ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

GC/MS Volatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200209993

Work Order Number: 0905095

1. This report consists of 2 water samples. The samples were received cool and intact by ALS on 05/13/09. All aqueous samples were free of headspace prior to analysis.

2. These samples were prepared according to SW-846, 3rd Edition procedures. Specifically, the water samples were prepared by purging 10 mL using purge and trap procedures based on Method 5030C.

3. The samples were analyzed using GC/MS with an RTX-624, RTX-VMS, or equivalent capillary column according to SOP 525 Revision 12 based on SW-846 Method 8260B. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.

4. All initial calibration criteria for SPCC's and CCC's were met. If average response factors were used in the initial calibration, %RSD was ≤15%. If linear or higher order regression calibrations were used in the initial calibration, the coefficient of determination (r^2) ≥0.99.

5. All initial calibrations are verified by comparing a second source standard calibration verification (ICV) against the calibration curve. All target compounds in the second source verification had a %D of less than 25%.

6. All criteria for SPCC's and CCC's were met in daily (continuing) calibration verifications (CCV).

7. Methylene chloride, acetone and 2-butanone are common laboratory contaminants. In order to minimize the levels of these compounds detected in the gc/ms analysis, ALS has designated its volatile laboratory as a restricted access area. In addition, the laboratory has been equipped with a dedicated, air intake and exhaust system that operates under positive pressure in order to minimize cross contamination of these compounds. Due to fluctuations in ambient laboratory conditions, reported sample values for common laboratory contaminants may be due to lab contamination even if the compound in question is not detected in the associated method blank.

All method blank criteria were met.

8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.

9. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.

10. The samples were analyzed within the established holding time.

11. All surrogate recoveries were within acceptance criteria.

12. All internal standard recoveries were within acceptance criteria.

13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Sharon L. Jobes
Organics Primary Data Reviewer

5.15.09
Date

Organics Final Data Reviewer

5/15/09
Date

ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

U or ND:	**This flag indicates that the compound was analyzed for but not detected.**
J:	**This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.**
B:	**This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.**
E:	**This flag identifies compounds whose concentration exceeds the upper level of the calibration range.**
A:	**This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.**
X:	**This flag indicates that the analyte was diluted below an accurate quantitation level.**
***:**	**This flag indicates that a spike recovery is equal to or outside the control criteria used.**
+:	**This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.**

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: Complaint 200209993
Client Project Number:
Client PO Number: OE PHA 09000000004

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Williams WW	0905095-1		WATER	12-May-09	8:36
Trip Blank	0905095-2		WATER	12-May-09	8:30

Paragon Analytics
A Division of DataChem Laboratories, Inc.

225 Commerce Drive Fort Collins, CO 80524
800-443-1511 or (970) 490-1511 (970) 490-1522 Fax

Accession Number (LAB ID) 0905095

Chain-of-Custody Date 12May09 Page 1 of 1

Originator: Retain pink copy!

Project Name/No.: _____ Sampler(s): Gintautas Turnaround (circle one) **Standard** or **Rush** (Due 10 dy) Dispose: Date 30 dy or **Return to Client**

Report To: Peter Gintautas
Phone: 719-846-3091
Fax:
E-mail: peter.gintautas@state.co.us
Company: Colo. Oil + Gas Cons. Comm.
Address:

Circle method (right); provide additional information as needed (comments).

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (indicate type... HCl, etc.)	No. of Containers	VOCs SW8260B (Full list + TPH)	BTEX (only) SW8021B Methane Ethane	SVOCs SW8270C Full LCS	OC Pesticides SW8081A	PCBs SW8082 TOC	Herbicides SW8151A	Explosives SW8330	TCLP Organics SW1311 SW8260B 8270C 8081A 8151A	TCLP Metals SW1311 Hg SW6010B 7470	Total Metals by ICP Hg SW6010B 7470 7471 E200.7	Dissolved Metals by ICP Hg SW6010B 7470 E200.7	Total Metals by ICP/MS SW6020A E200.8	Dissolved Metals by ICP/MS SW6020A E200.8	Hexavalent Chromium SW7196A Methane Dioxide	Inorganic Anions SW9056 E300.0 (specify in comments)	Solids: Total E160.3 TDS E160.1 TSS E160.2	pH SW9040B SW9045C	TPH SW8015B GRO DRO (circle one or both) Conductivity	Gross Alpha / Beta SW9310 E900.0	Actinides by Paragon SOP Pu / U / Am / Th / Cm / ___	Tritium E906.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811-00	Gamma Isotopes E901.1	Radon 222 SM7510Rn	SAR calc	Cation Anion Balance
Complaint 200209993 Williams UW	12May09	08:30	①	W	none	5		X	X								X		X	X	X	X	X	X								X	X
				W	HCl	3	X																										
			↓	W	H_2SO_4	1					X																						
Trip Blank	12May09	08:30	②	W	HCl	3	X																										

* **Time Zone:** EST CST (MST) PST **Matrix Key:** O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:
Anions = Br, Cl, F, NO_2, NO_3, SO4
Filter + preserve metals upon receipt.
200.7 = Be, Ba, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Na, Ni, K, Sr, Zn
or 200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Tl, U

Form 202r6.xls (6/16/06)

Relinquished By: (1)	Relinquished By: (2)
Signature Peter Gintautas	Signature
Printed Name Peter Gintautas	Printed Name
Date 12May09 Time 13:30	Date Time
Company COGCC	Company

Received By: (1)	Received By: (2)
Signature Cheryl Trimble	Signature
Printed Name Cheryl Trimble	Printed Name
Date 5-13-09 Time 0945	Date Time
Company ALS	Company

CONDITION OF SAMPLE UPON RECEIPT FORM **Paragon Analytics**

Client: COGCC Workorder No: 0905095

Project Manager: AW Initials: CDT Date: 5-13-09

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals** on **shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	(NONE)	YES	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7.	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	(YES)	(NO)
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble**: ____ < green pea ____ > green pea	N/A	YES	(NO)
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures measured at 0.1-6.0°C? **IR gun used*:** #2 (#4)	RAD ONLY	(YES)	NO

Cooler #:	1								
Temperature (°C):	5.6								
No. of custody seals on cooler:	1								
DOT Survey/ Acceptance Information — External µR/hr reading:	13								
Background µR/hr reading:	11								

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

Headspace 0905095-1-1 < green pea
Metals will be filtered and preserved in house. 5/13/09

If applicable, was the client contacted? YES / NO / NA Contact: _____ Date/Time: _____

Project Manager Signature / Date: 5/13/09

*IR Gun #2: Oakton. SN 29922500201-0066 *IR Gun #4: Oakton. SN 2372220101-0002

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Lab ID: VL090514-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14985

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	U	
74-87-3	CHLOROMETHANE	1	1	1	U	
75-01-4	VINYL CHLORIDE	1	1	1	U	
74-83-9	BROMOMETHANE	1	1	1	U	
75-00-3	CHLOROETHANE	1	1	1	U	
75-69-4	TRICHLOROFLUOROMETHANE	1	1	1	U	
75-35-4	1,1-DICHLOROETHENE	1	1	1	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROET	1	1	1	U	
67-64-1	ACETONE	1	10	10	U	
74-88-4	IODOMETHANE	1	1	1	U	
75-15-0	CARBON DISULFIDE	1	1	1	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	U	
156-60-5	TRANS-1,2-DICHLOROETHENE	1	1	1	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	1	1	1	U	
75-34-3	1,1-DICHLOROETHANE	1	1	1	U	
108-05-4	VINYL ACETATE	1	2	2	U	
156-59-2	CIS-1,2-DICHLOROETHENE	1	1	1	U	
78-93-3	2-BUTANONE	1	10	10	U	
74-97-5	BROMOCHLOROMETHANE	1	1	1	U	
67-66-3	CHLOROFORM	1	1	1	U	
71-55-6	1,1,1-TRICHLOROETHANE	1	1	1	U	
594-20-7	2,2-DICHLOROPROPANE	1	1	1	U	
56-23-5	CARBON TETRACHLORIDE	1	1	1	U	
563-58-6	1,1-DICHLOROPROPENE	1	1	1	U	
107-06-2	1,2-DICHLOROETHANE	1	1	1	U	
71-43-2	BENZENE	1	1	1	U	
79-01-6	TRICHLOROETHENE	1	1	1	U	

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Lab ID: VL090514-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14985

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

78-87-5	1,2-DICHLOROPROPANE	1	1	1	U	
74-95-3	DIBROMOMETHANE	1	1	1	U	
75-27-4	BROMODICHLOROMETHANE	1	1	1	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	1	1	1	U	
108-10-1	4-METHYL-2-PENTANONE	1	10	10	U	
108-88-3	TOLUENE	1	1	1	U	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	1	1	1	U	
79-00-5	1,1,2-TRICHLOROETHANE	1	1	1	U	
591-78-6	2-HEXANONE	1	10	10	U	
127-18-4	TETRACHLOROETHENE	1	1	1	U	
142-28-9	1,3-DICHLOROPROPANE	1	1	1	U	
124-48-1	DIBROMOCHLOROMETHANE	1	1	1	U	
106-93-4	1,2-DIBROMOETHANE	1	1	1	U	
544-10-5	1-CHLOROHEXANE	1	1	1	U	
108-90-7	CHLOROBENZENE	1	1	1	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	1	1	1	U	
100-41-4	ETHYLBENZENE	1	1	1	U	
136777-61-2	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	1	1	U	
100-42-5	STYRENE	1	1	1	U	
75-25-2	BROMOFORM	1	1	1	U	
98-82-8	ISOPROPYLBENZENE	1	1	1	U	
96-18-4	1,2,3-TRICHLOROPROPANE	1	1	1	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	1	1	1	U	
108-86-1	BROMOBENZENE	1	1	1	U	
103-65-1	N-PROPYLBENZENE	1	1	1	U	
95-49-8	2-CHLOROTOLUENE	1	1	1	U	
108-67-8	1,3,5-TRIMETHYLBENZENE	1	1	1	U	
106-43-4	4-CHLOROTOLUENE	1	1	1	U	

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Lab ID: VL090514-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14985

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

98-06-6	TERT-BUTYLBENZENE	1	1	1	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	1	1	1	U	
135-98-8	SEC-BUTYLBENZENE	1	1	1	U	
541-73-1	1,3-DICHLOROBENZENE	1	1	1	U	
99-87-6	P-ISOPROPYLTOLUENE	1	1	1	U	
106-46-7	1,4-DICHLOROBENZENE	1	1	1	U	
104-51-8	N-BUTYLBENZENE	1	1	1	U	
95-50-1	1,2-DICHLOROBENZENE	1	1	1	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	1	2	2	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	1	1	U	
87-68-3	HEXACHLOROBUTADIENE	1	1	1	U	
91-20-3	NAPHTHALENE	1	1	1	U	
87-61-6	1,2,3-TRICHLOROBENZENE	1	1	1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	24.8		25	99	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	27.8		25	111	80 - 124
2037-26-5	TOLUENE-D8	24.6		25	98	81 - 119

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Field ID:

Lab ID: VL090514-3MB

Sample Matrix: WATER
%Moisture: N/A
Date Collected: N/A
Date Extracted: 14-May-09
Date Analyzed: 14-May-09

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C14985

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Field ID: Williams WW
Lab ID: 0905095-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received
File Name: C14988

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	U	
74-87-3	CHLOROMETHANE	1	1	1	U	
75-01-4	VINYL CHLORIDE	1	1	1	U	
74-83-9	BROMOMETHANE	1	1	1	U	
75-00-3	CHLOROETHANE	1	1	1	U	
75-69-4	TRICHLOROFLUOROMETHANE	1	1	1	U	
75-35-4	1,1-DICHLOROETHENE	1	1	1	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1	1	1	U	
67-64-1	ACETONE	1	10	10	U	
74-88-4	IODOMETHANE	1	1	1	U	
75-15-0	CARBON DISULFIDE	1	1	1	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	U	
156-60-5	TRANS-1,2-DICHLOROETHENE	1	1	1	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	1	1	1	U	
75-34-3	1,1-DICHLOROETHANE	1	1	1	U	
108-05-4	VINYL ACETATE	1	2	2	U	
156-59-2	CIS-1,2-DICHLOROETHENE	1	1	1	U	
78-93-3	2-BUTANONE	1	10	10	U	
74-97-5	BROMOCHLOROMETHANE	1	1	1	U	
67-66-3	CHLOROFORM	1	1	1	U	
71-55-6	1,1,1-TRICHLOROETHANE	1	1	1	U	
594-20-7	2,2-DICHLOROPROPANE	1	1	1	U	
56-23-5	CARBON TETRACHLORIDE	1	1	1	U	
563-58-6	1,1-DICHLOROPROPENE	1	1	1	U	
107-06-2	1,2-DICHLOROETHANE	1	1	1	U	
71-43-2	BENZENE	1	1	1	U	
79-01-6	TRICHLOROETHENE	1	1	1	U	

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Field ID: Williams WW
Lab ID: 0905095-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received
File Name: C14988

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

78-87-5	1,2-DICHLOROPROPANE	1	1	1	U	
74-95-3	DIBROMOMETHANE	1	1	1	U	
75-27-4	BROMODICHLOROMETHANE	1	1	1	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	1	1	1	U	
108-10-1	4-METHYL-2-PENTANONE	1	10	10	U	
108-88-3	TOLUENE	1	0.57	1	J	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	1	1	1	U	
79-00-5	1,1,2-TRICHLOROETHANE	1	1	1	U	
591-78-6	2-HEXANONE	1	10	10	U	
127-18-4	TETRACHLOROETHENE	1	1	1	U	
142-28-9	1,3-DICHLOROPROPANE	1	1	1	U	
124-48-1	DIBROMOCHLOROMETHANE	1	1	1	U	
106-93-4	1,2-DIBROMOETHANE	1	1	1	U	
544-10-5	1-CHLOROHEXANE	1	1	1	U	
108-90-7	CHLOROBENZENE	1	1	1	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	1	1	1	U	
100-41-4	ETHYLBENZENE	1	0.48	1	J	
136777-61-2	M+P-XYLENE	1	1.7	1		
95-47-6	O-XYLENE	1	0.65	1	J	
100-42-5	STYRENE	1	1	1	U	
75-25-2	BROMOFORM	1	1	1	U	
98-82-8	ISOPROPYLBENZENE	1	1	1	U	
96-18-4	1,2,3-TRICHLOROPROPANE	1	1	1	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	1	1	1	U	
108-86-1	BROMOBENZENE	1	1	1	U	
103-65-1	N-PROPYLBENZENE	1	1	1	U	
95-49-8	2-CHLOROTOLUENE	1	1	1	U	
108-67-8	1,3,5-TRIMETHYLBENZENE	1	1	1	U	
106-43-4	4-CHLOROTOLUENE	1	1	1	U	

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Field ID: Williams WW
Lab ID: 0905095-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received
File Name: C14988

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

98-06-6	TERT-BUTYLBENZENE	1	1	1	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	1	1	1	U	
135-98-8	SEC-BUTYLBENZENE	1	1	1	U	
541-73-1	1,3-DICHLOROBENZENE	1	1	1	U	
99-87-6	P-ISOPROPYLTOLUENE	1	1	1	U	
106-46-7	1,4-DICHLOROBENZENE	1	1	1	U	
104-51-8	N-BUTYLBENZENE	1	1	1	U	
95-50-1	1,2-DICHLOROBENZENE	1	1	1	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	1	2	2	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	1	1	U	
87-68-3	HEXACHLOROBUTADIENE	1	1	1	U	
91-20-3	NAPHTHALENE	1	1	1	U	
87-61-6	1,2,3-TRICHLOROBENZENE	1	1	1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	24.4		25	97	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	28.6		25	114	80 - 124
2037-26-5	TOLUENE-D8	24.3		25	97	81 - 119

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Field ID: Williams WW
Lab ID: 0905095-1

Sample Matrix: WATER
%Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C14988

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Field ID: Trip Blank
Lab ID: 0905095-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received
File Name: C14987

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
75-71-8	DICHLORODIFLUOROMETHANE	1	1	1	U	
74-87-3	CHLOROMETHANE	1	1	1	U	
75-01-4	VINYL CHLORIDE	1	1	1	U	
74-83-9	BROMOMETHANE	1	1	1	U	
75-00-3	CHLOROETHANE	1	1	1	U	
75-69-4	TRICHLOROFLUOROMETHANE	1	1	1	U	
75-35-4	1,1-DICHLOROETHENE	1	1	1	U	
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	1	1	1	U	
67-64-1	ACETONE	1	10	10	U	
74-88-4	IODOMETHANE	1	1	1	U	
75-15-0	CARBON DISULFIDE	1	1	1	U	
75-09-2	METHYLENE CHLORIDE	1	1	1	U	
156-60-5	TRANS-1,2-DICHLOROETHENE	1	1	1	U	
1634-04-4	METHYL TERTIARY BUTYL ETHER	1	1	1	U	
75-34-3	1,1-DICHLOROETHANE	1	1	1	U	
108-05-4	VINYL ACETATE	1	2	2	U	
156-59-2	CIS-1,2-DICHLOROETHENE	1	1	1	U	
78-93-3	2-BUTANONE	1	10	10	U	
74-97-5	BROMOCHLOROMETHANE	1	1	1	U	
67-66-3	CHLOROFORM	1	1	1	U	
71-55-6	1,1,1-TRICHLOROETHANE	1	1	1	U	
594-20-7	2,2-DICHLOROPROPANE	1	1	1	U	
56-23-5	CARBON TETRACHLORIDE	1	1	1	U	
563-58-6	1,1-DICHLOROPROPENE	1	1	1	U	
107-06-2	1,2-DICHLOROETHANE	1	1	1	U	
71-43-2	BENZENE	1	1	1	U	
79-01-6	TRICHLOROETHENE	1	1	1	U	

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Field ID: Trip Blank
Lab ID: 0905095-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received
File Name: C14987

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

78-87-5	1,2-DICHLOROPROPANE	1	1	1	U	
74-95-3	DIBROMOMETHANE	1	1	1	U	
75-27-4	BROMODICHLOROMETHANE	1	1	1	U	
10061-01-5	CIS-1,3-DICHLOROPROPENE	1	1	1	U	
108-10-1	4-METHYL-2-PENTANONE	1	10	10	U	
108-88-3	TOLUENE	1	1	1	U	
10061-02-6	TRANS-1,3-DICHLOROPROPENE	1	1	1	U	
79-00-5	1,1,2-TRICHLOROETHANE	1	1	1	U	
591-78-6	2-HEXANONE	1	10	10	U	
127-18-4	TETRACHLOROETHENE	1	1	1	U	
142-28-9	1,3-DICHLOROPROPANE	1	1	1	U	
124-48-1	DIBROMOCHLOROMETHANE	1	1	1	U	
106-93-4	1,2-DIBROMOETHANE	1	1	1	U	
544-10-5	1-CHLOROHEXANE	1	1	1	U	
108-90-7	CHLOROBENZENE	1	1	1	U	
630-20-6	1,1,1,2-TETRACHLOROETHANE	1	1	1	U	
100-41-4	ETHYLBENZENE	1	1	1	U	
136777-61-2	M+P-XYLENE	1	1	1	U	
95-47-6	O-XYLENE	1	1	1	U	
100-42-5	STYRENE	1	1	1	U	
75-25-2	BROMOFORM	1	1	1	U	
98-82-8	ISOPROPYLBENZENE	1	1	1	U	
96-18-4	1,2,3-TRICHLOROPROPANE	1	1	1	U	
79-34-5	1,1,2,2-TETRACHLOROETHANE	1	1	1	U	
108-86-1	BROMOBENZENE	1	1	1	U	
103-65-1	N-PROPYLBENZENE	1	1	1	U	
95-49-8	2-CHLOROTOLUENE	1	1	1	U	
108-67-8	1,3,5-TRIMETHYLBENZENE	1	1	1	U	
106-43-4	4-CHLOROTOLUENE	1	1	1	U	

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Field ID: Trip Blank
Lab ID: 0905095-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09
Prep Method: SW5030 Rev C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received
File Name: C14987

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

98-06-6	TERT-BUTYLBENZENE	1	1	1	U	
95-63-6	1,2,4-TRIMETHYLBENZENE	1	1	1	U	
135-98-8	SEC-BUTYLBENZENE	1	1	1	U	
541-73-1	1,3-DICHLOROBENZENE	1	1	1	U	
99-87-6	P-ISOPROPYLTOLUENE	1	1	1	U	
106-46-7	1,4-DICHLOROBENZENE	1	1	1	U	
104-51-8	N-BUTYLBENZENE	1	1	1	U	
95-50-1	1,2-DICHLOROBENZENE	1	1	1	U	
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	1	2	2	U	
120-82-1	1,2,4-TRICHLOROBENZENE	1	1	1	U	
87-68-3	HEXACHLOROBUTADIENE	1	1	1	U	
91-20-3	NAPHTHALENE	1	1	1	U	
87-61-6	1,2,3-TRICHLOROBENZENE	1	1	1	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	24.4		25	98	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	27.3		25	109	80 - 124
2037-26-5	TOLUENE-D8	23.7		25	95	81 - 119

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Field ID: Trip Blank
Lab ID: 0905095-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 12-May-09
Date Extracted: 14-May-09
Date Analyzed: 14-May-09

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C14987

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
		NONE DETECTED	1			U

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Lab ID: VL090514-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/14/2009
Date Analyzed: 05/14/2009
Prep Method: SW5030C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14981

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
75-71-8	DICHLORODIFLUOROMETHANE	10	9.01	1		90	38 - 131%
74-87-3	CHLOROMETHANE	10	9.38	1		94	62 - 141%
75-01-4	VINYL CHLORIDE	10	9.91	1		99	77 - 124%
74-83-9	BROMOMETHANE	10	9.51	1		95	76 - 133%
75-00-3	CHLOROETHANE	10	9.53	1		95	81 - 130%
75-69-4	TRICHLOROFLUOROMETHANE	10	10.4	1		104	84 - 146%
75-35-4	1,1-DICHLOROETHENE	10	9.58	1		96	75 - 126%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	11.3	1		113	71 - 144%
67-64-1	ACETONE	40	41.6	10		104	50 - 150%
74-88-4	IODOMETHANE	10	9.3	1		93	76 - 116%
75-15-0	CARBON DISULFIDE	10	9.72	1		97	68 - 129%
75-09-2	METHYLENE CHLORIDE	10	10.3	1		103	22 - 146%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.1	1		101	76 - 135%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	20.4	1		102	75 - 125%
75-34-3	1,1-DICHLOROETHANE	10	10	1		100	77 - 131%
108-05-4	VINYL ACETATE	10	8.39	2		84	56 - 151%
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.5	1		105	81 - 121%
78-93-3	2-BUTANONE	40	41.3	10		103	50 - 150%
74-97-5	BROMOCHLOROMETHANE	10	11	1		110	85 - 126%
67-66-3	CHLOROFORM	10	10.4	1		104	84 - 125%
71-55-6	1,1,1-TRICHLOROETHANE	10	10.2	1		102	82 - 129%
594-20-7	2,2-DICHLOROPROPANE	10	10.7	1		107	79 - 130%
56-23-5	CARBON TETRACHLORIDE	10	9.92	1		99	83 - 135%
563-58-6	1,1-DICHLOROPROPENE	10	9.8	1		98	85 - 127%
107-06-2	1,2-DICHLOROETHANE	10	10.2	1		102	84 - 126%
71-43-2	BENZENE	10	10	1		100	82 - 122%

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Lab ID: VL090514-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/14/2009
Date Analyzed: 05/14/2009
Prep Method: SW5030C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14981

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
79-01-6	TRICHLOROETHENE	10	9.92	1		99	82 - 121%
78-87-5	1,2-DICHLOROPROPANE	10	10.5	1		105	81 - 121%
74-95-3	DIBROMOMETHANE	10	10.8	1		108	81 - 125%
75-27-4	BROMODICHLOROMETHANE	10	11	1		110	82 - 120%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	11	1		110	79 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	41.8	10		105	50 - 150%
108-88-3	TOLUENE	10	9.16	1		92	83 - 121%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.93	1		99	78 - 113%
79-00-5	1,1,2-TRICHLOROETHANE	10	10.1	1		101	82 - 122%
591-78-6	2-HEXANONE	40	38.3	10		96	50 - 150%
127-18-4	TETRACHLOROETHENE	10	9.41	1		94	79 - 136%
142-28-9	1,3-DICHLOROPROPANE	10	9.73	1		97	80 - 126%
124-48-1	DIBROMOCHLOROMETHANE	10	10	1		100	80 - 123%
106-93-4	1,2-DIBROMOETHANE	10	9.87	1		99	85 - 124%
544-10-5	1-CHLOROHEXANE	10	9.76	1		98	77 - 135%
108-90-7	CHLOROBENZENE	10	9.59	1		96	82 - 121%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10	1		100	85 - 128%
100-41-4	ETHYLBENZENE	10	9.33	1		93	83 - 126%
136777-61-	M+P-XYLENE	20	18.7	1		94	82 - 129%
95-47-6	O-XYLENE	10	9.84	1		98	87 - 132%
100-42-5	STYRENE	10	9.85	1		98	82 - 123%
75-25-2	BROMOFORM	10	10.1	1		101	79 - 118%
98-82-8	ISOPROPYLBENZENE	10	9.42	1		94	75 - 132%
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.88	1		99	77 - 128%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	11	1		110	74 - 130%
108-86-1	BROMOBENZENE	10	9.52	1		95	78 - 124%
103-65-1	N-PROPYLBENZENE	10	9.06	1		91	75 - 134%

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Lab ID: VL090514-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/14/2009
Date Analyzed: 05/14/2009
Prep Method: SW5030C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14981

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
95-49-8	2-CHLOROTOLUENE	10	9.55	1		95	77 - 128%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.24	1		92	77 - 131%
106-43-4	4-CHLOROTOLUENE	10	9.43	1		94	79 - 128%
98-06-6	TERT-BUTYLBENZENE	10	9.11	1		91	76 - 134%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.18	1		92	80 - 138%
135-98-8	SEC-BUTYLBENZENE	10	8.81	1		88	73 - 135%
541-73-1	1,3-DICHLOROBENZENE	10	9.56	1		96	79 - 126%
99-87-6	P-ISOPROPYLTOLUENE	10	9.1	1		91	72 - 132%
106-46-7	1,4-DICHLOROBENZENE	10	9.21	1		92	81 - 125%
104-51-8	N-BUTYLBENZENE	10	9.25	1		92	77 - 141%
95-50-1	1,2-DICHLOROBENZENE	10	9.59	1		96	82 - 128%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.6	2		96	64 - 134%
120-82-1	1,2,4-TRICHLOROBENZENE	10	9.41	1		94	80 - 128%
87-68-3	HEXACHLOROBUTADIENE	10	8.9	1		89	70 - 136%
91-20-3	NAPHTHALENE	10	10.4	1		104	78 - 125%
87-61-6	1,2,3-TRICHLOROBENZENE	10	9.58	1		96	79 - 131%

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Lab ID: VL090514-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/14/2009
Date Analyzed: 05/14/2009
Prep Method: SW5030C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14982

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
75-71-8	DICHLORODIFLUOROMETHANE	10	8.85	1		89	20	2
74-87-3	CHLOROMETHANE	10	9.34	1		93	20	0
75-01-4	VINYL CHLORIDE	10	9.58	1		96	20	3
74-83-9	BROMOMETHANE	10	9.73	1		97	20	2
75-00-3	CHLOROETHANE	10	9.33	1		93	20	2
75-69-4	TRICHLOROFLUOROMETHANE	10	10.2	1		102	20	2
75-35-4	1,1-DICHLOROETHENE	10	10.9	1		109	20	12
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10.9	1		109	20	4
67-64-1	ACETONE	40	38.9	10		97	30	7
74-88-4	IODOMETHANE	10	9.98	1		100	20	7
75-15-0	CARBON DISULFIDE	10	10.8	1		108	20	11
75-09-2	METHYLENE CHLORIDE	10	10.8	1		108	20	5
156-60-5	TRANS-1,2-DICHLOROETHENE	10	11.2	1		112	20	10
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	20.9	1		105	20	2
75-34-3	1,1-DICHLOROETHANE	10	10.7	1		107	20	6
108-05-4	VINYL ACETATE	10	7.57	2		76	20	10
156-59-2	CIS-1,2-DICHLOROETHENE	10	11.1	1		111	20	6
78-93-3	2-BUTANONE	40	42.8	10		107	30	4
74-97-5	BROMOCHLOROMETHANE	10	11.2	1		112	20	2
67-66-3	CHLOROFORM	10	11.2	1		112	20	7
71-55-6	1,1,1-TRICHLOROETHANE	10	10.9	1		109	20	7
594-20-7	2,2-DICHLOROPROPANE	10	11.7	1		117	20	9
56-23-5	CARBON TETRACHLORIDE	10	10.9	1		109	20	10
563-58-6	1,1-DICHLOROPROPENE	10	11	1		110	20	11
107-06-2	1,2-DICHLOROETHANE	10	10.7	1		107	20	5
71-43-2	BENZENE	10	10.8	1		108	20	8
79-01-6	TRICHLOROETHENE	10	10.8	1		108	20	8

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Lab ID: VL090514-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/14/2009
Date Analyzed: 05/14/2009
Prep Method: SW5030C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14982

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
78-87-5	1,2-DICHLOROPROPANE	10	11.2	1		112	20	6
74-95-3	DIBROMOMETHANE	10	10.8	1		108	20	0
75-27-4	BROMODICHLOROMETHANE	10	11.4	1		114	20	4
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	11.3	1		113	20	3
108-10-1	4-METHYL-2-PENTANONE	40	43.1	10		108	30	3
108-88-3	TOLUENE	10	9.91	1		99	20	8
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.4	1		104	20	4
79-00-5	1,1,2-TRICHLOROETHANE	10	10.4	1		104	20	4
591-78-6	2-HEXANONE	40	39.7	10		99	30	3
127-18-4	TETRACHLOROETHENE	10	10.2	1		102	20	8
142-28-9	1,3-DICHLOROPROPANE	10	9.73	1		97	20	0
124-48-1	DIBROMOCHLOROMETHANE	10	10.3	1		103	20	2
106-93-4	1,2-DIBROMOETHANE	10	9.89	1		99	20	0
544-10-5	1-CHLOROHEXANE	10	9.88	1		99	20	1
108-90-7	CHLOROBENZENE	10	10.2	1		102	20	6
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10.4	1		104	20	4
100-41-4	ETHYLBENZENE	10	10.1	1		101	20	8
136777-61-	M+P-XYLENE	20	20.3	1		102	20	8
95-47-6	O-XYLENE	10	10.4	1		104	20	5
100-42-5	STYRENE	10	10.2	1		102	20	4
75-25-2	BROMOFORM	10	10.5	1		105	20	4
98-82-8	ISOPROPYLBENZENE	10	10.1	1		101	20	7
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.73	1		97	20	2
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	10.7	1		107	20	2
108-86-1	BROMOBENZENE	10	10	1		100	20	5
103-65-1	N-PROPYLBENZENE	10	9.92	1		99	20	9
95-49-8	2-CHLOROTOLUENE	10	10.2	1		102	20	6

Data Package ID: *VL0905095-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0905095
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200209993

Lab ID: VL090514-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/14/2009
Date Analyzed: 05/14/2009
Prep Method: SW5030C

Prep Batch: VL090514-3
QCBatchID: VL090514-3-2
Run ID: VL090514-3A
Cleanup: NONE
Basis: N/A
File Name: C14982

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: UG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.71	1		97	20	5
106-43-4	4-CHLOROTOLUENE	10	9.97	1		100	20	6
98-06-6	TERT-BUTYLBENZENE	10	9.96	1		100	20	9
95-63-6	1,2,4-TRIMETHYLBENZENE	10	10	1		100	20	9
135-98-8	SEC-BUTYLBENZENE	10	9.58	1		96	20	8
541-73-1	1,3-DICHLOROBENZENE	10	9.93	1		99	20	4
99-87-6	P-ISOPROPYLTOLUENE	10	9.81	1		98	20	8
106-46-7	1,4-DICHLOROBENZENE	10	9.74	1		97	20	6
104-51-8	N-BUTYLBENZENE	10	9.94	1		99	20	7
95-50-1	1,2-DICHLOROBENZENE	10	10.1	1		101	20	6
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.93	2		99	20	3
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.1	1		101	20	7
87-68-3	HEXACHLOROBUTADIENE	10	9.51	1		95	20	7
91-20-3	NAPHTHALENE	10	11	1		110	20	5
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.1	1		101	20	6

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25	94		97		78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25	108		109		80 - 124
2037-26-5	TOLUENE-D8	25	95		97		81 - 119

Data Package ID: *VL0905095-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\051409\C14985.D Vial: 6
Acq On : 14 May 2009 18:06 Operator: SDW-sop525r12
Sample : VL090514-3MB Inst : CSS Instr
Misc : 10ml un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 14 20:22 2009 Quant Results File: 032209W.RES

Quant Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 14 13:18:52 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.32	96	1553944	25.00	ppb	0.00
53) Chlorobenzene-d5	12.46	82	677168	25.00	ppb	0.00
73) 1,4-Dichlorobenzene-d4	14.47	152	483114	25.00	ppb	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	8.52	113	518718	27.85	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 111.40%			
39) 1,2-dichloroethane-d4	8.99	65	371132	25.84	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 103.36%			
54) Toluene-d8	11.02	98	1731294	24.55	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 98.20%			
74) 4-Bromofluorobenzene	13.50	95	625687	24.85	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 99.40%			

Target Compounds Qvalue

sjw 5/15/09

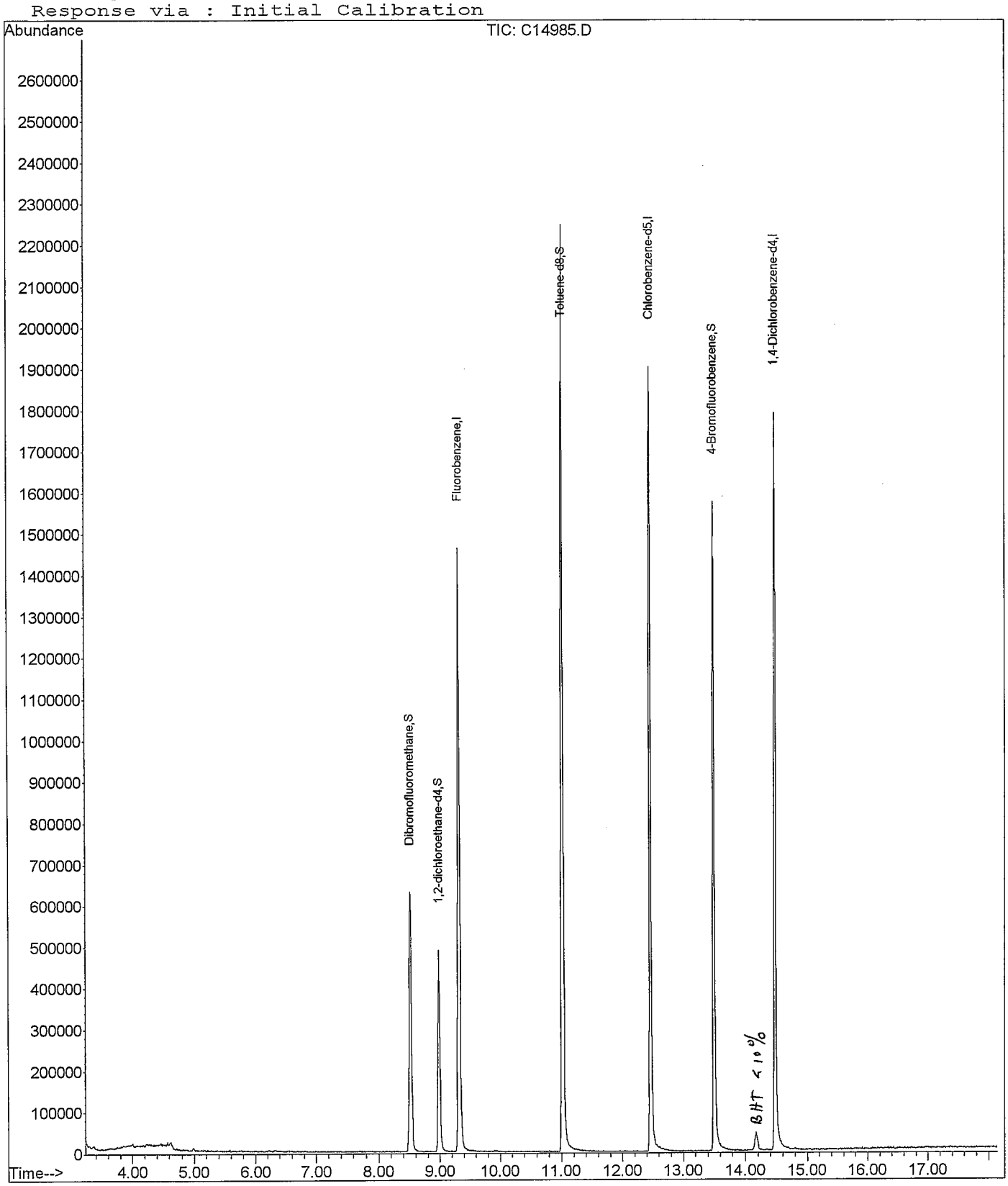
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051409\C14985.D
Acq On : 14 May 2009 18:06
Sample : VL090514-3MB
Misc : 10ml un-heated water
MS Integration Params: ettics.p
Quant Time: May 14 20:22 2009

Vial: 6
Operator: SDW-sop525r12
Inst : CSS Instr
Multiplr: 1.00
Quant Results File: 032209W.RES

Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 14 13:18:52 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: SDW-sop525r12 Date Acquired: 14 May 2009 18:06
Data File: C:\HPCHEM\1\DATA\051409\C14985.D
Name: VL090514-3MB
Misc: 10ml un-heated water
Method: C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title: GC/MS Volatiles (S.O.P. 525)
Library Searched: C:\DATABASE\NBS75K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc

C14985.D 032209W.M Thu May 14 21:07:02 2009

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\051409\C14988.D Vial: 9
Acq On : 14 May 2009 19:16 Operator: SDW-sop525r12
Sample : 0905095-1 Inst : CSS Instr
Misc : 10ml un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 14 20:23 2009 Quant Results File: 032209W.RES

Quant Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 14 13:18:52 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.32	96	1541225	25.00	ppb	0.00
53) Chlorobenzene-d5	12.46	82	671749	25.00	ppb	0.00
73) 1,4-Dichlorobenzene-d4	14.47	152	482470	25.00	ppb	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	8.52	113	527892	28.57	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 114.28%			
39) 1,2-dichloroethane-d4	8.99	65	366602	25.73	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 102.92%			
54) Toluene-d8	11.02	98	1699494	24.30	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 97.20%			
74) 4-Bromofluorobenzene	13.50	95	612807	24.37	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 97.48%			
Target Compounds						Qvalue
55) Toluene	11.09	91	51144	0.57	ppb	95
66) Ethylbenzene	12.53	91	46502	0.48	ppb	100
68) m,p-Xylene	12.63	106	60937	1.75	ppb	99
69) o-Xylene	13.00	106	22233	0.65	ppb	100

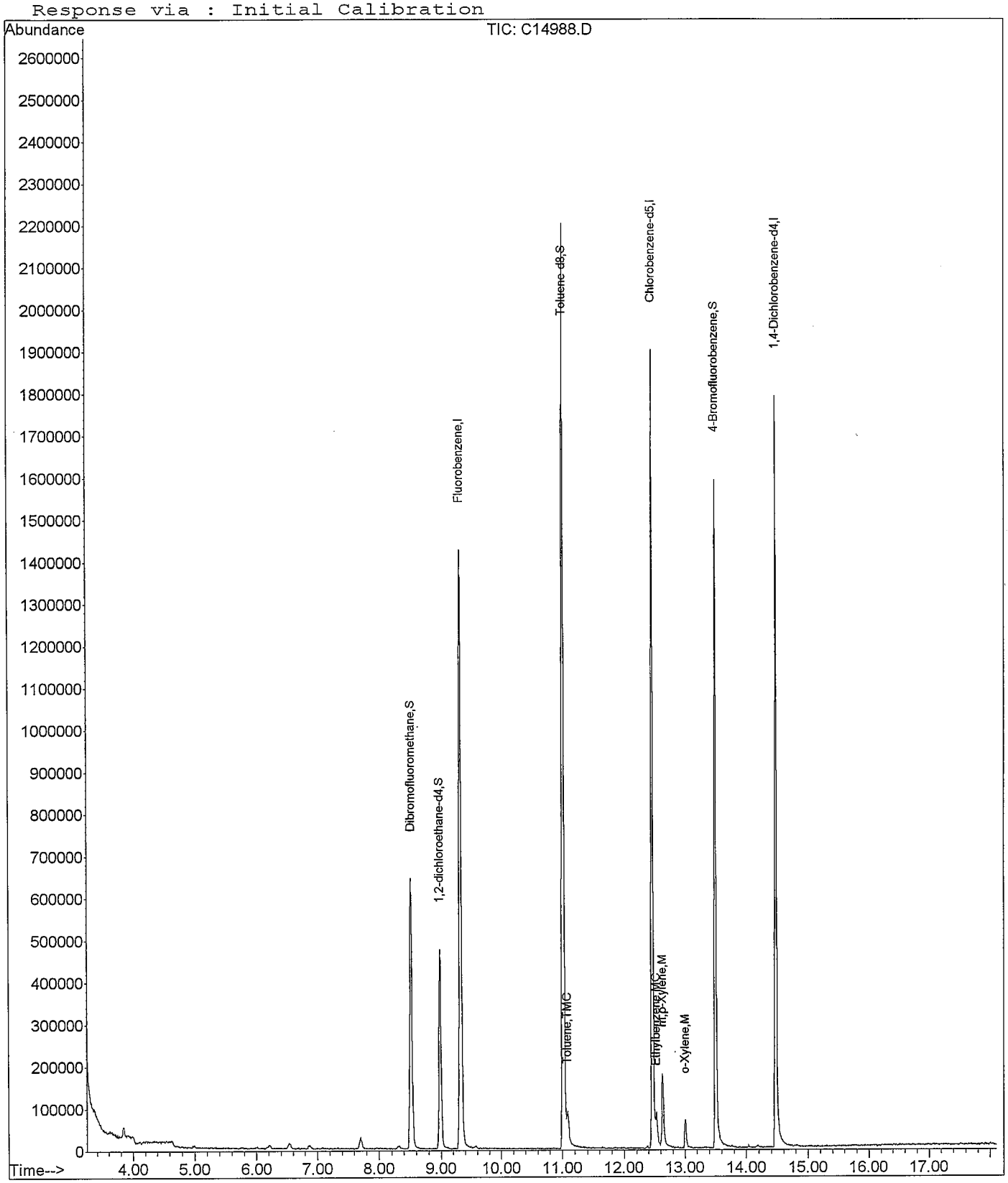
SDW 5/15/09

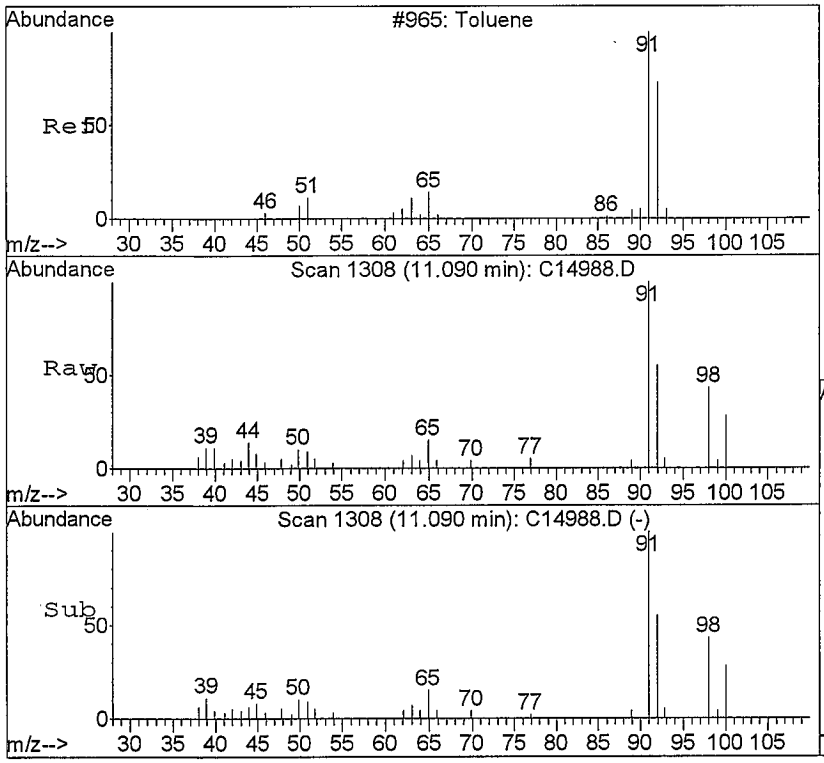
(#) = qualifier out of range (m) = manual integration
C14988.D 032209W.M Thu May 14 20:23:24 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051409\C14988.D Vial: 9
Acq On : 14 May 2009 19:16 Operator: SDW-sop525r12
Sample : 0905095-1 Inst : CSS Instr
Misc : 10ml un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 14 20:23 2009 Quant Results File: 032209W.RES

Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 14 13:18:52 2009
Response via : Initial Calibration

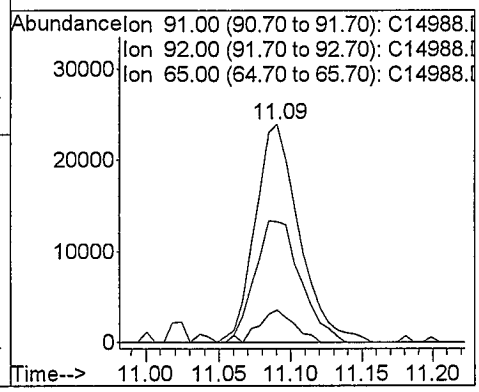


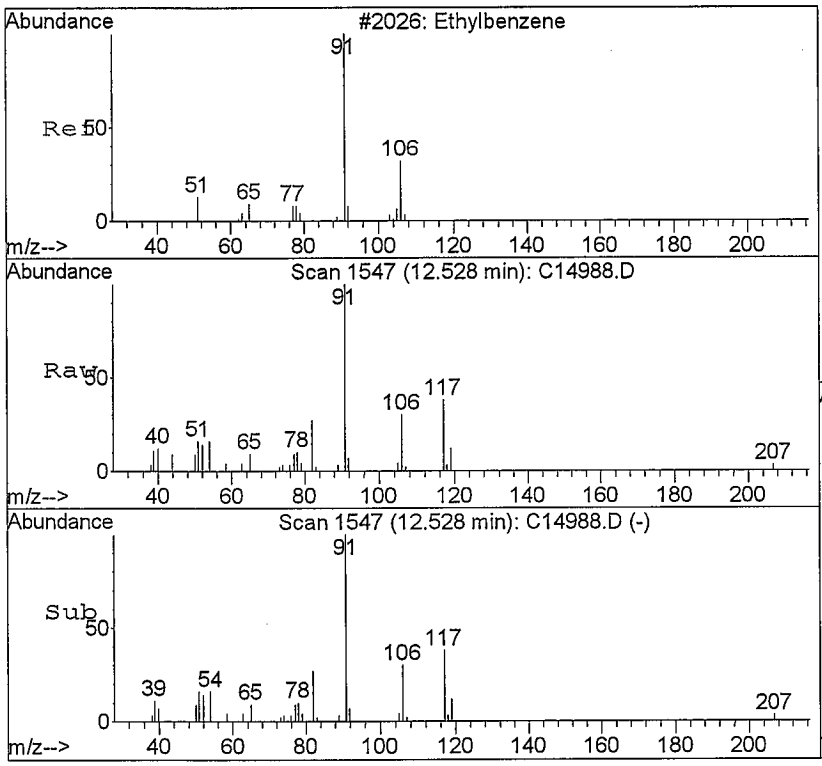


#55
Toluene
Concen: 0.57 ppb
RT: 11.09 min Scan# 1308
Delta R.T. 0.01 min
Lab File: C14988.D
Acq: 14 May 2009 19:16

Tgt Ion: 91 Resp: 51144

Ion	Ratio	Lower	Upper
91	100		
92	55.2	35.1	81.9
65	15.0	7.7	18.1

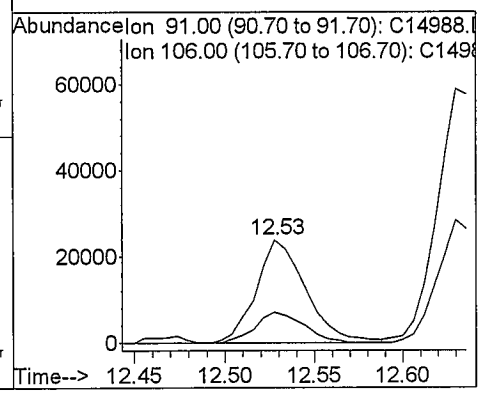


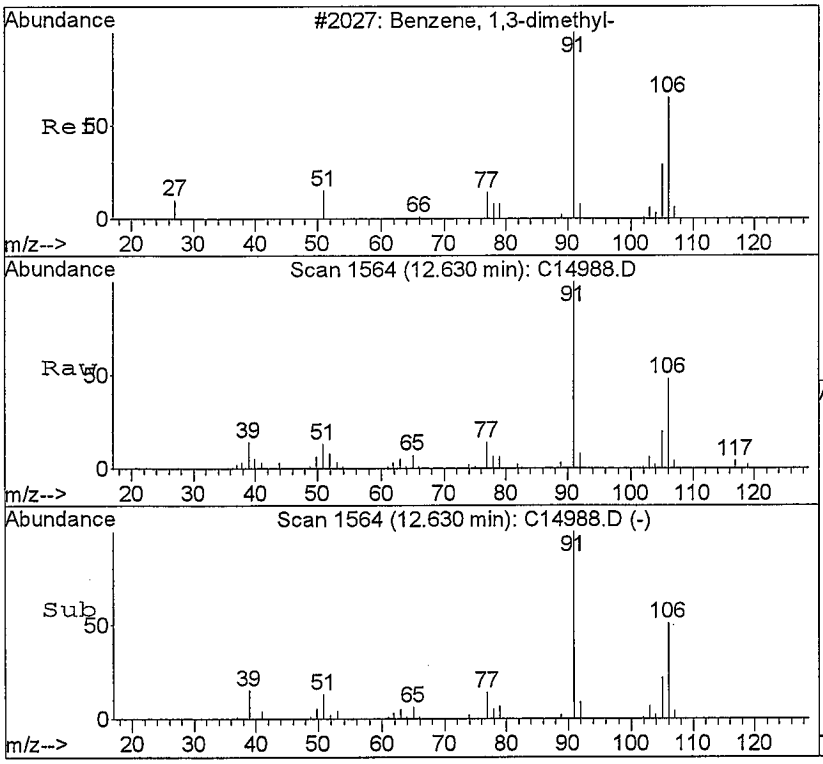


#66
Ethylbenzene
Concen: 0.48 ppb
RT: 12.53 min Scan# 1547
Delta R.T. 0.00 min
Lab File: C14988.D
Acq: 14 May 2009 19:16

Tgt Ion: 91 Resp: 46502

Ion	Ratio	Lower	Upper
91	100		
106	30.0	18.2	42.4

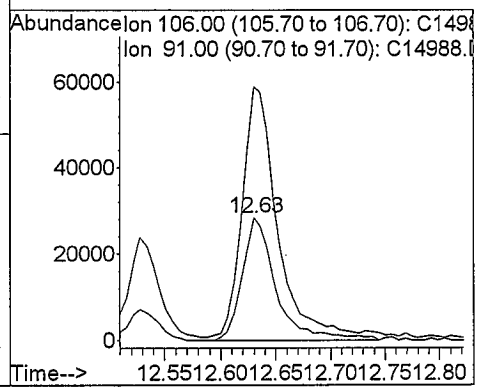


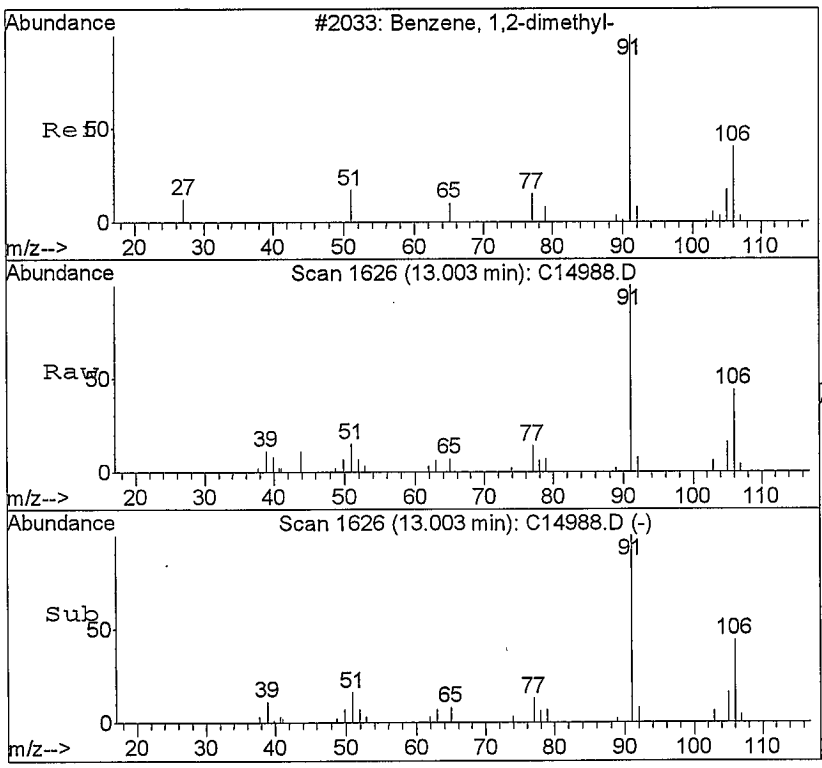


#68
m,p-Xylene
Concen: 1.75 ppb
RT: 12.63 min Scan# 1564
Delta R.T. 0.00 min
Lab File: C14988.D
Acq: 14 May 2009 19:16

Tgt Ion:106 Resp: 60937

Ion	Ratio	Lower	Upper
106	100		
91	204.4	122.0	284.8

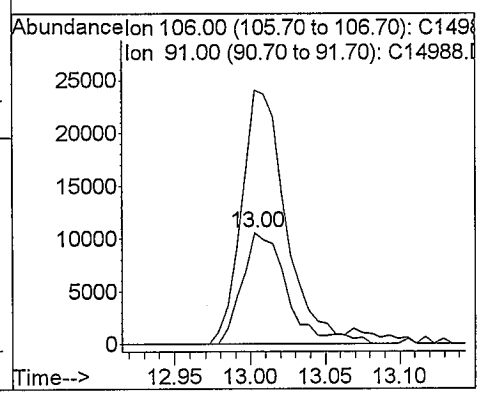




#69
o-Xylene
Concen: 0.65 ppb
RT: 13.00 min Scan# 1626
Delta R.T. 0.00 min
Lab File: C14988.D
Acq: 14 May 2009 19:16

Tgt Ion:106 Resp: 22233

Ion	Ratio	Lower	Upper
106	100		
91	227.7	136.3	317.9



Tentatively Identified Compound (LSC) summary

Operator ID: SDW-sop525r12 Date Acquired: 14 May 2009 19:16
Data File: C:\HPCHEM\1\DATA\051409\C14988.D
Name: 0905095-1
Misc: 10ml un-heated water
Method: C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title: GC/MS Volatiles (S.O.P. 525)
Library Searched: C:\DATABASE\NBS75K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc

C14988.D 032209W.M Thu May 14 21:07:41 2009

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\051409\C14987.D Vial: 8
Acq On : 14 May 2009 18:53 Operator: SDW-sop525r12
Sample : 0905095-2 Inst : CSS Instr
Misc : 10ml un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 14 20:23 2009 Quant Results File: 032209W.RES

Quant Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 14 13:18:52 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.32	96	1561332	25.00	ppb	0.00
53) Chlorobenzene-d5	12.47	82	681629	25.00	ppb	0.00
73) 1,4-Dichlorobenzene-d4	14.47	152	490681	25.00	ppb	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	8.51	113	510637	27.28	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 109.12%			
39) 1,2-dichloroethane-d4	8.98	65	364049	25.22	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 100.88%			
54) Toluene-d8	11.02	98	1680003	23.67	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 94.68%			
74) 4-Bromofluorobenzene	13.50	95	625080	24.44	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 97.76%			

Target Compounds Qvalue

SMW 5/15/09

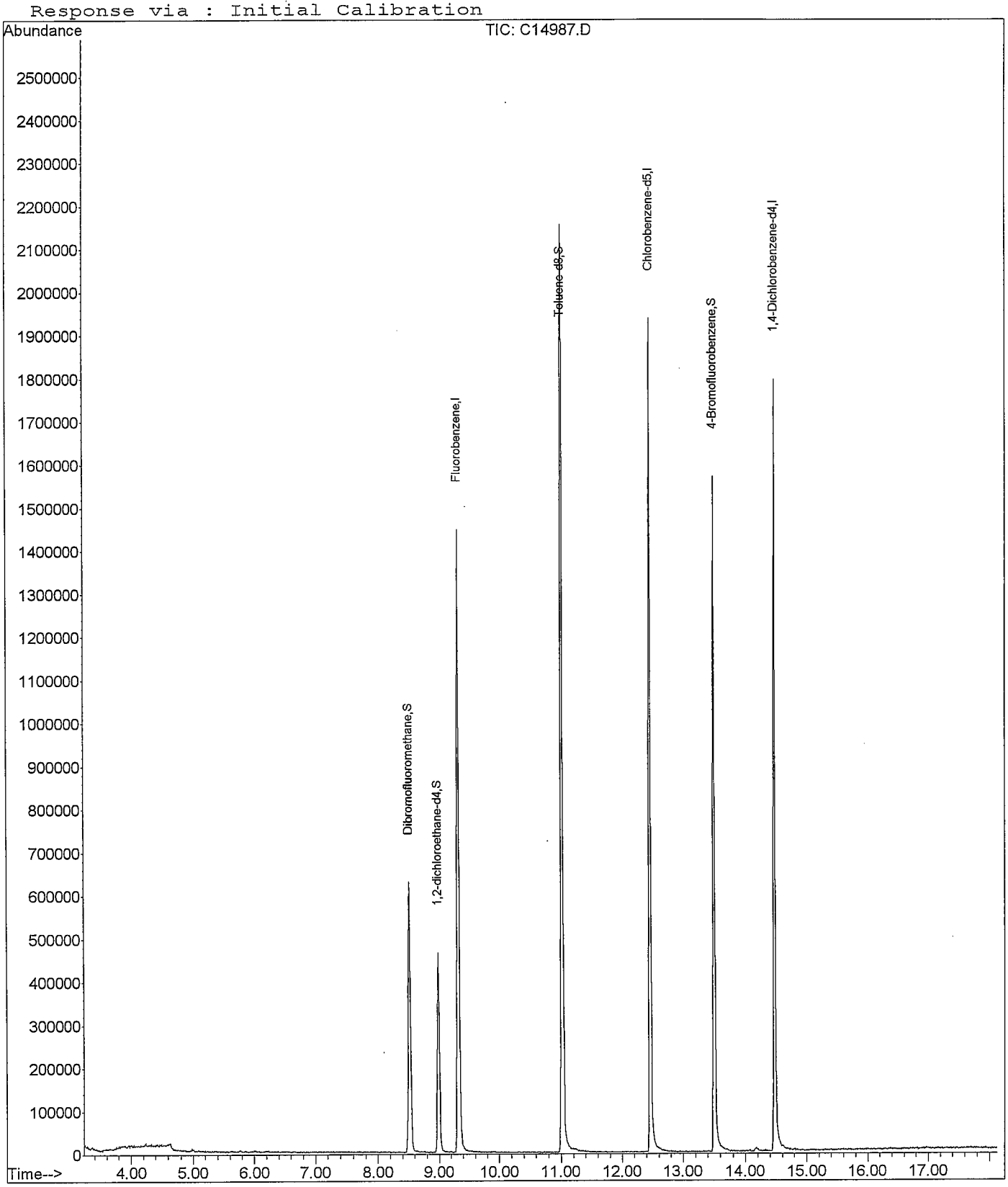
(#) = qualifier out of range (m) = manual integration
C14987.D 032209W.M Thu May 14 20:23:14 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051409\C14987.D
Acq On : 14 May 2009 18:53
Sample : 0905095-2
Misc : 10ml un-heated water
MS Integration Params: ettics.p
Quant Time: May 14 20:23 2009

Vial: 8
Operator: SDW-sop525r12
Inst : CSS Instr
Multiplr: 1.00
Quant Results File: 032209W.RES

Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 14 13:18:52 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: SDW-sop525r12 Date Acquired: 14 May 2009 18:53
Data File: C:\HPCHEM\1\DATA\051409\C14987.D
Name: 0905095-2
Misc: 10ml un-heated water
Method: C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title: GC/MS Volatiles (S.O.P. 525)
Library Searched: C:\DATABASE\NBS75K.L

TIC Top Hit name	RT	EstConc	Units	Area	IntStd	ISRT	ISArea	ISConc

C14987.D 032209W.M Thu May 14 21:07:28 2009