ALS Paragon

GC/MS Volatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200206467

Work Order Number: 0903159

1. This report consists of 2 water samples. The samples were received cool and intact by ALS Paragon on 03/20/09. 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 Paragon 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 Paragon 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

3-29-09
Date

Shawn D. White
Organics Final Data Reviewer

3-27-09
Date

ALS Paragon
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 Paragon

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: Complaint 200206467
Client Project Number:
Client PO Number: OE PHA 09000000004

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Kosslyn 090319	0903159-1		WATER	19-Mar-09	13:45
Trip Blank	0903159-2		WATER	20-Mar-09	

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) 0903159

Chain-of-Custody Date 3/19/09 Page 1 of 1

Originator: Retain pink copy!

Project Name/No.: NFR **Sampler(s):** C. Whitmore Turnaround (circle one) (**Standard**) or **Rush (Due** 14) (**Dispose**) **Date** 30d or **Return to Client**

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

Complaints: PULSIFER WW: 200204502
VANAELSTYN WW: 200204503

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_25 Full + TICs	~~BTEX (only) SW8021~~ Methane, ethane, ethene	SVOCs SW8270C_ Full + TICs	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	~~Explosives~~ TOC 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~~ Alkalinity Total HCO3, CO3	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~~ 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.	Anion Cation Balance
GORDONROSS 090319	3/19/09	10:05		W	None HCl H2SO4	10	X	X	X				X				X		X	X	X	X	X	X										X	X
PULSIFER 090319	↓	11:05		↓	↓	↓	X	X	X				X				X		X	X	X	X	X	X										X	X
VANAELSTYN 090319	↓	12:40		↓	↓	↓	X	X	X				X				X		X	X	X	X	X	X										X	X
KOSSLYN 090319	↓	13:45	1	↓	↓	↓	X	X	X				X				X		X	X	X	X	X	X										X	X
Trip Blank 03/20/09			2			~~2~~ 3 03/20/09																													

* **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:
Filter + preserve metals upon receipt
Anions = Br, Cl, F, NO2, NO3, SO4
200.7 = Ba, Be, B, Ca, Cr, Cu, Fe, Li, Mn, Mg, Ni, K, Na, Sr, Zn
200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Tl, U

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

Relinquished By: (1)	Relinquished By: (2)
Signature [signature]	Signature
Printed Name Christa E. Whitmore	Printed Name
Date 3/19/09 Time 16:30	Date Time
Company Whetstone Associates	Company

Received By: (1)	Received By: (2)
Signature [signature]	Signature
Printed Name Lara J Orban	Printed Name
Date 3/20/09 Time ~~0930~~ 1008 03/20/09	Date Time
Company ALS Paragon	Company

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

Client: COGCC Workorder No: 0903159

Project Manager: AW Initials: LSO Date: 3/20/09

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):	2.2							
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.

* the 500ml poly For metals analysis needs to be filtered and preserved in house.

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

Project Manager Signature / Date: [signature] 3/23/09

*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 Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13948

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: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13948

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: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13948

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	26.3		25	105	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	24.9		25	100	80 - 124
2037-26-5	TOLUENE-D8	26		25	104	81 - 119

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID:
Lab ID: VL090323-3MB

Sample Matrix: WATER
%Moisture: N/A
Date Collected: N/A
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C13948

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
128-37-0	14.17	BUTYLATED HYDROXYTOLUENE	1	3.9	UG/L	J

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID: Kosslyn 090319
Lab ID: 0903159-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13953

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: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID: Kosslyn 090319
Lab ID: 0903159-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13953

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: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID: Kosslyn 090319
Lab ID: 0903159-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13953

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	25.2		25	101	80 - 124
2037-26-5	TOLUENE-D8	24.9		25	99	81 - 119

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Paragon

Work Order Number: 0903159

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206467

Field ID: Kosslyn 090319
Lab ID: 0903159-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 19-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C13953

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

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID: Trip Blank
Lab ID: 0903159-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13952

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: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID: Trip Blank
Lab ID: 0903159-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13952

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: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Field ID: Trip Blank
Lab ID: 0903159-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 20-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09
Prep Method: SW5030 Rev C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13952

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	25.3		25	101	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25.7		25	103	80 - 124
2037-26-5	TOLUENE-D8	25.7		25	103	81 - 119

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Paragon

Work Order Number: 0903159

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200206467

Field ID: Trip Blank
Lab ID: 0903159-2

Sample Matrix: WATER
%Moisture: N/A
Date Collected: 20-Mar-09
Date Extracted: 23-Mar-09
Date Analyzed: 23-Mar-09

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: C13952

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

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03/23/2009
Date Analyzed: 03/23/2009
Prep Method: SW5030C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13945

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	9.73	1		97	38 - 131%
74-87-3	CHLOROMETHANE	10	9.57	1		96	62 - 141%
75-01-4	VINYL CHLORIDE	10	9.79	1		98	77 - 124%
74-83-9	BROMOMETHANE	10	10.5	1		105	76 - 133%
75-00-3	CHLOROETHANE	10	9.7	1		97	81 - 130%
75-69-4	TRICHLOROFLUOROMETHANE	10	10	1		100	84 - 146%
75-35-4	1,1-DICHLOROETHENE	10	10.2	1		102	75 - 126%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10.3	1		103	71 - 144%
67-64-1	ACETONE	40	34.5	10		86	50 - 150%
74-88-4	IODOMETHANE	10	10.5	1		105	76 - 116%
75-15-0	CARBON DISULFIDE	10	10.2	1		102	68 - 129%
75-09-2	METHYLENE CHLORIDE	10	9.46	1		95	22 - 146%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.5	1		105	76 - 135%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	16.9	1		85	75 - 125%
75-34-3	1,1-DICHLOROETHANE	10	10.2	1		102	77 - 131%
108-05-4	VINYL ACETATE	10	9.82	2		98	56 - 151%
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.3	1		103	81 - 121%
78-93-3	2-BUTANONE	40	34.2	10		85	50 - 150%
74-97-5	BROMOCHLOROMETHANE	10	9.65	1		96	85 - 126%
67-66-3	CHLOROFORM	10	10.3	1		103	84 - 125%
71-55-6	1,1,1-TRICHLOROETHANE	10	10.4	1		104	82 - 129%
594-20-7	2,2-DICHLOROPROPANE	10	11.7	1		117	79 - 130%
56-23-5	CARBON TETRACHLORIDE	10	10.7	1		107	83 - 135%
563-58-6	1,1-DICHLOROPROPENE	10	10.6	1		106	85 - 127%
107-06-2	1,2-DICHLOROETHANE	10	9.35	1		94	84 - 126%
71-43-2	BENZENE	10	10	1		100	82 - 122%

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03/23/2009
Date Analyzed: 03/23/2009
Prep Method: SW5030C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13945

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	10.1	1		101	82 - 121%
78-87-5	1,2-DICHLOROPROPANE	10	9.81	1		98	81 - 121%
74-95-3	DIBROMOMETHANE	10	9.15	1		91	81 - 125%
75-27-4	BROMODICHLOROMETHANE	10	9.98	1		100	82 - 120%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.1	1		101	79 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	32.7	10		82	50 - 150%
108-88-3	TOLUENE	10	10.9	1		109	83 - 121%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.2	1		102	78 - 113%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.74	1		97	82 - 122%
591-78-6	2-HEXANONE	40	34.7	10		87	50 - 150%
127-18-4	TETRACHLOROETHENE	10	11.3	1		113	79 - 136%
142-28-9	1,3-DICHLOROPROPANE	10	9.79	1		98	80 - 126%
124-48-1	DIBROMOCHLOROMETHANE	10	9.78	1		98	80 - 123%
106-93-4	1,2-DIBROMOETHANE	10	9.49	1		95	85 - 124%
544-10-5	1-CHLOROHEXANE	10	11.1	1		111	77 - 135%
108-90-7	CHLOROBENZENE	10	10.8	1		108	82 - 121%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10.6	1		106	85 - 128%
100-41-4	ETHYLBENZENE	10	11.1	1		111	83 - 126%
136777-61-	M+P-XYLENE	20	22.2	1		111	82 - 129%
95-47-6	O-XYLENE	10	11.2	1		112	87 - 132%
100-42-5	STYRENE	10	10.9	1		109	82 - 123%
75-25-2	BROMOFORM	10	9.52	1		95	79 - 118%
98-82-8	ISOPROPYLBENZENE	10	11.2	1		112	75 - 132%
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.46	1		95	77 - 128%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	9.73	1		97	74 - 130%
108-86-1	BROMOBENZENE	10	10.7	1		107	78 - 124%
103-65-1	N-PROPYLBENZENE	10	11.6	1		116	75 - 134%

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03/23/2009
Date Analyzed: 03/23/2009
Prep Method: SW5030C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13945

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	11.5	1		115	77 - 128%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	11.7	1		117	77 - 131%
106-43-4	4-CHLOROTOLUENE	10	11.3	1		113	79 - 128%
98-06-6	TERT-BUTYLBENZENE	10	11.8	1		118	76 - 134%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	11.2	1		112	80 - 138%
135-98-8	SEC-BUTYLBENZENE	10	11.4	1		114	73 - 135%
541-73-1	1,3-DICHLOROBENZENE	10	11.1	1		111	79 - 126%
99-87-6	P-ISOPROPYLTOLUENE	10	11.5	1		115	72 - 132%
106-46-7	1,4-DICHLOROBENZENE	10	10.4	1		104	81 - 125%
104-51-8	N-BUTYLBENZENE	10	11.9	1		119	77 - 141%
95-50-1	1,2-DICHLOROBENZENE	10	10.5	1		105	82 - 128%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.41	2		94	64 - 134%
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.3	1		103	80 - 128%
87-68-3	HEXACHLOROBUTADIENE	10	11.7	1		117	70 - 136%
91-20-3	NAPHTHALENE	10	10.1	1		101	78 - 125%
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.2	1		102	79 - 131%

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03/23/2009
Date Analyzed: 03/23/2009
Prep Method: SW5030C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13946

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	9.86	1		99	20	1
74-87-3	CHLOROMETHANE	10	9.76	1		98	20	2
75-01-4	VINYL CHLORIDE	10	9.67	1		97	20	1
74-83-9	BROMOMETHANE	10	10.5	1		105	20	0
75-00-3	CHLOROETHANE	10	9.84	1		98	20	1
75-69-4	TRICHLOROFLUOROMETHANE	10	9.68	1		97	20	4
75-35-4	1,1-DICHLOROETHENE	10	10.1	1		101	20	1
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10.4	1		104	20	1
67-64-1	ACETONE	40	38.1	10		95	30	10
74-88-4	IODOMETHANE	10	10.3	1		103	20	2
75-15-0	CARBON DISULFIDE	10	10	1		100	20	2
75-09-2	METHYLENE CHLORIDE	10	9.8	1		98	20	3
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.5	1		105	20	0
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	18.9	1		94	20	11
75-34-3	1,1-DICHLOROETHANE	10	10.1	1		101	20	0
108-05-4	VINYL ACETATE	10	11	2		110	20	12
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.3	1		103	20	0
78-93-3	2-BUTANONE	40	38.4	10		96	30	12
74-97-5	BROMOCHLOROMETHANE	10	10.3	1		103	20	7
67-66-3	CHLOROFORM	10	10.4	1		104	20	1
71-55-6	1,1,1-TRICHLOROETHANE	10	10.4	1		104	20	0
594-20-7	2,2-DICHLOROPROPANE	10	11.6	1		116	20	1
56-23-5	CARBON TETRACHLORIDE	10	10.5	1		105	20	2
563-58-6	1,1-DICHLOROPROPENE	10	10.4	1		104	20	2
107-06-2	1,2-DICHLOROETHANE	10	9.93	1		99	20	6
71-43-2	BENZENE	10	10.2	1		102	20	1
79-01-6	TRICHLOROETHENE	10	10.4	1		104	20	3

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03/23/2009
Date Analyzed: 03/23/2009
Prep Method: SW5030C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13946

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	10.4	1		104	20	6
74-95-3	DIBROMOMETHANE	10	9.96	1		100	20	8
75-27-4	BROMODICHLOROMETHANE	10	10.6	1		106	20	6
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.7	1		107	20	5
108-10-1	4-METHYL-2-PENTANONE	40	38.8	10		97	30	17
108-88-3	TOLUENE	10	10.7	1		107	20	2
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	11	1		110	20	7
79-00-5	1,1,2-TRICHLOROETHANE	10	10.8	1		108	20	10
591-78-6	2-HEXANONE	40	41	10		102	30	16
127-18-4	TETRACHLOROETHENE	10	11.1	1		111	20	2
142-28-9	1,3-DICHLOROPROPANE	10	10.3	1		103	20	5
124-48-1	DIBROMOCHLOROMETHANE	10	10.7	1		107	20	9
106-93-4	1,2-DIBROMOETHANE	10	10.5	1		105	20	10
544-10-5	1-CHLOROHEXANE	10	10.6	1		106	20	5
108-90-7	CHLOROBENZENE	10	10.8	1		108	20	0
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	11	1		110	20	4
100-41-4	ETHYLBENZENE	10	10.8	1		108	20	3
136777-61-	M+P-XYLENE	20	21.7	1		109	20	2
95-47-6	O-XYLENE	10	10.9	1		109	20	3
100-42-5	STYRENE	10	11	1		110	20	1
75-25-2	BROMOFORM	10	10.4	1		104	20	9
98-82-8	ISOPROPYLBENZENE	10	10.9	1		109	20	3
96-18-4	1,2,3-TRICHLOROPROPANE	10	10.5	1		105	20	11
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	10.2	1		102	20	4
108-86-1	BROMOBENZENE	10	10.6	1		106	20	0
103-65-1	N-PROPYLBENZENE	10	10.9	1		109	20	6
95-49-8	2-CHLOROTOLUENE	10	11.2	1		112	20	3

Data Package ID: *VL0903159-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon
Work Order Number: 0903159
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200206467

Lab ID: VL090323-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 03/23/2009
Date Analyzed: 03/23/2009
Prep Method: SW5030C

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: N/A
File Name: C13946

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	11.2	1		112	20	4
106-43-4	4-CHLOROTOLUENE	10	10.9	1		109	20	4
98-06-6	TERT-BUTYLBENZENE	10	10.9	1		109	20	7
95-63-6	1,2,4-TRIMETHYLBENZENE	10	11.1	1		111	20	0
135-98-8	SEC-BUTYLBENZENE	10	10.8	1		108	20	5
541-73-1	1,3-DICHLOROBENZENE	10	10.8	1		108	20	3
99-87-6	P-ISOPROPYLTOLUENE	10	10.9	1		109	20	6
106-46-7	1,4-DICHLOROBENZENE	10	10.5	1		105	20	1
104-51-8	N-BUTYLBENZENE	10	11.2	1		112	20	6
95-50-1	1,2-DICHLOROBENZENE	10	10.7	1		107	20	2
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	10.3	2		103	20	9
120-82-1	1,2,4-TRICHLOROBENZENE	10	11	1		110	20	7
87-68-3	HEXACHLOROBUTADIENE	10	10.9	1		109	20	7
91-20-3	NAPHTHALENE	10	10.9	1		109	20	8
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.8	1		108	20	5

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	104		99		78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25	100		98		80 - 124
2037-26-5	TOLUENE-D8	25	108		103		81 - 119

Data Package ID: *VL0903159-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\032309\C13948.D Vial: 8
Acq On : 23 Mar 2009 11:29 Operator: TWK-sop525r12
Sample : VL090323-3MB Inst : CSS Instr
Misc : 10mL un-heated purge Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Mar 23 13:07 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 : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.34	96	1755067	25.00	ppb	0.00
53) Chlorobenzene-d5	12.48	82	654687	25.00	ppb	0.00
73) 1,4-Dichlorobenzene-d4	14.48	152	457889	25.00	ppb	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	8.54	113	524111	24.91	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery =	99.64%		
39) 1,2-dichloroethane-d4	9.01	65	393063	24.23	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery =	96.92%		
54) Toluene-d8	11.03	98	1774712	26.03	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery =	104.12%		
74) 4-Bromofluorobenzene	13.52	95	627374	26.29	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery =	105.16%		
Target Compounds						Qvalue
84) 1,2,4-Trimethylbenzene	14.17	105	12356	0.19	ppb	# NO 33

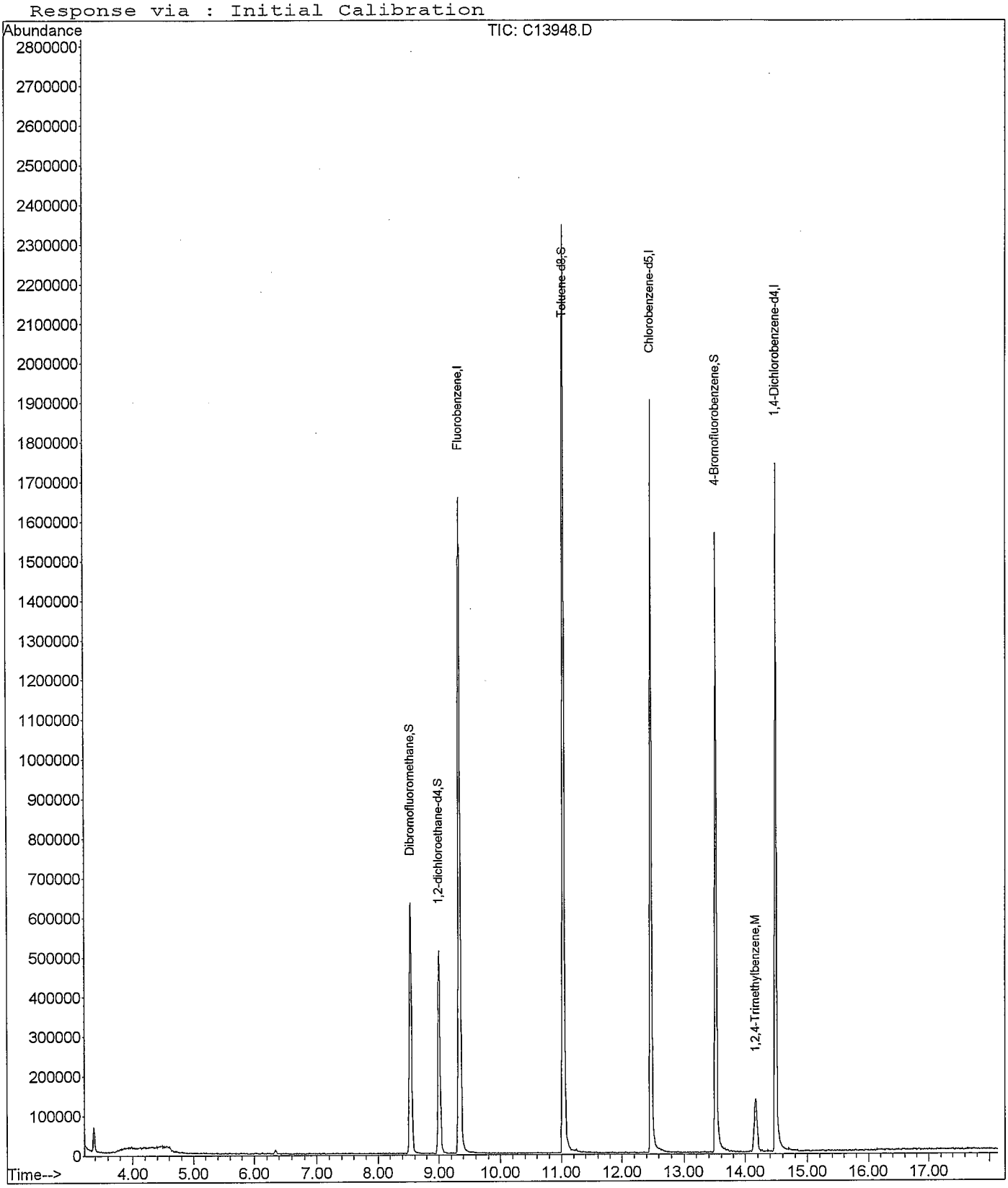
ar 3/24/09

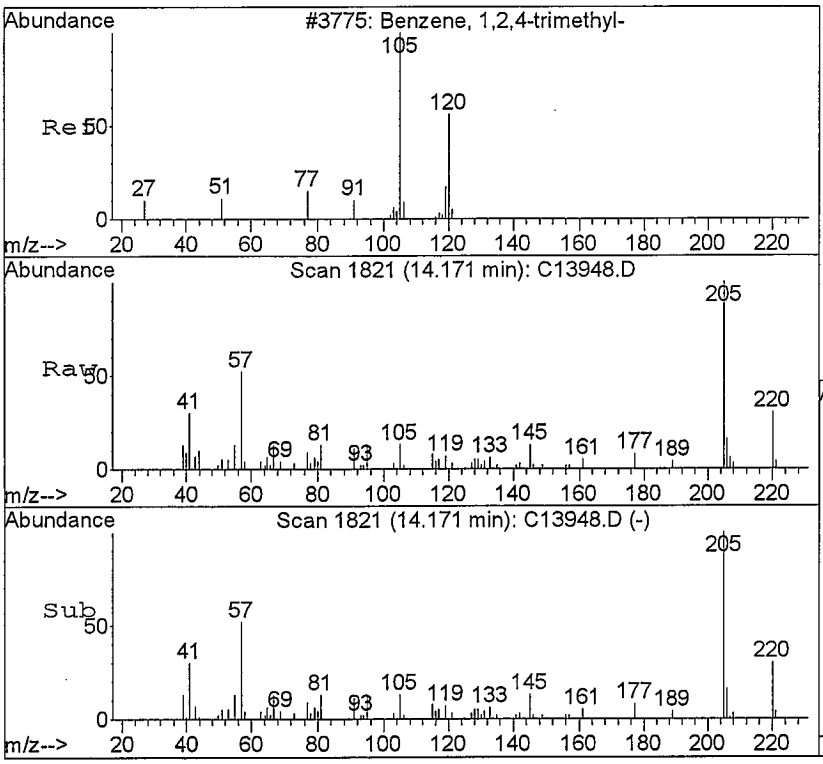
(#) = qualifier out of range (m) = manual integration
C13948.D 032209W.M Mon Mar 23 13:07:29 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\032309\C13948.D Vial: 8
Acq On : 23 Mar 2009 11:29 Operator: TWK-sop525r12
Sample : VL090323-3MB Inst : CSS Instr
Misc : 10mL un-heated purge Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Mar 23 13:07 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 : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration

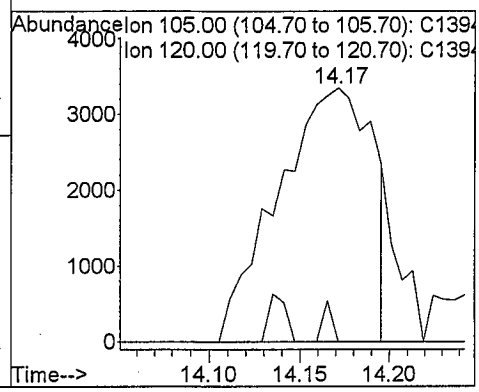




#84
1,2,4-Trimethylbenzene NO
Concen: 0.19 ppb
RT: 14.17 min Scan# 1821
Delta R.T. 0.04 min
Lab File: C13948.D
Acq: 23 Mar 2009 11:29

Tgt Ion:105 Resp: 12356

Ion	Ratio	Lower	Upper
105	100		
120	0.0	25.6	59.8#



Butylated Hydroxytoluene carryover from Appendix 9 standard.
cm 3/24/09

Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\032309\C13948.D
Acq On : 23 Mar 2009 11:29
Sample : VL090323-3MB
Misc : 10mL un-heated purge
MS Integration Params: ettics.p

Vial: 8
Operator: TWK-sop525r12
Inst : CSS Instr
Multiplr: 1.00

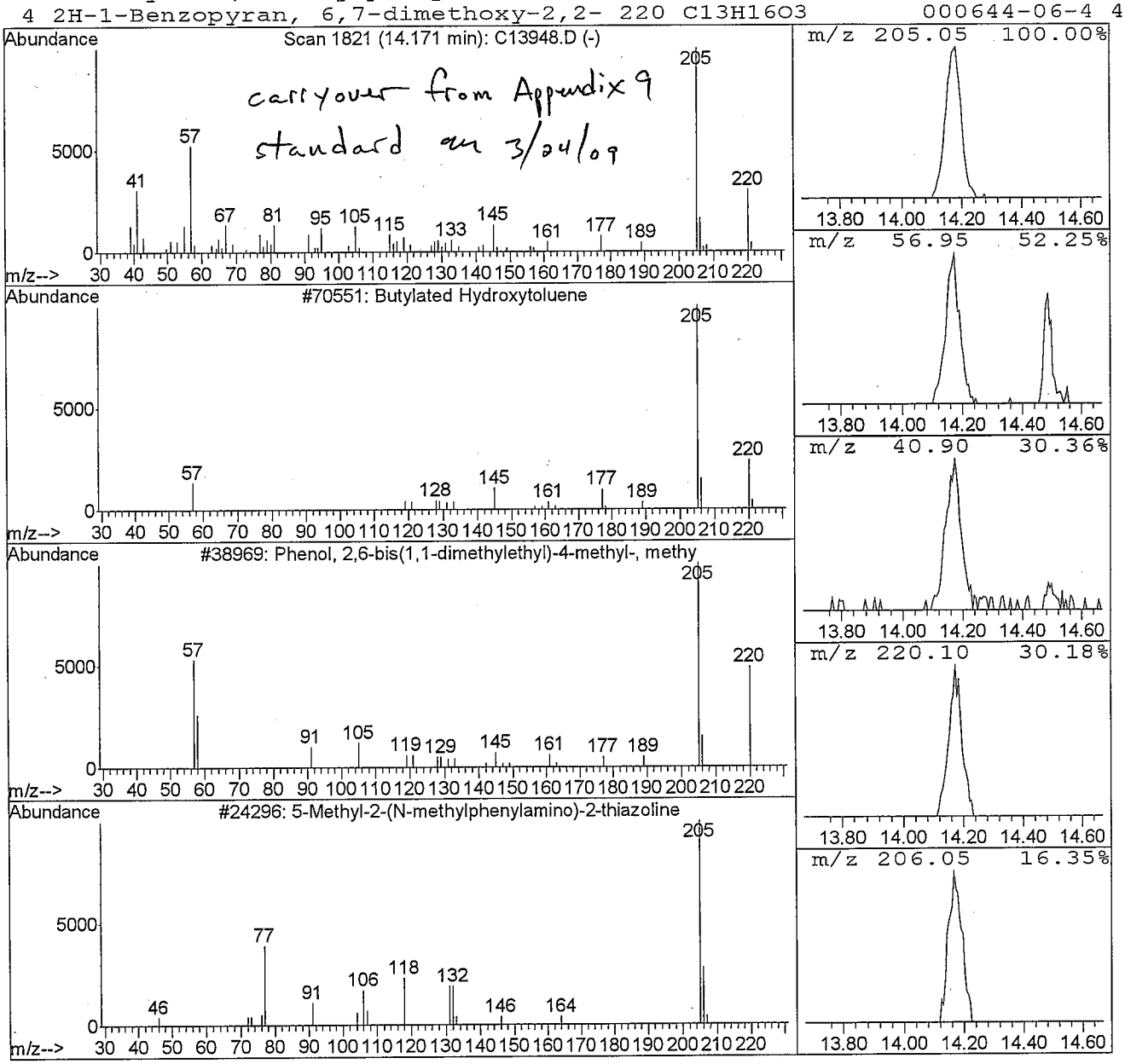
Quant Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Butylated Hydroxytoluene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.17	3.86 ppb	466599	1,4-Dichlorobenzene-d4	14.48

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Butylated Hydroxytoluene	220	C15H24O	000128-37-0	94
2	Phenol, 2,6-bis(1,1-dimethylethyl)-	277	C17H27NO2	001918-11-2	53
3	5-Methyl-2-(N-methylphenylamino)-2-	206	C11H14N2S	029604-93-1	49
4	2H-1-Benzopyran, 6,7-dimethoxy-2,2-	220	C13H16O3	000644-06-4	45



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\032309\C13953.D Vial: 13
Acq On : 23 Mar 2009 13:33 Operator: TWK-sop525r12
Sample : 0903159-1 Inst : CSS Instr
Misc : 10mL un-heated purge Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Mar 23 14:13 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 : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.34	96	1723110	25.00	ppb	0.00
53) Chlorobenzene-d5	12.47	82	653768	25.00	ppb	0.00
73) 1,4-Dichlorobenzene-d4	14.49	152	461620	25.00	ppb	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	8.53	113	520486	25.20	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 100.80%			
39) 1,2-dichloroethane-d4	9.00	65	387945	24.36	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 97.44%			
54) Toluene-d8	11.03	98	1693159	24.87	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 99.48%			
74) 4-Bromofluorobenzene	13.51	95	597278	24.82	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 99.28%			
Target Compounds						Qvalue

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(#) = qualifier out of range (m) = manual integration
C13953.D 032209W.M Mon Mar 23 14:13:58 2009 Page 1

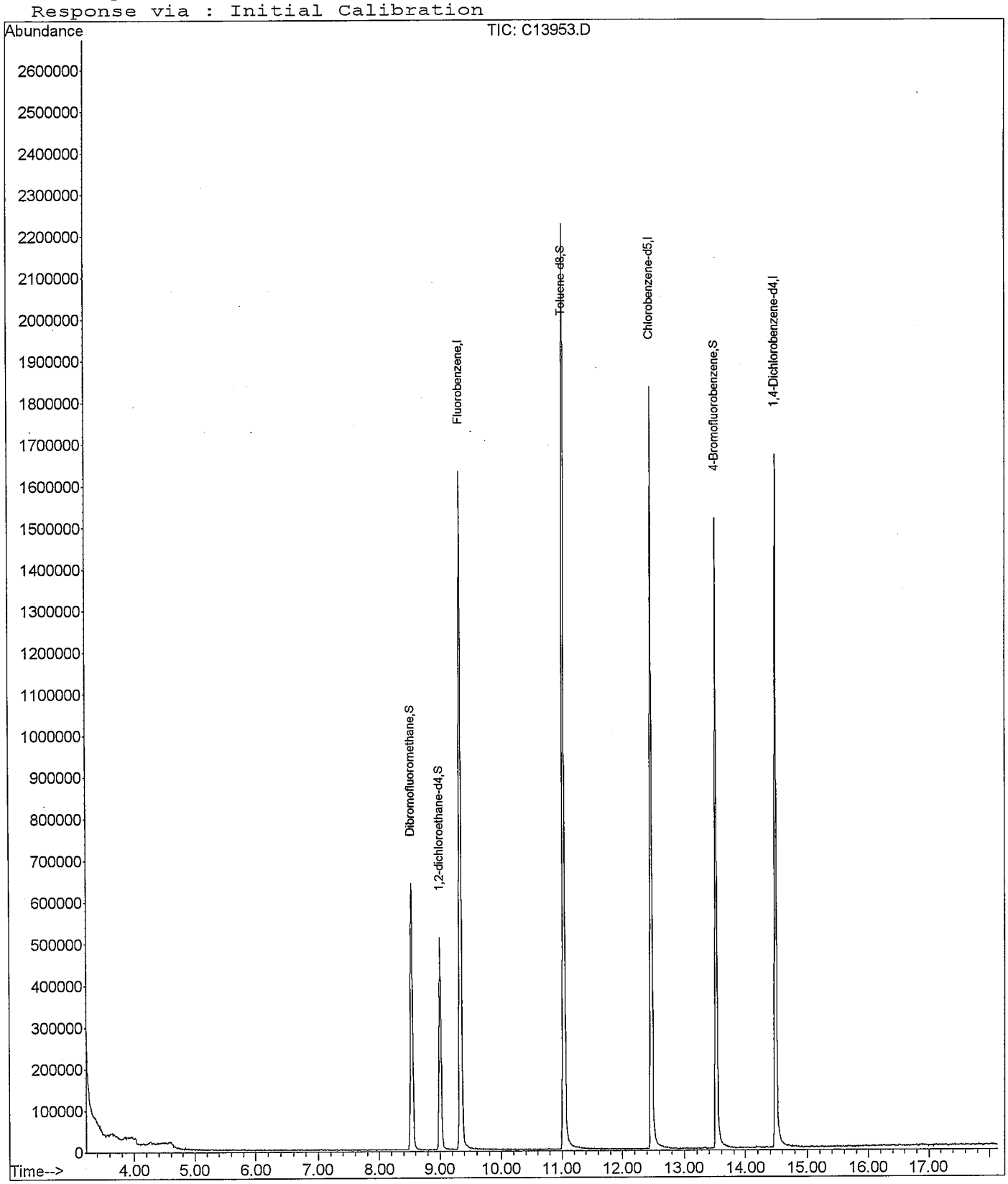
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032309\C13953.D
Acq On : 23 Mar 2009 13:33
Sample : 0903159-1
Misc : 10mL un-heated purge
MS Integration Params: ettics.p
Quant Time: Mar 23 14:13 2009

Vial: 13
Operator: TWK-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 : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: TWK-sop525r12 Date Acquired: 23 Mar 2009 13:33
Data File: C:\HPCHEM\1\DATA\032309\C13953.D
Name: 0903159-1
Misc: 10mL un-heated purge
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

C13953.D 032209W.M Tue Mar 24 16:30:57 2009

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\032309\C13952.D Vial: 12
Acq On : 23 Mar 2009 13:09 Operator: TWK-sop525r12
Sample : 0903159-2 Inst : CSS Instr
Misc : 10mL un-heated purge Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Mar 23 14:13 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 : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.34	96	1730423	25.00	ppb	0.00
53) Chlorobenzene-d5	12.47	82	658817	25.00	ppb	0.00
73) 1,4-Dichlorobenzene-d4	14.48	152	457586	25.00	ppb	0.00
System Monitoring Compounds						
34) Dibromofluoromethane	8.54	113	532202	25.66	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery =	102.64%		
39) 1,2-dichloroethane-d4	9.00	65	395937	24.75	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery =	99.00%		
54) Toluene-d8	11.03	98	1765974	25.74	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery =	102.96%		
74) 4-Bromofluorobenzene	13.51	95	602879	25.28	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery =	101.12%		

Target Compounds Qvalue

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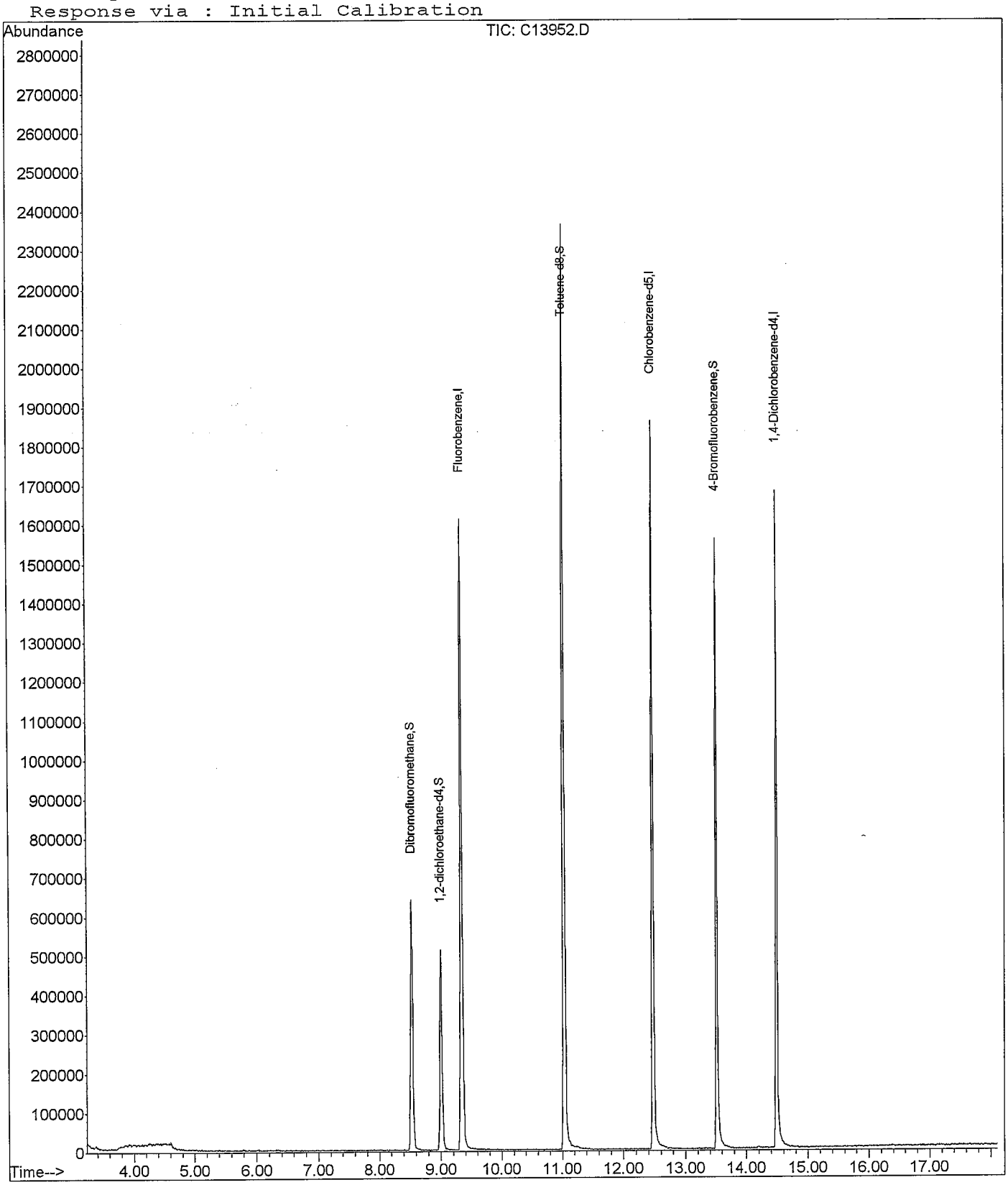
(#) = qualifier out of range (m) = manual integration
C13952.D 032209W.M Mon Mar 23 14:13:46 2009 Page 1

Quantitation Report

Data File : C:\HPCHEM\1\DATA\032309\C13952.D
Acq On : 23 Mar 2009 13:09
Sample : 0903159-2
Misc : 10mL un-heated purge
MS Integration Params: ettics.p
Quant Time: Mar 23 14:13 2009

Vial: 12
Operator: TWK-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 : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: TWK-sop525r12 Date Acquired: 23 Mar 2009 13:09
Data File: C:\HPCHEM\1\DATA\032309\C13952.D
Name: 0903159-2
Misc: 10mL un-heated purge
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

C13952.D 032209W.M Tue Mar 24 16:30:29 2009