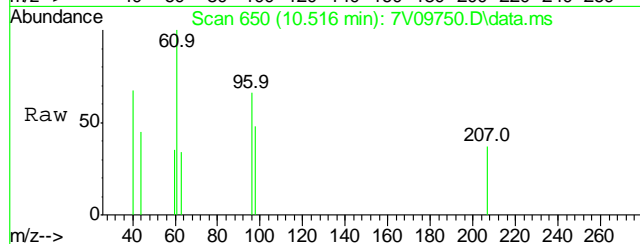
#18
Tert-Butyl Alcohol
Concen: 48.92 ug/l
RT: 10.196 min Scan# 622
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

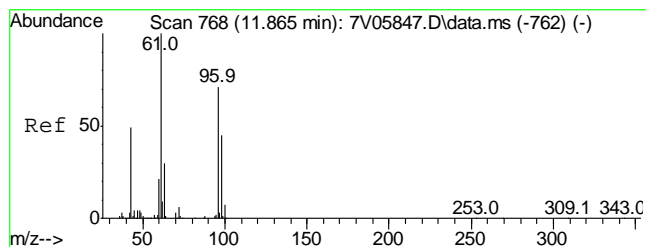
Tgt Ion	Ratio	Lower	Upper
59	100		
41	9.2	17.7	26.5#
57	0.0	8.6	13.0#



#21
trans-1,2-Dichloroethene
Concen: 0.77 ug/l
RT: 10.516 min Scan# 650
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

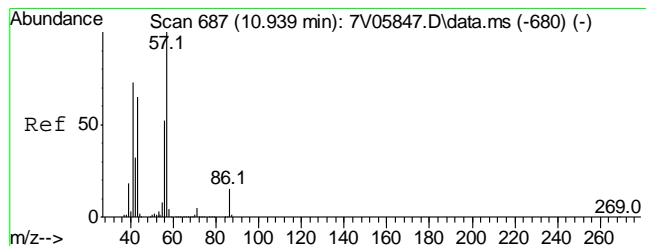
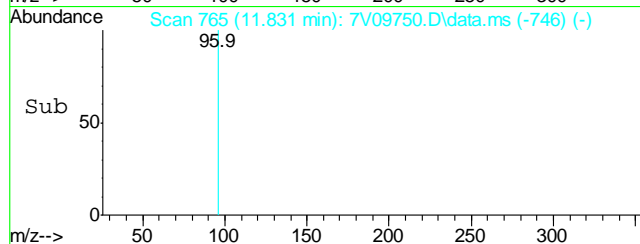
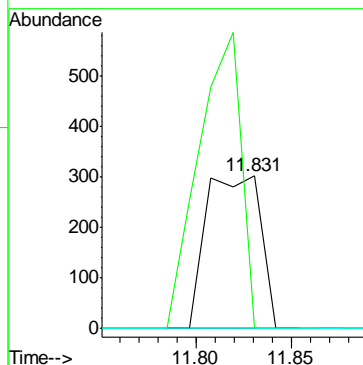
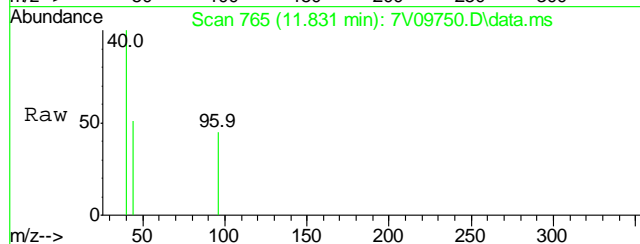
Tgt Ion	Ratio	Lower	Upper
96	100		
61	146.8	152.6	192.6#
98	43.6	42.7	82.7





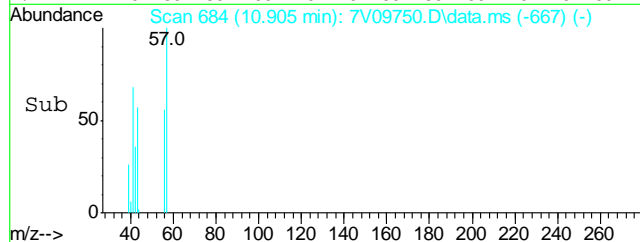
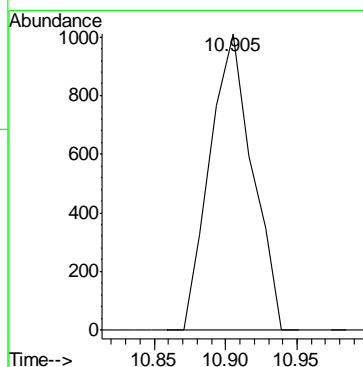
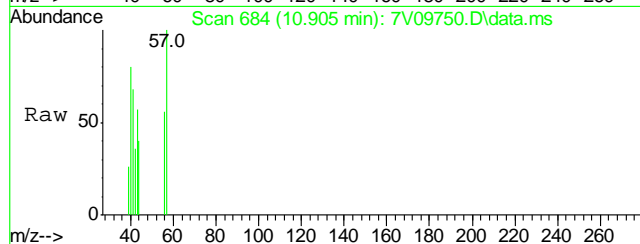
#24
cis-1,2-Dichloroethene
Concen: 0.38 ug/l
RT: 11.831 min Scan# 765
Delta R.T. 0.012 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

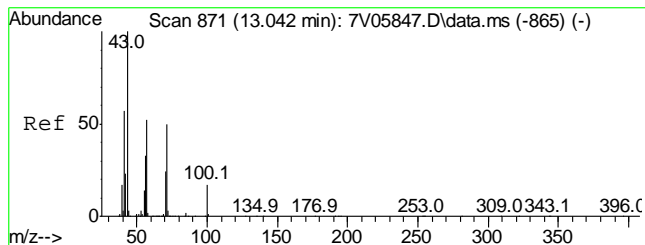
Tgt Ion:	96	Resp:	604
Ion Ratio	Lower	Upper	
96	100		
61	149.8	158.3	198.3#
98	0.0	43.3	83.3#



#37
Hexane
Concen: 0.67 ug/l
RT: 10.905 min Scan# 684
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

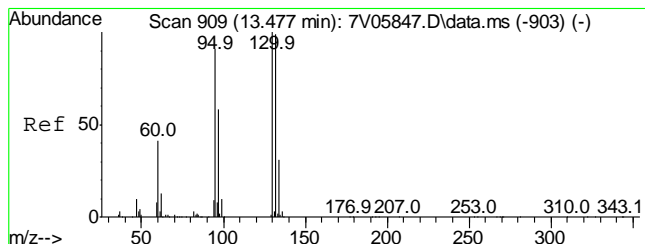
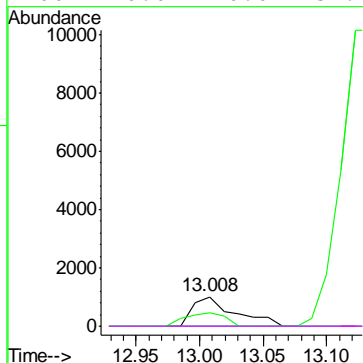
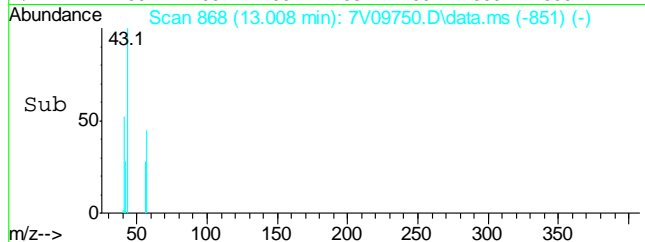
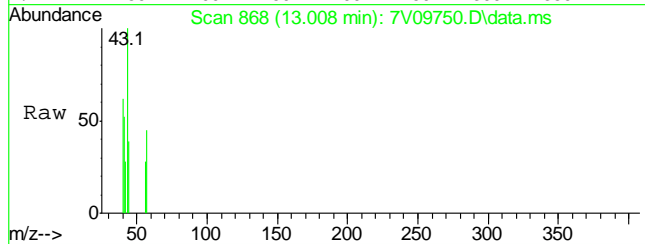
Tgt Ion: 57 Resp: 2083





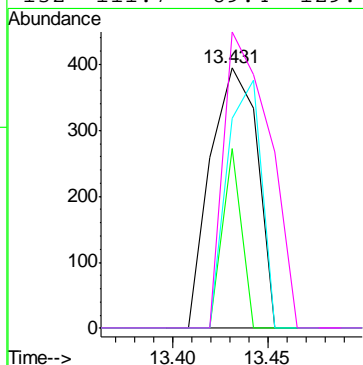
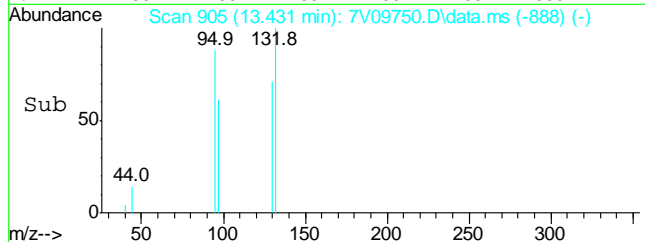
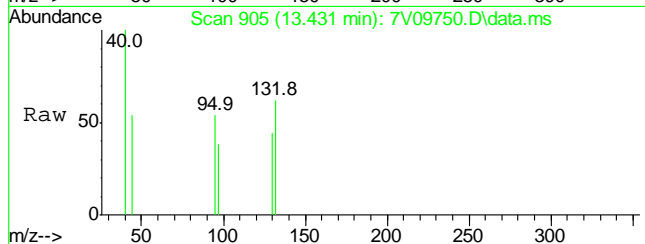
#39
Heptane
Concen: 0.53 ug/l
RT: 13.008 min Scan# 868
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

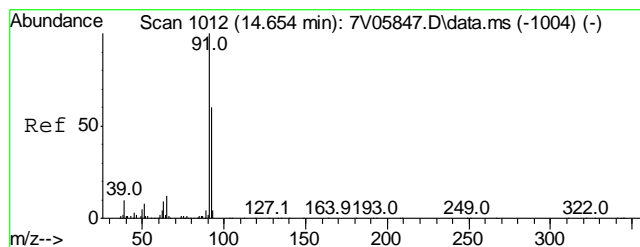
Tgt Ion: 43 Resp: 2309
Ion Ratio Lower Upper
43 100
57 43.7 24.3 64.3
71 0.0 15.5 55.5#
100 0.0 0.0 32.1



#43
Trichloroethene
Concen: 0.41 ug/l
RT: 13.431 min Scan# 905
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

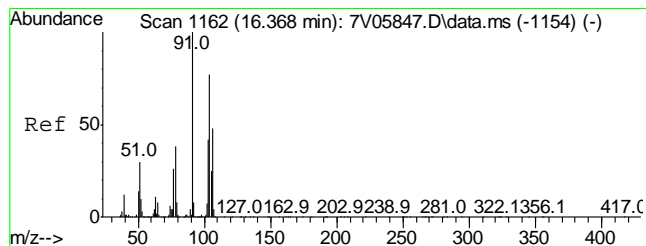
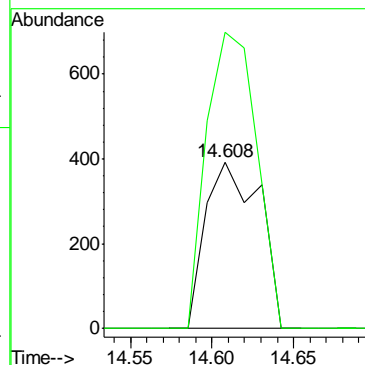
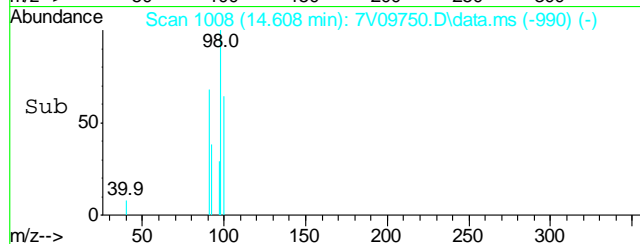
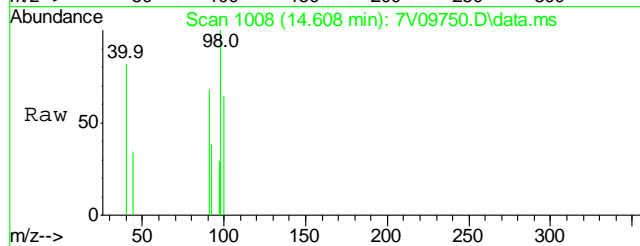
Tgt Ion: 95 Resp: 676
Ion Ratio Lower Upper
95 100
97 27.7 45.4 85.4#
130 70.6 89.8 129.8#
132 111.7 89.4 129.4





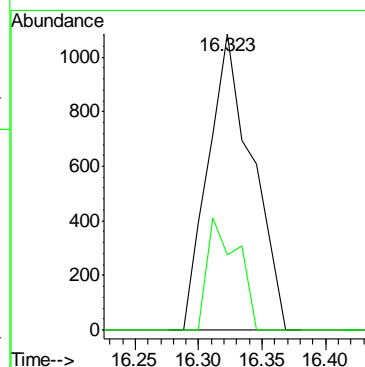
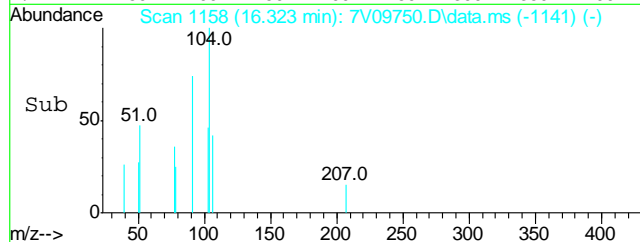
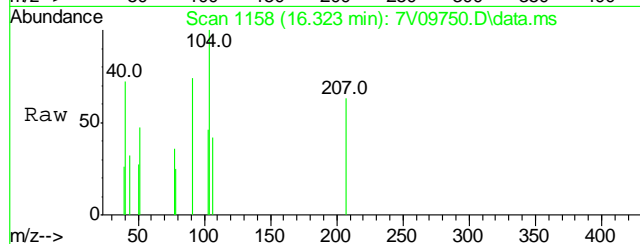
#56
Toluene
Concen: 0.25 ug/l
RT: 14.608 min Scan# 1008
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

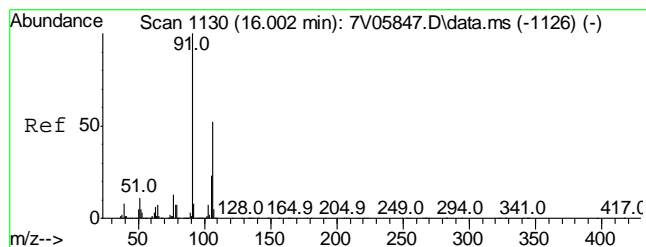
Tgt Ion: 92 Resp: 910
Ion Ratio Lower Upper
92 100
91 165.2 145.9 185.9



#60
Styrene
Concen: 0.63 ug/l
RT: 16.323 min Scan# 1158
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

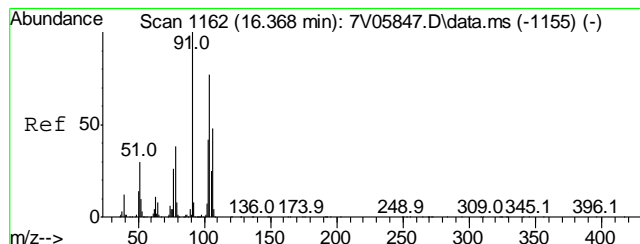
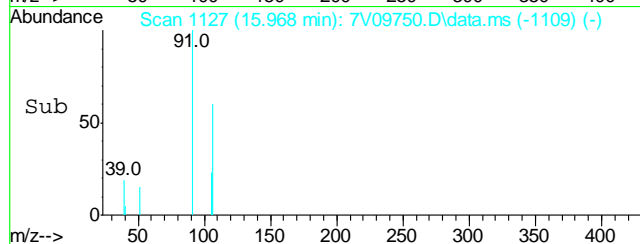
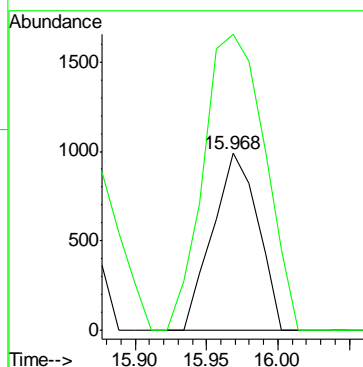
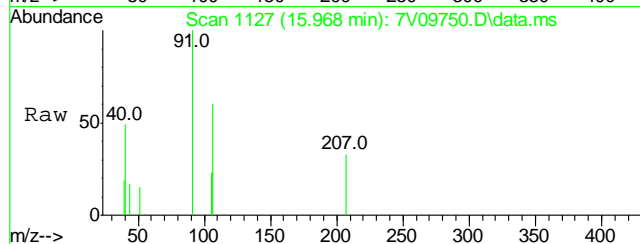
Tgt Ion: 104 Resp: 2605
Ion Ratio Lower Upper
104 100
78 26.1 27.6 67.6#





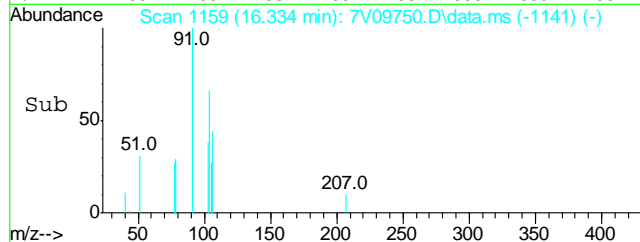
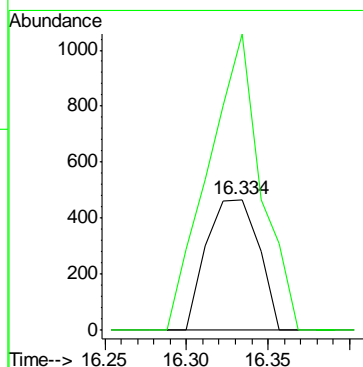
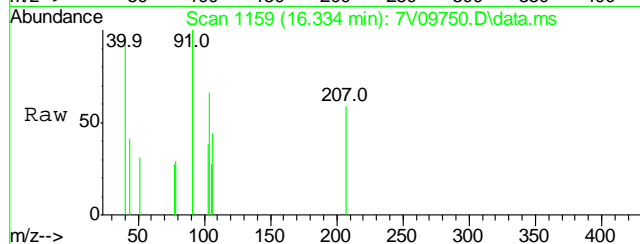
#61
m,p-xylene
Concen: 0.73 ug/l
RT: 15.968 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

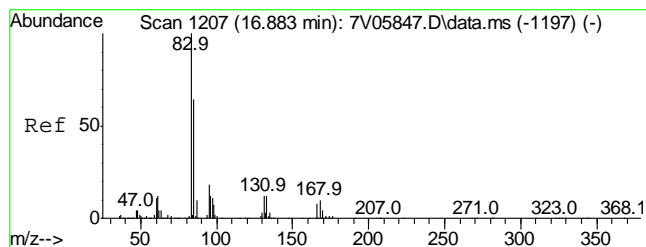
Tgt Ion	Ratio	Lower	Upper
106	100		
91	225.8	177.6	217.6#



#62
o-xylene
Concen: 0.37 ug/l
RT: 16.334 min Scan# 1159
Delta R.T. 0.011 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

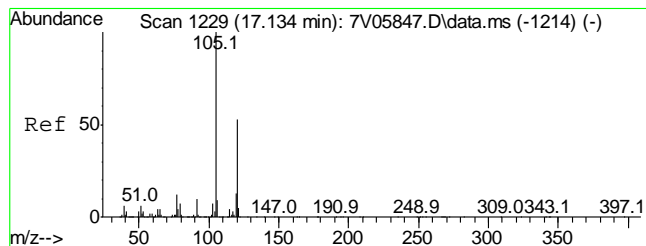
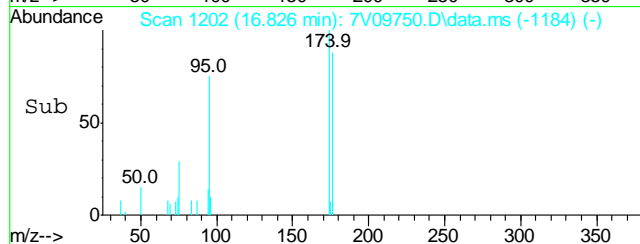
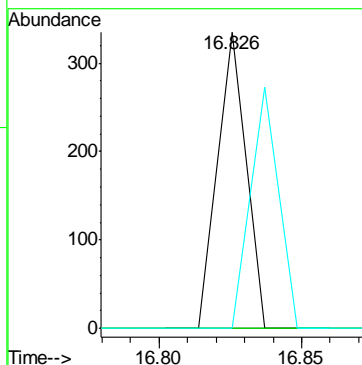
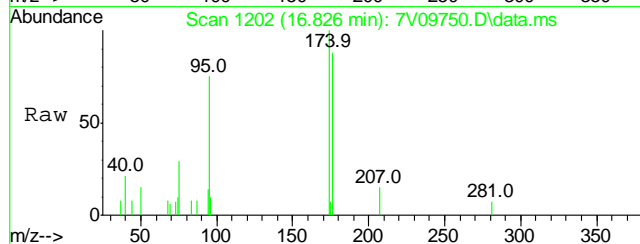
Tgt Ion	Ratio	Lower	Upper
106	100		
91	228.8	165.2	247.8





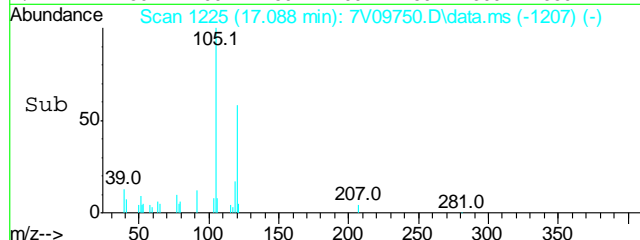
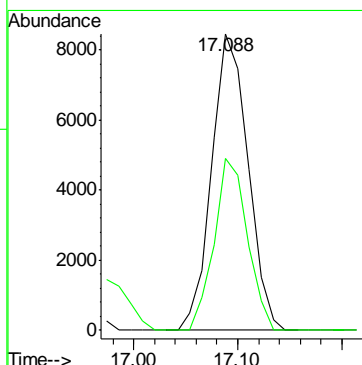
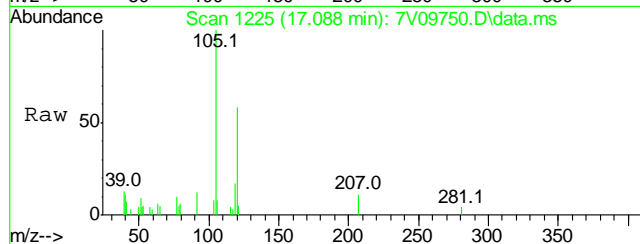
#64
1,1,2,2-Tetrachloroethane
Concen: 0.47 ug/l
RT: 16.826 min Scan# 1202
Delta R.T. 0.001 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

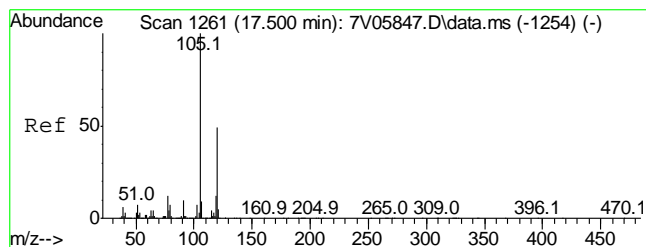
Tgt Ion:	83	Resp:	230
Ion Ratio	Lower	Upper	
83	100		
131	0.0	8.8	13.2#
85	81.3	51.0	76.6#



#65
1,3,5-Trimethylbenzene
Concen: 5.10 ug/l
RT: 17.088 min Scan# 1225
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

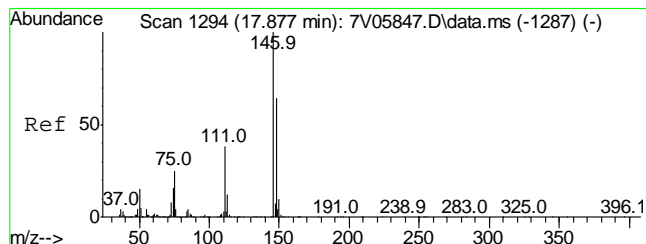
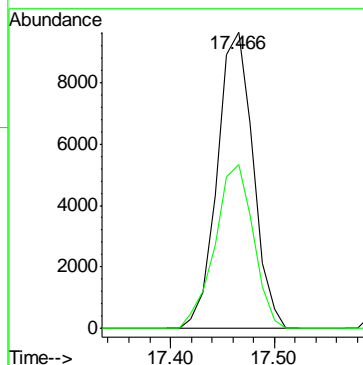
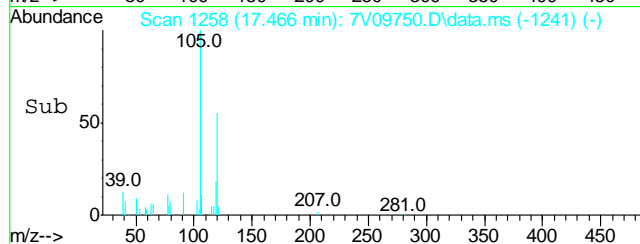
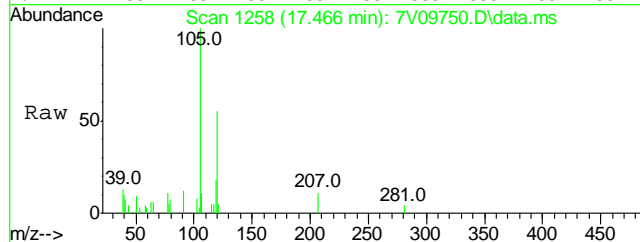
Tgt Ion:	105	Resp:	20556
Ion Ratio	Lower	Upper	
105	100		
120	53.0	42.0	63.0





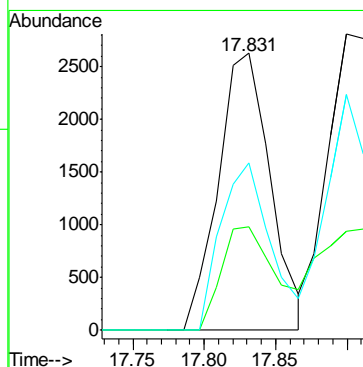
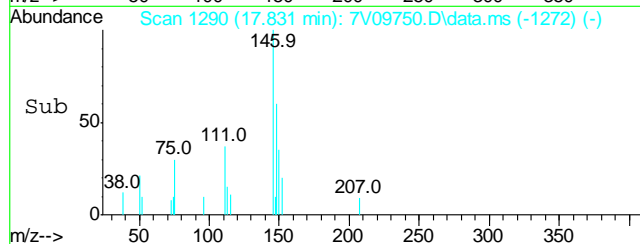
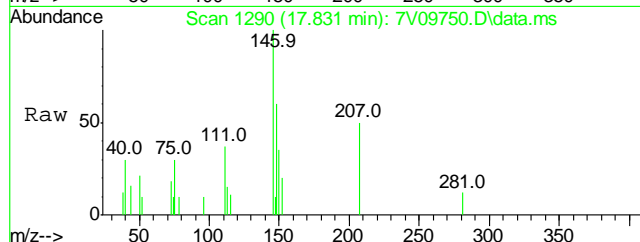
#66
1,2,4-Trimethylbenzene
Concen: 6.69 ug/l
RT: 17.466 min Scan# 1258
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

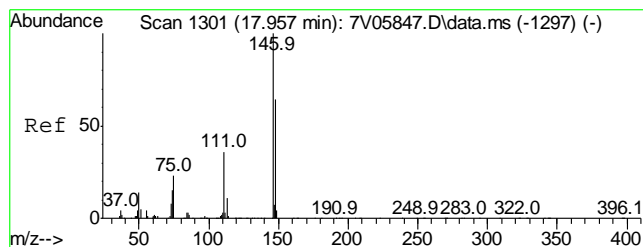
Tgt Ion:	105	Resp:	23129
Ion Ratio	Lower	Upper	
105	100		
120	59.1	39.1	58.7#



#67
1,3-Dichlorobenzene
Concen: 2.36 ug/l
RT: 17.831 min Scan# 1290
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

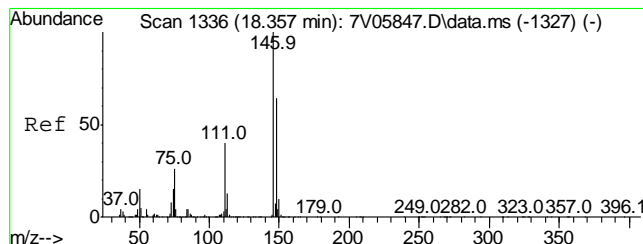
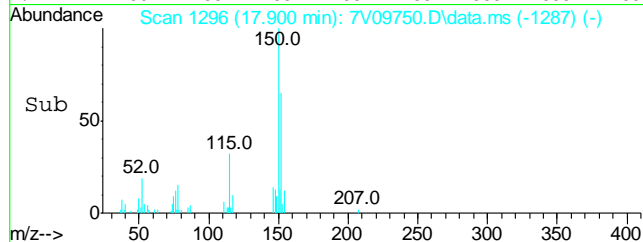
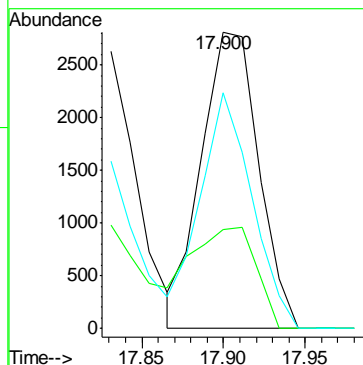
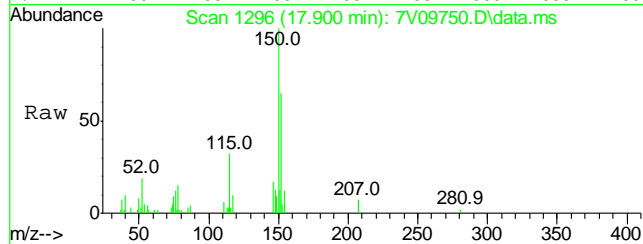
Tgt Ion:	146	Resp:	6667
Ion Ratio	Lower	Upper	
146	100		
111	39.7	30.9	46.3
148	57.8	51.0	76.6





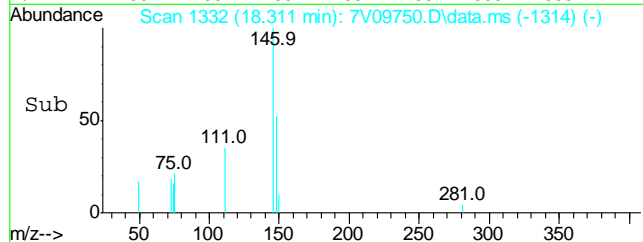
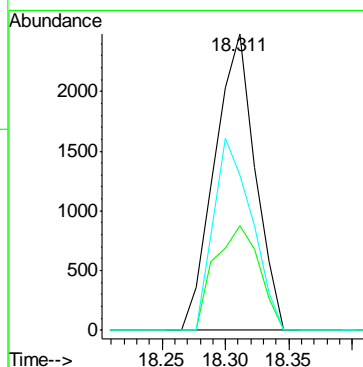
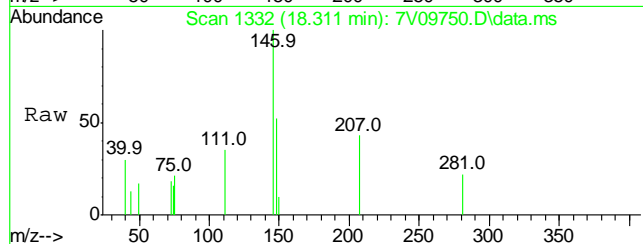
#68
1,4-Dichlorobenzene
Concen: 2.67 ug/l
RT: 17.900 min Scan# 1296
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

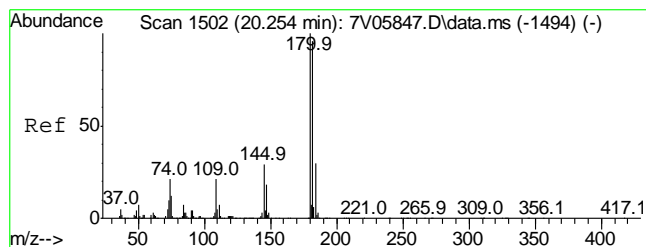
Tgt	Ion:146	Resp:	6871
Ion	Ratio	Lower	Upper
146	100		
111	38.4	29.3	43.9
148	71.9	50.4	75.6



#69
1,2-Dichlorobenzene
Concen: 2.59 ug/l
RT: 18.311 min Scan# 1332
Delta R.T. 0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

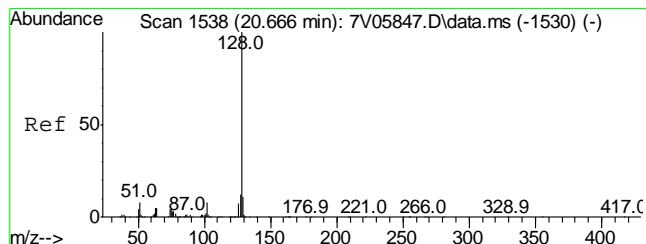
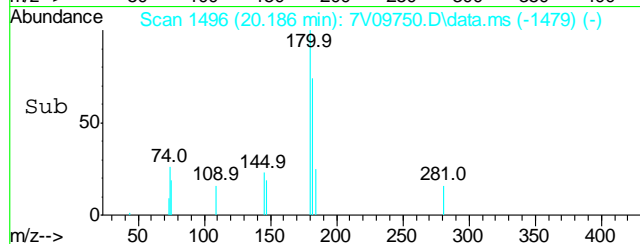
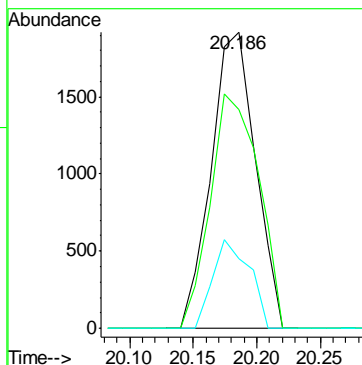
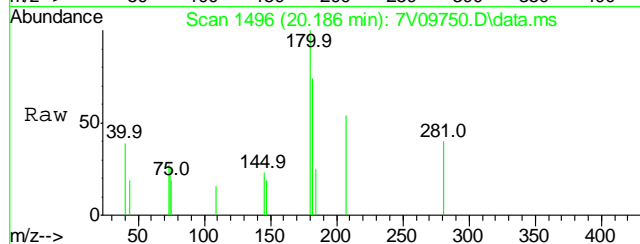
Tgt	Ion:146	Resp:	5492
Ion	Ratio	Lower	Upper
146	100		
111	38.5	31.8	47.6
148	61.0	50.9	76.3





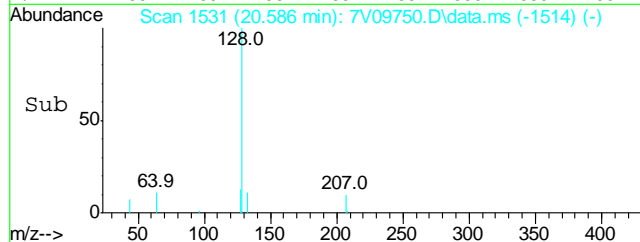
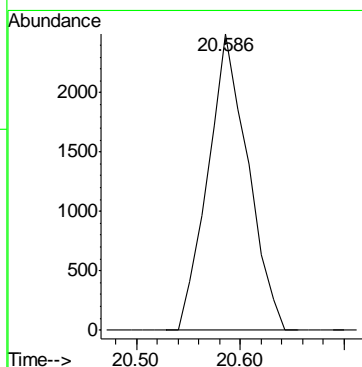
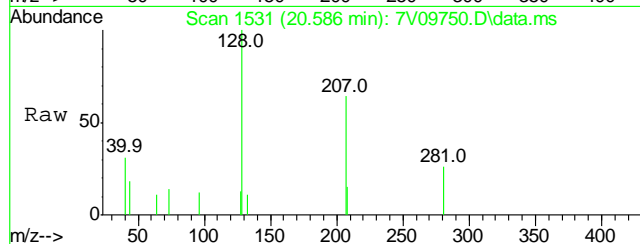
#71
1,2,4-Trichlorobenzene
Concen: 7.14 ug/l
RT: 20.186 min Scan# 1496
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

Tgt Ion	Ratio	Lower	Upper
180	100		
182	86.4	76.4	114.6
145	24.8	23.0	34.6



#72
Naphthalene
Concen: 6.83 ug/l
RT: 20.586 min Scan# 1531
Delta R.T. -0.000 min
Lab File: 7V09750.D
Acq: 22 Oct 2011 9:09 am

Tgt Ion:128 Resp: 6675



GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D28729
Account: LTENCODE LT Environmental
Project: Baseline Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB174-MB	FB05049.D	1	10/24/11	CS	n/a	n/a	GFB174

The QC reported here applies to the following samples:

Method: RSK175 MOD

D28729-1

CAS No.	Compound	Result	RL	MDL	Units	Q
74-82-8	Methane	ND	0.00080	0.00080	mg/l	

CAS No.	Surrogate Recoveries	Limits
74-98-6	Propane	107% 70-130%

Blank Spike Summary

Job Number: D28729
Account: LTENCODE LT Environmental
Project: Baseline Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GFB174-BS	FB05050.D	10	10/24/11	CS	n/a	n/a	GFB174

The QC reported here applies to the following samples: Method: RSK175 MOD

D28729-1

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
74-82-8	Methane	.5094	0.542	106	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
74-98-6	Propane	95%	70-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D28729
Account: LTENCODE LT Environmental
Project: Baseline Sampling

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D28809-1MS	FB05065.D	10	10/24/11	CS	n/a	n/a	GFB174
D28809-1MSD	FB05066.D	10	10/24/11	CS	n/a	n/a	GFB174
D28809-1	FB05061.D	1	10/24/11	CS	n/a	n/a	GFB174

The QC reported here applies to the following samples: Method: RSK175 MOD

D28729-1

CAS No.	Compound	D28809-1 mg/l	Spike Q	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
74-82-8	Methane	ND		0.5094	0.523	103	0.512	100	270-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D28809-1	Limits
74-98-6	Propane	94%	90%	103%	70-130%

GC Volatiles

Raw Data

∞

Quantitation Report (QT Reviewed)

Data File : V:\FB102411\FB05054.D Vial: 8
Acq On : 24 Oct 2011 11:42 am Operator: CHAVALIT
Sample : D28729-1 Inst : FID 4
Misc : 500uL|GC2351,GFB174,,,,,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 24 11:46:46 2011 Quant Results File: MEEP-GFB169.RES

Quant Method : C:\MSDCHEM\2...\MEEP-GFB169.M (Chemstation Integrator)
Title : RSK 175 Methane, Ethene, Ethane, and Propane
Last Update : Mon Oct 10 11:28:59 2011
Response via : Initial Calibration
DataAcq Meth : GAS.M

Volume Inj. : 100ul
Signal Phase : Porapak Q 80/100
Signal Info : 1/8 in

Compound	R.T.	Response	Conc Units

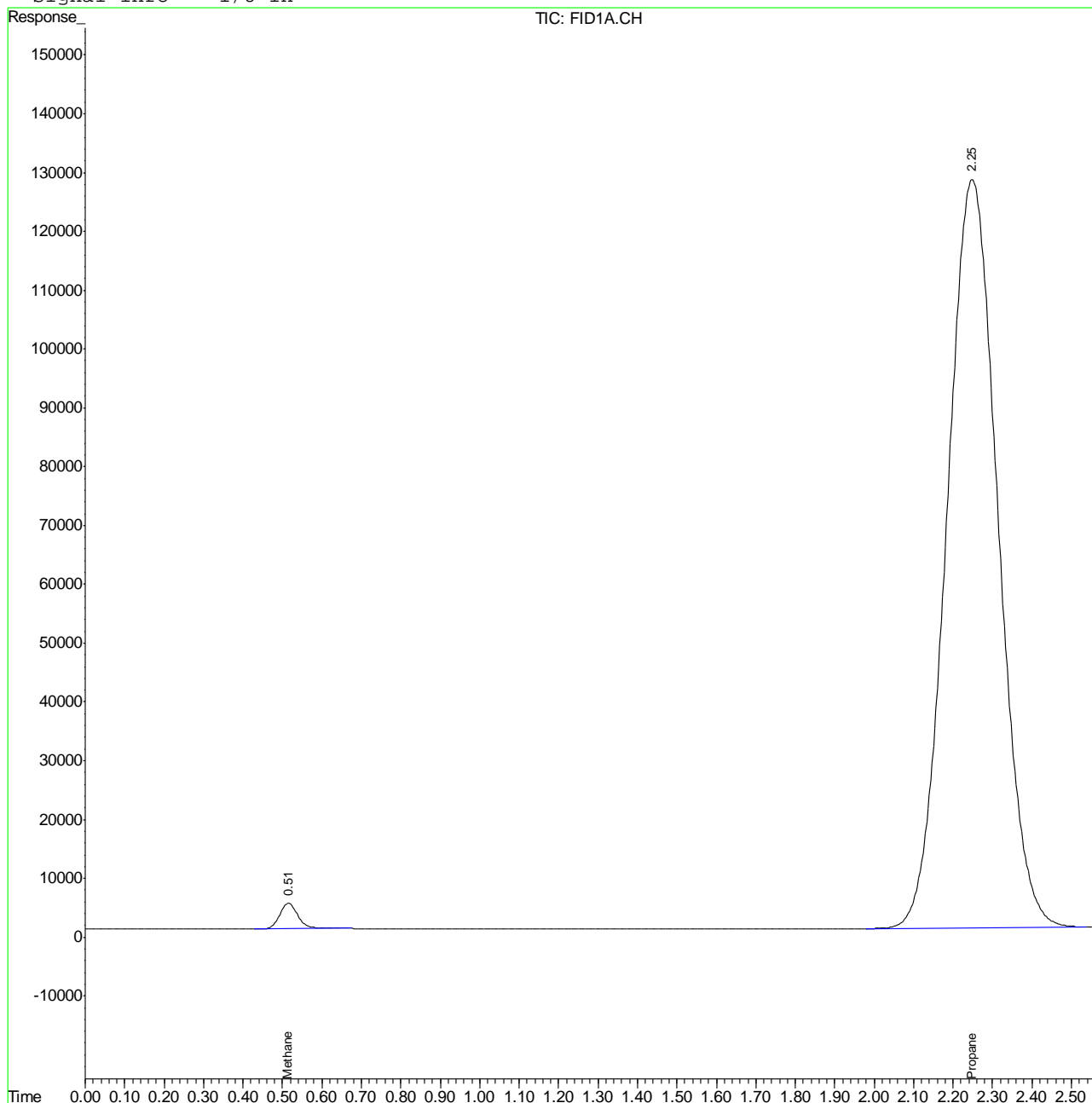
System Monitoring Compounds			
4) S Propane	2.25	11450622	377.710 rawvp
Target Compounds			
1) Methane	0.52	137497	13.273 rawvp

Quantitation Report (QT Reviewed)

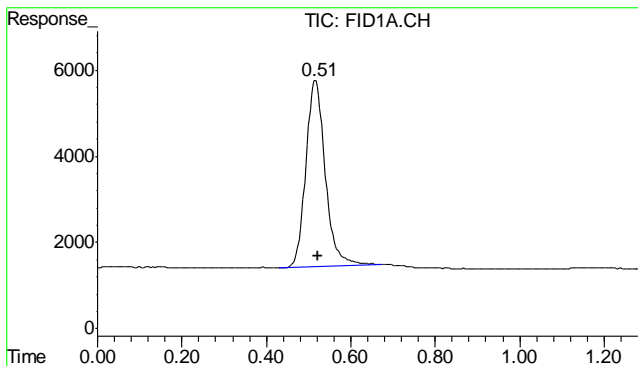
Data File : V:\FB102411\FB05054.D Vial: 8
 Acq On : 24 Oct 2011 11:42 am Operator: CHAVALIT
 Sample : D28729-1 Inst : FID 4
 Misc : 500uL|GC2351,GFB174,,,,,1 Multiplr: 1.00
 IntFile : autoint1.e
 Quant Time: Oct 24 11:45 2011 Quant Results File: MEEP-GFB169.RES

Quant Method : C:\MSDCHEM\2...\MEEP-GFB169.M (Chemstation Integrator)
 Title : RSK 175 Methane, Ethene, Ethane, and Propane
 Last Update : Mon Oct 10 11:28:59 2011
 Response via : Multiple Level Calibration
 DataAcq Meth : GAS.M

Volume Inj. : 100ul
 Signal Phase : Porapak Q 80/100
 Signal Info : 1/8 in

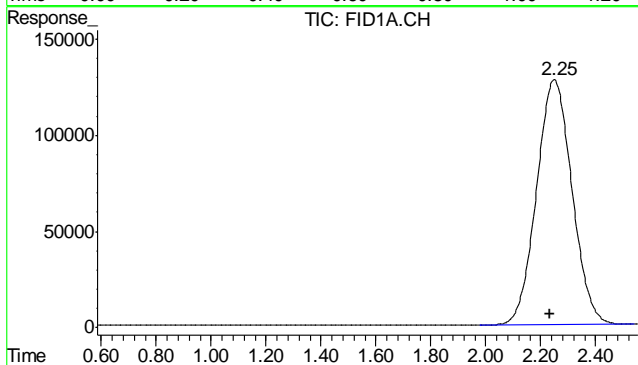


8.1.1
8



#1 Methane

R.T.: 0.516 min
Delta R.T.: -0.006 min
Response: 137497
Conc: 13.27 rawvppm



#4 Propane

R.T.: 2.249 min
Delta R.T.: 0.014 min
Response: 11450622
Conc: 377.71 rawvppm

8.1.1

8

Quantitation Report (QT Reviewed)

Data File : V:\FB102411\FB05049.D Vial: 3
Acq On : 24 Oct 2011 10:24 am Operator: CHAVALIT
Sample : MB Inst : FID 4
Misc : 500uL|GC2351,GFB174,,,,,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 24 10:29:10 2011 Quant Results File: MEEP-GFB169.RES

Quant Method : C:\MSDCHEM\2...\MEEP-GFB169.M (Chemstation Integrator)
Title : RSK 175 Methane, Ethene, Ethane, and Propane
Last Update : Mon Oct 10 11:28:59 2011
Response via : Initial Calibration
DataAcq Meth : GAS.M

Volume Inj. : 100ul
Signal Phase : Porapak Q 80/100
Signal Info : 1/8 in

Compound	R.T.	Response	Conc Units

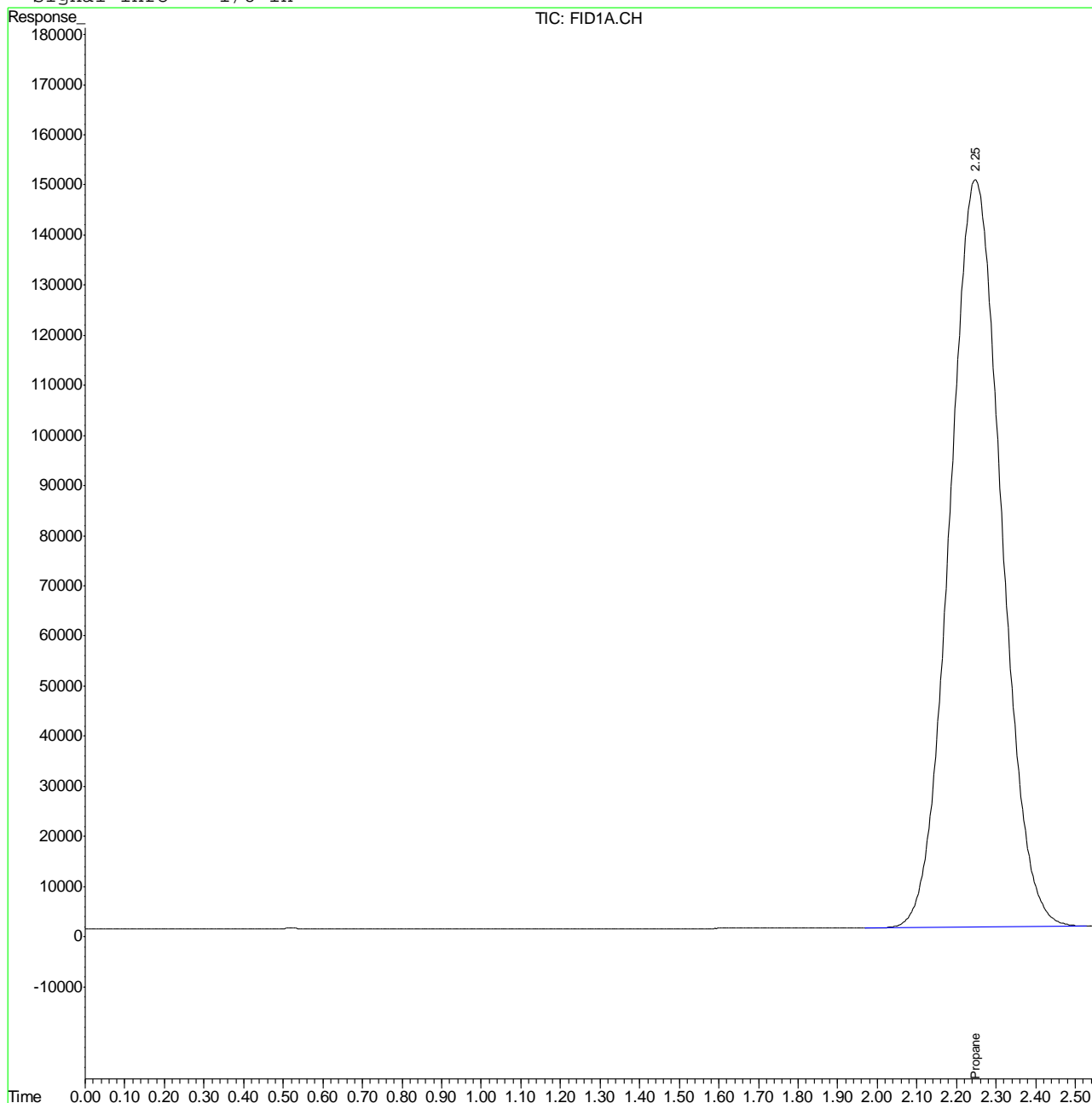
System Monitoring Compounds			
4) S Propane	2.25	13495389	426.734 rawvp
Target Compounds			

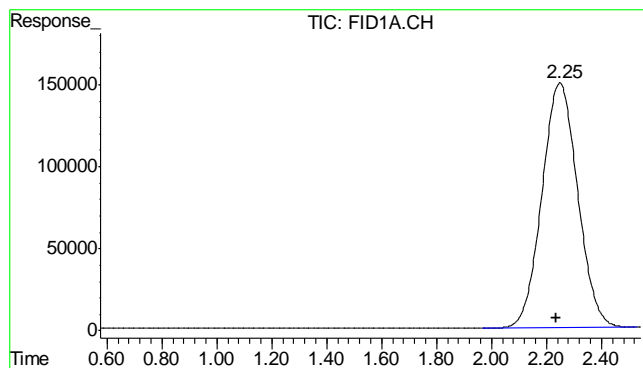
Quantitation Report (QT Reviewed)

Data File : V:\FB102411\FB05049.D Vial: 3
Acq On : 24 Oct 2011 10:24 am Operator: CHAVALIT
Sample : MB Inst : FID 4
Misc : 500uL|GC2351,GFB174,,,,,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Oct 24 10:27 2011 Quant Results File: MEEP-GFB169.RES

Quant Method : C:\MSDCHEM\2...\MEEP-GFB169.M (Chemstation Integrator)
Title : RSK 175 Methane, Ethene, Ethane, and Propane
Last Update : Mon Oct 10 11:28:59 2011
Response via : Multiple Level Calibration
DataAcq Meth : GAS.M

Volume Inj. : 100ul
Signal Phase : Porapak Q 80/100
Signal Info : 1/8 in





#4 Propane

R.T.: 2.249 min
Delta R.T.: 0.014 min
Response: 13495389
Conc: 426.73 rawvppm

8.2.1

8

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6066
Matrix Type: AQUEOUS

Methods: SW846 6020
Units: mg/l

Prep Date: 10/21/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	0.25	.0014	.0028		
Antimony	0.0020	.00001	.000015		
Arsenic	0.0040	.00049	.00014		
Barium	0.010	.000035	.00013		
Beryllium	0.0010	.000075	.00013		
Boron	0.20	.0097	.001		
Calcium	2.0	.018	.023		
Chromium	0.010	.00021	.00005		
Cobalt	0.0010	.000033	.00005		
Copper	0.010	.00011	.00014		
Iron	0.20	.0081	.013		
Lead	0.0025	.000012	.000025		
Magnesium	0.50	.00067	.002		
Manganese	0.0050	.00007	.00005		
Molybdenum	0.0050	.000044	.000075		
Nickel	0.010	.000029	.00075		
Phosphorus	0.30	.018			
Potassium	1.0	.02	.0085		
Selenium	0.0020	.00075	.00036	-0.00065	<0.0020
Silver	0.00050	.000008	.000075		
Sodium	2.5	.008	.0065		
Strontium	0.10	.00004	.00005		
Thallium	0.0010	.00015	.00006		
Tin	0.050	.00006	.000075		
Titanium	0.010	.00035	.0002		
Uranium	0.0010	.0000038	.00012		
Vanadium	0.0050	.00052	.00025		
Zinc	0.050	.00039	.0011		

Associated samples MP6066: D28729-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28729
 Account: LTENCODE - LT Environmental
 Project: Baseline Sampling

QC Batch ID: MP6066
 Matrix Type: AQUEOUS

Methods: SW846 6020
 Units: mg/l

Prep Date: 10/21/11

Metal	D28740-1 Original MS	Spikelot MPICPAL % Rec	QC Limits
Aluminum	anr		
Antimony	anr		
Arsenic	anr		
Barium	anr		
Beryllium	anr		
Boron	anr		
Calcium	anr		
Chromium	anr		
Cobalt	anr		
Copper	anr		
Iron	anr		
Lead	anr		
Magnesium	anr		
Manganese	anr		
Molybdenum	anr		
Nickel	anr		
Phosphorus			
Potassium	anr		
Selenium	0.018 1.0	1.0 98.2	75-125
Silver	anr		
Sodium	anr		
Strontium	anr		
Thallium	anr		
Tin	anr		
Titanium	anr		
Uranium	anr		
Vanadium	anr		
Zinc	anr		

Associated samples MP6066: D28729-1F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6066
Matrix Type: AQUEOUS

Methods: SW846 6020
Units: mg/l

Prep Date: 10/21/11

Metal	D28740-1 Original MSD	Spikelot MPICPALL % Rec	MSD RPD	QC Limit		
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Calcium	anr					
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	anr					
Lead	anr					
Magnesium	anr					
Manganese	anr					
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	anr					
Selenium	0.018	1.0	1.0	98.2	0.0	20
Silver	anr					
Sodium	anr					
Strontium	anr					
Thallium	anr					
Tin	anr					
Titanium	anr					
Uranium	anr					
Vanadium	anr					
Zinc	anr					

Associated samples MP6066: D28729-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28729
 Account: LTENCODE - LT Environmental
 Project: Baseline Sampling

QC Batch ID: MP6066
 Matrix Type: AQUEOUS

Methods: SW846 6020
 Units: mg/l

Prep Date: 10/21/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Calcium	anr			
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	anr			
Lead	anr			
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	anr			
Selenium	1.0	1.0	100.0	80-120
Silver	anr			
Sodium	anr			
Strontium	anr			
Thallium	anr			
Tin	anr			
Titanium	anr			
Uranium	anr			
Vanadium	anr			
Zinc	anr			

Associated samples MP6066: D28729-1F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/21/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	46.4	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13	6.0	<70
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	-0.80	<200
Manganese	5.0	.053	.31	0.30	<5.0
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	252	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	82.8	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6082: D28729-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28729
 Account: LTENCODE - LT Environmental
 Project: Baseline Sampling

QC Batch ID: MP6082
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date: 10/21/11

Metal	D28769-1 Original MS		SpikeLot MPICPAL % Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	265000	285000	25000	80.0 75-125
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	23200	27800	5000	92.0 75-125
Lead	anr			
Lithium	anr			
Magnesium	17200	41600	25000	97.6 75-125
Manganese	652	1120	500	93.6 75-125
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	72400	95700	25000	93.2 75-125
Selenium	anr			
Silicon				
Silver	anr			
Sodium	5450000	5100000	25000	-1400.0a 75-125
Strontium	anr			
Thallium	anr			
Tin	anr			
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP6082: D28729-1F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/21/11

Metal	D28769-1 Original	MSD	SpikeLot MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum	anr					
Antimony	anr					
Arsenic	anr					
Barium	anr					
Beryllium	anr					
Boron	anr					
Cadmium	anr					
Calcium	265000	285000	25000	80.0	0.0	20
Chromium	anr					
Cobalt	anr					
Copper	anr					
Iron	23200	27600	5000	88.0	0.7	20
Lead	anr					
Lithium	anr					
Magnesium	17200	41700	25000	98.0	0.2	20
Manganese	652	1120	500	93.6	0.0	20
Molybdenum	anr					
Nickel	anr					
Phosphorus						
Potassium	72400	106000	25000	134.4N(a)	6.3	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	5450000	5580000	25000	520.0(b)	9.0	20
Strontium	anr					
Thallium	anr					
Tin	anr					
Titanium	anr					
Uranium						
Vanadium	anr					
Zinc	anr					

Associated samples MP6082: D28729-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- (b) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/21/11

Metal	BSP Result	Spikelot MPICALL	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	anr			
Barium	anr			
Beryllium	anr			
Boron	anr			
Cadmium	anr			
Calcium	26900	25000	107.6	80-120
Chromium	anr			
Cobalt	anr			
Copper	anr			
Iron	5100	5000	102.0	80-120
Lead	anr			
Lithium	anr			
Magnesium	26100	25000	104.4	80-120
Manganese	516	500	103.2	80-120
Molybdenum	anr			
Nickel	anr			
Phosphorus				
Potassium	26700	25000	106.8	80-120
Selenium	anr			
Silicon				
Silver	anr			
Sodium	25800	25000	103.2	80-120
Strontium	anr			
Thallium	anr			
Tin	anr			
Titanium	anr			
Uranium				
Vanadium	anr			
Zinc	anr			

Associated samples MP6082: D28729-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

QC Batch ID: MP6082
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN12171	5.0	2.0	mg/l	100	102	101.6	90-110%
Alkalinity, Carbonate	GN12172	5.0	0.0	mg/l	100	102	101.6	80-120%
Alkalinity, Total as CaCO3	GN12169	5.0	2.0	mg/l	100	102	101.6	90-110%
Chloride	GP5735/GN12096	0.50	0.22	mg/l	20	19.5	97.5	90-110%
Nitrogen, Nitrate	GP5735/GN12096	0.045	0.0	mg/l	4.52	4.39	97.2	90-110%
Nitrogen, Nitrite	GP5735/GN12096	0.061	0.0	mg/l	6.09	6.12	100.5	90-110%
Solids, Total Dissolved	GN12100	10	0.0	mg/l	400	400	100.0	90-110%
Specific Conductivity	GP5760/GN12158			umhos/cm	99.3	92.9	93.6	90-110%
Sulfate	GP5735/GN12096	0.50	0.0	mg/l	30	29.0	96.7	90-110%
pH	GN12098			su	8.00	7.95	99.4	99.3-100.7%

Associated Samples:

Batch GN12098: D28729-1
Batch GN12100: D28729-1
Batch GN12169: D28729-1
Batch GN12171: D28729-1
Batch GN12172: D28729-1
Batch GP5735: D28729-1
Batch GP5760: D28729-1
(*) Outside of QC limits

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO ₃	GN12169	D28680-4	mg/l	257	244	4.8	0-20%
Solids, Total Dissolved	GN12100	D28729-1	mg/l	812	784	3.5	0-25%
Specific Conductivity	GP5760/GN12158	D28693-1	umhos/cm	1030	1020	0.8	0-20%

Associated Samples:

Batch GN12100: D28729-1

Batch GN12169: D28729-1

Batch GP5760: D28729-1

(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO ₃	GN12169	D28680-4	mg/l	257	100	337	80.1	80-120%
Chloride	GP5735/GN12096	D28694-1	mg/l	8.6	10	19.2	106.0	80-120%
Nitrogen, Nitrate	GP5735/GN12096	D28694-1	mg/l	1.9	5.65	7.9	106.2	80-120%
Nitrogen, Nitrite	GP5735/GN12096	D28694-1	mg/l	0.0	0.305	0.31	101.8	80-120%
Sulfate	GP5735/GN12096	D28694-1	mg/l	170	100	274	104.0	80-120%

Associated Samples:

Batch GN12169: D28729-1

Batch GP5735: D28729-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28729
Account: LTENCODE - LT Environmental
Project: Baseline Sampling

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO ₃	GN12169	D28680-4	mg/l	257	100	336	0.0	20%
Chloride	GP5735/GN12096	D28694-1	mg/l	8.6	10	19.1	0.5	20%
Nitrogen, Nitrate	GP5735/GN12096	D28694-1	mg/l	1.9	5.65	7.9	0.0	20%
Nitrogen, Nitrite	GP5735/GN12096	D28694-1	mg/l	0.0	0.305	0.31	0.0	20%
Sulfate	GP5735/GN12096	D28694-1	mg/l	170	100	275	0.4	20%

Associated Samples:

Batch GN12169: D28729-1

Batch GP5735: D28729-1

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits