ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

GC/MS Volatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200221032

Work Order Number: 0910289

1. This report consists of 2 water samples. The samples were received cool and intact by ALS on 10/28/09. The aqueous sample was free of headspace prior to analysis.

2. The 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 14 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

11-10-09
Date

Organics Final Data Reviewer

11-09-09
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: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: Complaint 200221032
Client Project Number:
Client PO Number: OE PHA 09000000004

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Meadows WW	0910289-1		WATER	27-Oct-09	11:14
Trip Blank	0910289-2		WATER	27-Oct-09	

0910289

ALS Laboratory Group

225 Commerce Drive, Fort Collins, CO 80524
TF: 800-443-1511 PH: 970-490-1511 FX: 970-490-1522

Chain-of-Custody

Date 27Oct2009 | Page 1 of 1 | Lab ID

Project Name/No.	
REPORT TO:	Peter Gintautas
PHONE:	719-846-3091
FAX:	719-846-3384
E-MAIL:	peter.gintautas@state.co.us
COMPANY:	Colo. Oil & Gas Cons. Comm.
ADDRESS:	PO Box 108 Trinidad CO 81082

Sampler(s): Gintautas

Turnaround: Standard or Due 4 day

Disposal: By Lab or Retu

Provide additional information as needed in Comments below.

Circle Analytical Method Above

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (Type HCl, etc.)	No. of Containers	~~TPH Methane Ethane Ethene~~	VOCs	BTEX + MtBE	SVOCs	OC Pesticides	~~PCBs~~ TOC	Herbicides	Explosives	TCLP Organics SW1311	TCLP Metals SW1311	Total Metals (ICP) or Hg	Dissolved Metals (ICP) or Hg	Total Metals (ICP-MS)	Dissolved Metals (ICP-MS)	~~Hexavalent Chromium~~	Inorganic Anions	Solids	pH	Perchlorate	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium
Complaint 200221017																																	
Stevens WW	27Oct	09:36		W	HCl	6		X		X		X						X		X	X	X	X	X	X								
Complaint 200221028					none	6	X			X		X						X		X	X	X	X	Y	X								
Ligano WW	27Oct	10:35		W	HCl	3		X				X																					
Complaint 200221032	27Oct		1		none	5	X											X		X	X	X	X	Y	X								
Meadows WW	↓	11:14	1	W	HCl	3		X																									
Complaint 200221031					none	5	X											X		X	X	X	X	Y	X								
Bieber WW	27Oct	12:06		W	HCl	3		X				X																					

(1) trip blanks 40mL VOA (2)

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

For metals or anions, please detail analyte list below.

Comments: (Trip Blank + Complaint 200221032) = 8260_25 + tert butanol / TICs

Anions = Br, Cl, F, Na, NO3, SO4

Filter + Preserve metals upon receipt

200.7 = B, Ba, Be, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Na, Sr, Zn, Si

200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Tl, U

Originator: Retain pink page or a photocopy!

Form 202r7 (5/19/09)

Relinquished By: (1)	Relinquished By:
Signature	Signature
Printed Name Peter Gintautas	Printed Name
Date 27Oct09 Time 16:20	Date Time
Company COGCC	Company

Received By: (1)	Received By:
Signature	Signature
Printed Name Lauren Schmitz	Printed Name
Date 10/28/09 Time 1015	Date Time
Company ALS	Company

5

ALS Laboratory Group - Fort Collins

CONDITION OF SAMPLE UPON RECEIPT FORM

0910289

Client: COGCC

Workorder No: ~~0910288~~ LS 10/28/09

Project Manager: AW

Initials: LAS Date: 10/28/09

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) * LS 10/29/09
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	2							
Temperature (°C):	2.7°	3.8°							
No. of custody seals on cooler:	1	1							
DOT Survey/ Acceptance Information: External µR/hr reading:	15	15							
Background µR/hr reading:	13								

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

* 2 trip blanks not accounted for on COC - supplemental letter states they are to go with this workorder (sample #2 = 2 trip blanks)

* metals will be filtered and preserved by the lab (prior to analysis)

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

Project Manager Signature / Date: _____ 11/2/09

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

Form 201r22.xls (6/1/09)

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: VL091029-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18300

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
75-65-0	TERT-BUTANOL	1	200	200	U	
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	

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: VL091029-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18300

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

79-01-6	TRICHLOROETHENE	1	1	1	U	
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	

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: VL091029-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18300

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

106-43-4	4-CHLOROTOLUENE	1	1	1	U	
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	23.8		25	95	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25.7		25	103	80 - 124
2037-26-5	TOLUENE-D8	23.8		25	95	81 - 119

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID:

Lab ID: VL091029-3MB

Sample Matrix: WATER
%Moisture: N/A
Date Collected: N/A
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C18300

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

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID: Meadows WW
Lab ID: 0910289-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received
File Name: C18308

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
75-65-0	TERT-BUTANOL	1	200	200	U	
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	

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID: Meadows WW
Lab ID: 0910289-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received
File Name: C18308

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

79-01-6	TRICHLOROETHENE	1	1	1	U	
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	

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Field ID: Meadows WW
Lab ID: 0910289-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received
File Name: C18308

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

106-43-4	4-CHLOROTOLUENE	1	1	1	U	
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	23.7		25	95	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	26		25	104	80 - 124
2037-26-5	TOLUENE-D8	23.1		25	93	81 - 119

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID: Meadows WW
Lab ID: 0910289-1

Sample Matrix: WATER
%Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C18308

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

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID: Trip Blank
Lab ID: 0910289-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received
File Name: C18301

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
75-65-0	TERT-BUTANOL	1	200	200	U	
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	

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Field ID: Trip Blank
Lab ID: 0910289-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received
File Name: C18301

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

79-01-6	TRICHLOROETHENE	1	1	1	U	
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	

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Field ID: Trip Blank
Lab ID: 0910289-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09
Prep Method: SW5030 Rev C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received
File Name: C18301

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

106-43-4	4-CHLOROTOLUENE	1	1	1	U	
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	23.6		25	94	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25.7		25	103	80 - 124
2037-26-5	TOLUENE-D8	24		25	96	81 - 119

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Field ID: Trip Blank
Lab ID: 0910289-2

Sample Matrix: WATER
%Moisture: N/A
Date Collected: 27-Oct-09
Date Extracted: 29-Oct-09
Date Analyzed: 29-Oct-09

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C18301

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

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0910289

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200221032

Lab ID: VL091029-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/29/2009
Date Analyzed: 10/29/2009
Prep Method: SW5030C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18297

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	9.4	1		94	38 - 131%
74-87-3	CHLOROMETHANE	10	10.3	1		103	62 - 141%
75-01-4	VINYL CHLORIDE	10	11	1		110	77 - 124%
74-83-9	BROMOMETHANE	10	10.6	1		106	76 - 133%
75-00-3	CHLOROETHANE	10	11.6	1		116	81 - 130%
75-69-4	TRICHLOROFLUOROMETHANE	10	10.9	1		109	84 - 146%
75-35-4	1,1-DICHLOROETHENE	10	10	1		100	75 - 126%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10.6	1		106	71 - 144%
67-64-1	ACETONE	40	46.1	10		115	50 - 150%
74-88-4	IODOMETHANE	10	11.4	1		114	76 - 116%
75-15-0	CARBON DISULFIDE	10	10.3	1		103	68 - 129%
75-09-2	METHYLENE CHLORIDE	10	10.1	1		101	22 - 146%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.2	1		102	76 - 135%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	20.5	1		103	75 - 125%
75-34-3	1,1-DICHLOROETHANE	10	10.3	1		103	77 - 131%
108-05-4	VINYL ACETATE	10	10.4	2		104	56 - 151%
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.3	1		103	81 - 121%
78-93-3	2-BUTANONE	40	44.5	10		111	50 - 150%
74-97-5	BROMOCHLOROMETHANE	10	10.6	1		106	85 - 126%
67-66-3	CHLOROFORM	10	10.5	1		105	84 - 125%
71-55-6	1,1,1-TRICHLOROETHANE	10	9.96	1		100	82 - 129%
594-20-7	2,2-DICHLOROPROPANE	10	10.4	1		104	79 - 130%
56-23-5	CARBON TETRACHLORIDE	10	9.97	1		100	83 - 135%
563-58-6	1,1-DICHLOROPROPENE	10	10.2	1		102	85 - 127%
107-06-2	1,2-DICHLOROETHANE	10	10.7	1		107	84 - 126%
71-43-2	BENZENE	10	10.3	1		103	82 - 122%

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Lab ID: VL091029-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/29/2009
Date Analyzed: 10/29/2009
Prep Method: SW5030C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18297

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	10.2	1		102	82 - 121%
78-87-5	1,2-DICHLOROPROPANE	10	10.4	1		104	81 - 121%
74-95-3	DIBROMOMETHANE	10	10.6	1		106	81 - 125%
75-27-4	BROMODICHLOROMETHANE	10	10.8	1		108	82 - 120%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.6	1		106	79 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	44.5	10		111	50 - 150%
108-88-3	TOLUENE	10	9.54	1		95	83 - 121%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.44	1		94	78 - 113%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.44	1		94	82 - 122%
591-78-6	2-HEXANONE	40	42.6	10		106	50 - 150%
127-18-4	TETRACHLOROETHENE	10	9.64	1		96	79 - 136%
142-28-9	1,3-DICHLOROPROPANE	10	9.65	1		97	80 - 126%
124-48-1	DIBROMOCHLOROMETHANE	10	10	1		100	80 - 123%
106-93-4	1,2-DIBROMOETHANE	10	9.84	1		98	85 - 124%
544-10-5	1-CHLOROHEXANE	10	10.2	1		102	77 - 135%
108-90-7	CHLOROBENZENE	10	9.73	1		97	82 - 121%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.3	1		93	85 - 128%
100-41-4	ETHYLBENZENE	10	9.77	1		98	83 - 126%
136777-61-2	M+P-XYLENE	20	20.1	1		100	82 - 129%
95-47-6	O-XYLENE	10	9.9	1		99	87 - 132%
100-42-5	STYRENE	10	10.2	1		102	82 - 123%
75-25-2	BROMOFORM	10	10.1	1		101	79 - 118%
98-82-8	ISOPROPYLBENZENE	10	9.62	1		96	75 - 132%
96-18-4	1,2,3-TRICHLOROPROPANE	10	8.57	1		86	77 - 128%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	8.61	1		86	74 - 130%
108-86-1	BROMOBENZENE	10	9.2	1		92	78 - 124%
103-65-1	N-PROPYLBENZENE	10	9.19	1		92	75 - 134%

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Lab ID: VL091029-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/29/2009
Date Analyzed: 10/29/2009
Prep Method: SW5030C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18297

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	9.28	1		93	77 - 128%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	9.42	1		94	77 - 131%
106-43-4	4-CHLOROTOLUENE	10	9.28	1		93	79 - 128%
98-06-6	TERT-BUTYLBENZENE	10	9.07	1		91	76 - 134%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.47	1		95	80 - 138%
135-98-8	SEC-BUTYLBENZENE	10	9.17	1		92	73 - 135%
541-73-1	1,3-DICHLOROBENZENE	10	9	1		90	79 - 126%
99-87-6	P-ISOPROPYLTOLUENE	10	8.93	1		89	72 - 132%
106-46-7	1,4-DICHLOROBENZENE	10	9.14	1		91	81 - 125%
104-51-8	N-BUTYLBENZENE	10	9.54	1		95	77 - 141%
95-50-1	1,2-DICHLOROBENZENE	10	9	1		90	82 - 128%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.16	2		92	64 - 134%
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.1	1		101	80 - 128%
87-68-3	HEXACHLOROBUTADIENE	10	9.15	1		92	70 - 136%
91-20-3	NAPHTHALENE	10	11.2	1		112	78 - 125%
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.2	1		102	79 - 131%

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Lab ID: VL091029-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/29/2009
Date Analyzed: 10/29/2009
Prep Method: SW5030C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18298

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	10.1	1		101	20	7
74-87-3	CHLOROMETHANE	10	10.8	1		108	20	5
75-01-4	VINYL CHLORIDE	10	11.7	1		117	20	7
74-83-9	BROMOMETHANE	10	11.2	1		112	20	5
75-00-3	CHLOROETHANE	10	12.4	1		124	20	6
75-69-4	TRICHLOROFLUOROMETHANE	10	11.5	1		115	20	5
75-35-4	1,1-DICHLOROETHENE	10	10.5	1		105	20	5
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10.8	1		108	20	2
67-64-1	ACETONE	40	45.2	10		113	30	2
74-88-4	IODOMETHANE	10	11.6	1		116	20	3
75-15-0	CARBON DISULFIDE	10	10.7	1		107	20	3
75-09-2	METHYLENE CHLORIDE	10	10.6	1		106	20	5
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.4	1		104	20	2
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	21.4	1		107	20	4
75-34-3	1,1-DICHLOROETHANE	10	10.8	1		108	20	4
108-05-4	VINYL ACETATE	10	10.4	2		104	20	0
156-59-2	CIS-1,2-DICHLOROETHENE	10	11	1		110	20	6
78-93-3	2-BUTANONE	40	47.2	10		118	30	6
74-97-5	BROMOCHLOROMETHANE	10	11.2	1		112	20	5
67-66-3	CHLOROFORM	10	11.4	1		114	20	8
71-55-6	1,1,1-TRICHLOROETHANE	10	10.6	1		106	20	6
594-20-7	2,2-DICHLOROPROPANE	10	10.9	1		109	20	5
56-23-5	CARBON TETRACHLORIDE	10	10.6	1		106	20	6
563-58-6	1,1-DICHLOROPROPENE	10	10.8	1		108	20	5
107-06-2	1,2-DICHLOROETHANE	10	11.3	1		113	20	6
71-43-2	BENZENE	10	10.7	1		107	20	4
79-01-6	TRICHLOROETHENE	10	10.9	1		109	20	6

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Lab ID: VL091029-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/29/2009
Date Analyzed: 10/29/2009
Prep Method: SW5030C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18298

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	11.4	1		114	20	9
74-95-3	DIBROMOMETHANE	10	11.3	1		113	20	7
75-27-4	BROMODICHLOROMETHANE	10	11.5	1		115	20	7
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	11.3	1		113	20	7
108-10-1	4-METHYL-2-PENTANONE	40	46.9	10		117	30	5
108-88-3	TOLUENE	10	10.1	1		101	20	6
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.1	1		101	20	7
79-00-5	1,1,2-TRICHLOROETHANE	10	10.2	1		102	20	8
591-78-6	2-HEXANONE	40	43.8	10		109	30	3
127-18-4	TETRACHLOROETHENE	10	10.4	1		104	20	7
142-28-9	1,3-DICHLOROPROPANE	10	10.2	1		102	20	6
124-48-1	DIBROMOCHLOROMETHANE	10	10.7	1		107	20	7
106-93-4	1,2-DIBROMOETHANE	10	10.2	1		102	20	4
544-10-5	1-CHLOROHEXANE	10	10.6	1		106	20	3
108-90-7	CHLOROBENZENE	10	10.4	1		104	20	7
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10.2	1		102	20	9
100-41-4	ETHYLBENZENE	10	10.6	1		106	20	8
136777-61-2	M+P-XYLENE	20	21.3	1		106	20	6
95-47-6	O-XYLENE	10	10.7	1		107	20	7
100-42-5	STYRENE	10	10.9	1		109	20	7
75-25-2	BROMOFORM	10	10.5	1		105	20	4
98-82-8	ISOPROPYLBENZENE	10	10.3	1		103	20	7
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.13	1		91	20	6
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	9.18	1		92	20	6
108-86-1	BROMOBENZENE	10	10	1		100	20	8
103-65-1	N-PROPYLBENZENE	10	10	1		100	20	9
95-49-8	2-CHLOROTOLUENE	10	10	1		100	20	7

Data Package ID: *VL0910289-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 0910289
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200221032

Lab ID: VL091029-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/29/2009
Date Analyzed: 10/29/2009
Prep Method: SW5030C

Prep Batch: VL091029-3
QCBatchID: VL091029-3-2
Run ID: VL091029-3A
Cleanup: NONE
Basis: N/A
File Name: C18298

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	10.3	1		103	20	9
106-43-4	4-CHLOROTOLUENE	10	9.96	1		100	20	7
98-06-6	TERT-BUTYLBENZENE	10	9.69	1		97	20	7
95-63-6	1,2,4-TRIMETHYLBENZENE	10	10.2	1		102	20	7
135-98-8	SEC-BUTYLBENZENE	10	9.8	1		98	20	7
541-73-1	1,3-DICHLOROBENZENE	10	9.89	1		99	20	9
99-87-6	P-ISOPROPYLTOLUENE	10	9.85	1		99	20	10
106-46-7	1,4-DICHLOROBENZENE	10	9.83	1		98	20	7
104-51-8	N-BUTYLBENZENE	10	10.2	1		102	20	7
95-50-1	1,2-DICHLOROBENZENE	10	9.68	1		97	20	7
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.62	2		96	20	5
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.7	1		107	20	6
87-68-3	HEXACHLOROBUTADIENE	10	9.75	1		97	20	6
91-20-3	NAPHTHALENE	10	11.7	1		117	20	5
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.6	1		106	20	4

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		94		78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25	103		103		80 - 124
2037-26-5	TOLUENE-D8	25	95		95		81 - 119

Data Package ID: *VL0910289-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\102909\C18300.D Vial: 9
Acq On : 29 Oct 2009 11:54 Operator: sdw-sop525r12
Sample : VL091029-3MB Inst : CSS Instr
Misc : 10mls UN-htd purge water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 29 12:33 2009 Quant Results File: 090209W.RES

Quant Method : C:\HPCHEM\1\METHODS\090209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu Oct 29 11:41:35 2009
Response via : Initial Calibration
DataAcq Meth : 090209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.31	96	1437389	25.00	ppb	-0.01
57) Chlorobenzene-d5	12.45	82	560299	25.00	ppb	-0.01
77) 1,4-Dichlorobenzene-d4	14.46	152	417009	25.00	ppb	-0.01
System Monitoring Compounds						
36) Dibromofluoromethane	8.50	113	404356	25.70	ppb	-0.02
Spiked Amount 25.000	Range 80 - 124		Recovery = 102.80%			
41) 1,2-dichloroethane-d4	8.97	65	254074	25.16	ppb	-0.01
Spiked Amount 25.000	Range 62 - 139		Recovery = 100.64%			
58) Toluene-d8	11.01	98	1335247	23.81	ppb	-0.01
Spiked Amount 25.000	Range 81 - 119		Recovery = 95.24%			
78) 4-Bromofluorobenzene	13.49	95	454554	23.79	ppb	-0.01
Spiked Amount 25.000	Range 78 - 129		Recovery = 95.16%			

Target Compounds Qvalue

All <MDL

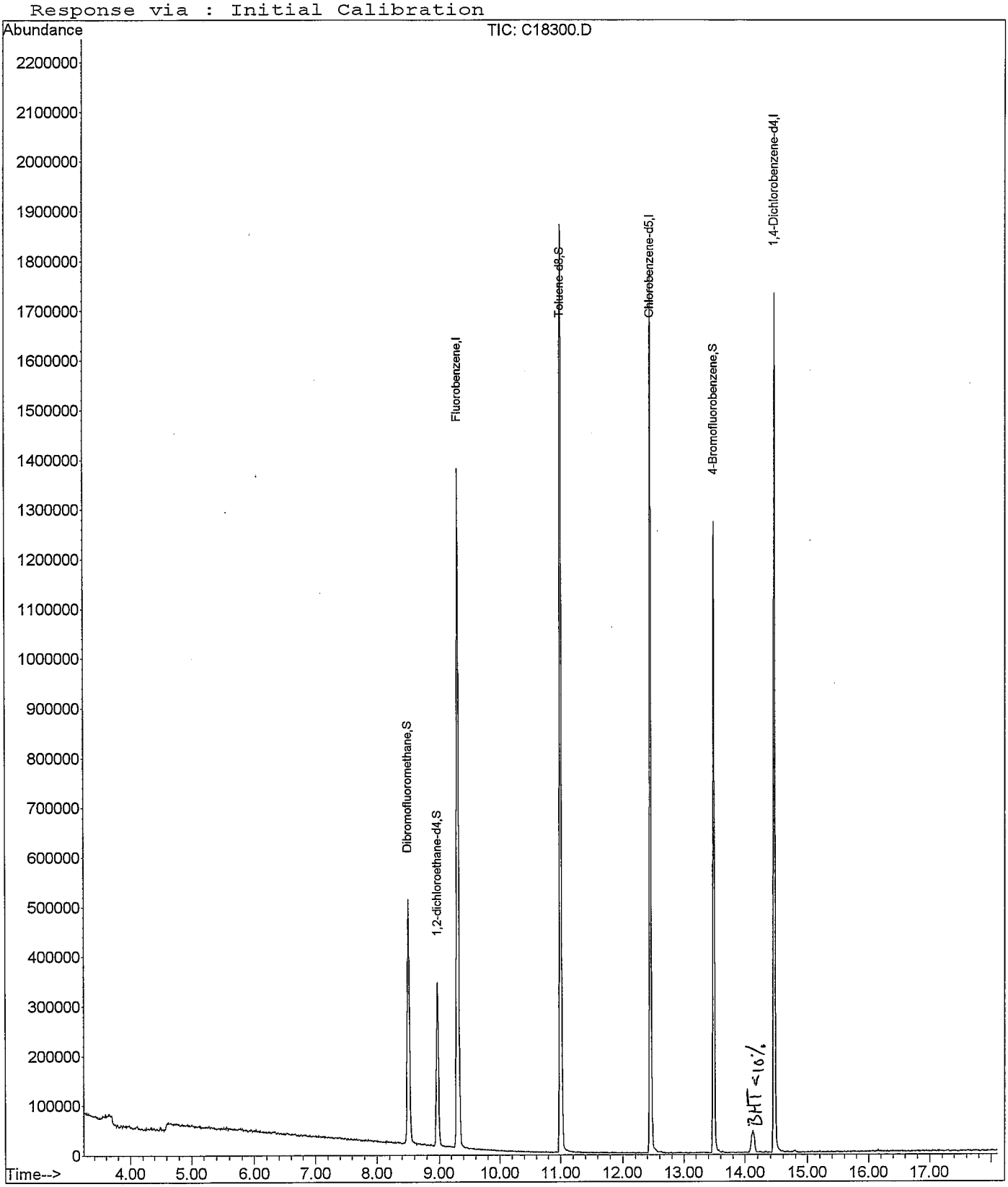
SW 10/29/09

(#) = qualifier out of range (m) = manual integration
C18300.D 090209W.M Thu Oct 29 12:33:47 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\102909\C18300.D Vial: 9
Acq On : 29 Oct 2009 11:54 Operator: sdw-sop525r12
Sample : VL091029-3MB Inst : CSS Instr
Misc : 10mls UN-htd purge water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 29 12:33 2009 Quant Results File: 090209W.RES

Method : C:\HPCHEM\1\METHODS\090209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu Oct 29 11:41:35 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: sdw-sop525r12 Date Acquired: 29 Oct 2009 11:54
Data File: C:\HPCHEM\1\DATA\102909\C18300.D
Name: VL091029-3MB
Misc: 10mls UN-htd purge water
Method: C:\HPCHEM\1\METHODS\090209W.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

C18300.D 090209W.M Fri Oct 30 09:11:41 2009

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\102909\C18308.D Vial: 17
Acq On : 29 Oct 2009 15:01 Operator: sdw-sop525r12
Sample : 0910289-1 Inst : CSS Instr
Misc : 10mls UN-htd purge water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 29 16:01 2009 Quant Results File: 090209W.RES

Quant Method : C:\HPCHEM\1\METHODS\090209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu Oct 29 11:41:35 2009
Response via : Initial Calibration
DataAcq Meth : 090209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.31	96	1379344	25.00	ppb	0.00
57) Chlorobenzene-d5	12.45	82	550494	25.00	ppb	0.00
77) 1,4-Dichlorobenzene-d4	14.46	152	402509	25.00	ppb	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.51	113	393161	26.04	ppb	-0.02
Spiked Amount 25.000	Range 80 - 124		Recovery = 104.16%			
41) 1,2-dichloroethane-d4	8.97	65	253704	26.18	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 104.72%			
58) Toluene-d8	11.01	98	1274913	23.13	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 92.52%			
78) 4-Bromofluorobenzene	13.49	95	437242	23.70	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 94.80%			
Target Compounds						Qvalue
18) Acetonitrile	6.33	41	1720	Below Cal	#	25
20) tert-Butanol	6.35	59	5602	Below Cal	#	83

All <MDL

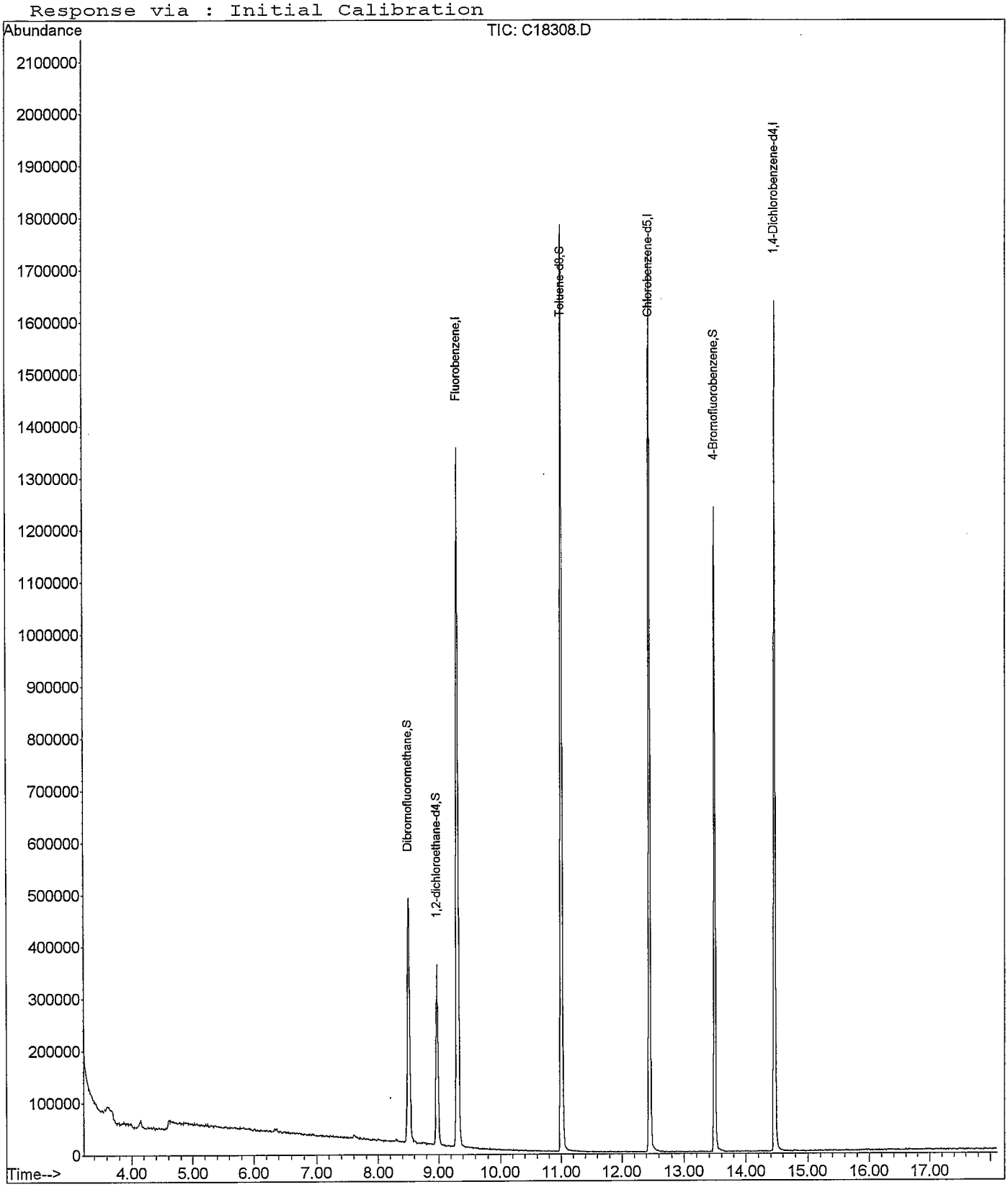
sdw 10/29/09

(#) = qualifier out of range (m) = manual integration
C18308.D 090209W.M Thu Oct 29 16:01:19 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\102909\C18308.D Vial: 17
Acq On : 29 Oct 2009 15:01 Operator: sdw-sop525r12
Sample : 0910289-1 Inst : CSS Instr
Misc : 10mls UN-htd purge water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 29 16:01 2009 Quant Results File: 090209W.RES

Method : C:\HPCHEM\1\METHODS\090209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu Oct 29 11:41:35 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: sdw-sop525r12 Date Acquired: 29 Oct 2009 15:01
Data File: C:\HPCHEM\1\DATA\102909\C18308.D
Name: 0910289-1
Misc: 10mls UN-htd purge water
Method: C:\HPCHEM\1\METHODS\090209W.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

C18308.D 090209W.M Fri Oct 30 09:12:35 2009

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\102909\C18301.D Vial: 10
Acq On : 29 Oct 2009 12:18 Operator: sdw-sop525r12
Sample : 0910289-2 Inst : CSS Instr
Misc : 10mls UN-htd purge water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 29 13:47 2009 Quant Results File: 090209W.RES

Quant Method : C:\HPCHEM\1\METHODS\090209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu Oct 29 11:41:35 2009
Response via : Initial Calibration
DataAcq Meth : 090209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.31	96	1439969	25.00	ppb	-0.02
57) Chlorobenzene-d5	12.45	82	556715	25.00	ppb	0.00
77) 1,4-Dichlorobenzene-d4	14.46	152	412343	25.00	ppb	0.00
System Monitoring Compounds						
36) Dibromofluoromethane	8.51	113	405303	25.71	ppb	-0.02
Spiked Amount 25.000	Range 80 - 124		Recovery =	102.84%		
41) 1,2-dichloroethane-d4	8.98	65	256634	25.36	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery =	101.44%		
58) Toluene-d8	11.00	98	1338937	24.02	ppb	-0.02
Spiked Amount 25.000	Range 81 - 119		Recovery =	96.08%		
78) 4-Bromofluorobenzene	13.49	95	445642	23.58	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery =	94.32%		
Target Compounds						Qvalue
19) Methylene chloride	6.31	84	6432	Below Cal		93

All cmpds

SMW 10/24/09

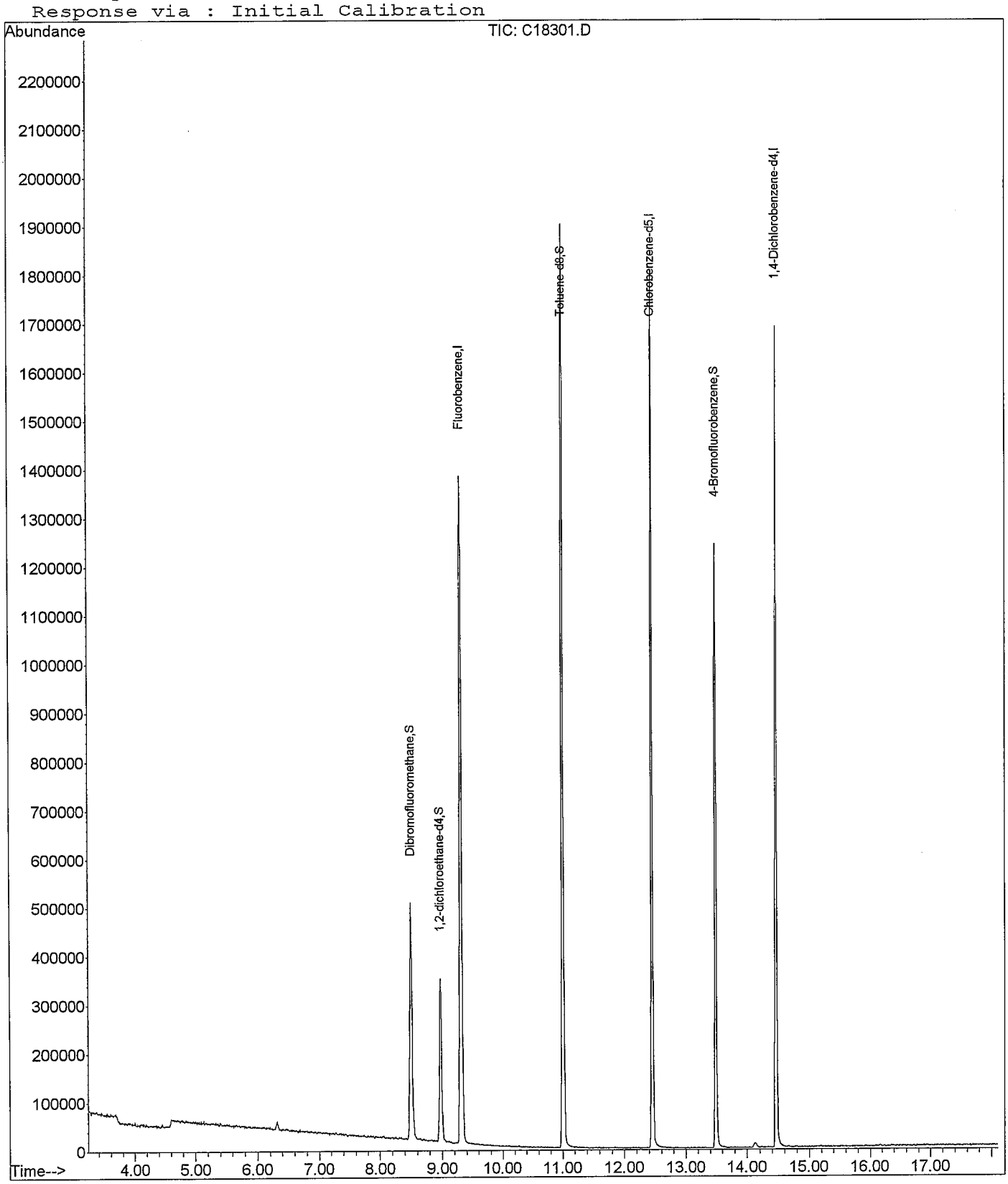
(#) = qualifier out of range (m) = manual integration
C18301.D 090209W.M Thu Oct 29 13:47:58 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\102909\C18301.D
Acq On : 29 Oct 2009 12:18
Sample : 0910289-2
Misc : 10mls UN-htd purge water
MS Integration Params: ettics.p
Quant Time: Oct 29 13:47 2009

Vial: 10
Operator: sdw-sop525r12
Inst : CSS Instr
Multiplr: 1.00
Quant Results File: 090209W.RES

Method : C:\HPCHEM\1\METHODS\090209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu Oct 29 11:41:35 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: sdw-sop525r12 Date Acquired: 29 Oct 2009 12:18
Data File: C:\HPCHEM\1\DATA\102909\C18301.D
Name: 0910289-2
Misc: 10mls UN-htd purge water
Method: C:\HPCHEM\1\METHODS\090209W.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

C18301.D 090209W.M Fri Oct 30 09:11:55 2009