ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

GC/MS Volatiles

Case Narrative

COGCC

Complaint 200241120

Work Order Number: 1005024

1. This report consists of 2 water samples. The samples were received cool and intact by ALS on 05/05/10. All aqueous samples were free of headspace prior to analysis.

   Sample 1005024-1, provided for volatiles, had a pH > 2 at the time of analysis. All other samples had a pH < 2 at the time of 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 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.

SLJ
Sharon L. Jobes
Organics Primary Data Reviewer

5-14-10
Date

Tyler Underhill
Organics Final Data Reviewer

05-14-10
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

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

Chain-of-Custody

Date | Page 1 of 1 | Lab ID 1005024

Project Name/No.: Complaint 2-0024 1120 | Sampler(s): Contractors | Turnaround: Standard or Due 14 day | Disposal: By Lab or Return to Client

REPORT TO: Potter Gintautas
PHONE: 719-846-3091
FAX:
E-MAIL: potter.gintautas@state.co.us
COMPANY: Colo. Oil & Gas Cons. Comm
ADDRESS: PO Box 106
Trinidad CO 81082

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	VOCs	~~BTEX + MBE~~ RSK 175	SVOCs	OC Pesticides	PCBs	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~~ Alkalinity	Inorganic Anions	Solids	pH	~~Perchlorate~~ Conductivity	TOC	Actinides	Gamma Isotopes	Gross Alpha / Beta	Total Alpha-Emitting Radium	Radium 226	Radium 228	Strontium 90 (Total RadioSr)	Tritium	Radon 222		
Lizard Well	4 May	14:07	1	W	HCl	3		X																		X										
	↓	↓	↓	W	H2SO4	1																														
	↓	↓	↓	W	none	5												X		X	X	X	X	X	X										X	X
Trip Blank	4 May	07:xx	2	W	HCl	2		X																												

* 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:

Anions = Br, Cl, F, NO2, NO3, SO4
Filter and preserve metals upon receipt = dissolved.
~~200.7~~ 200.7 = Ba, Be, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Sr, V, Zn
~~200.8~~ 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: (2)
Signature: Potter Gintautas	Signature:
Printed Name: Potter Gintautas	Printed Name:
Date: 4 May 2010 Time: 16:20	Date: Time:
Company: COGCC	Company:

Received By: (1)	Received By: (2)
Signature: Lauren Schmitz	Signature:
Printed Name: Lauren Schmitz	Printed Name:
Date: 5/5/10 Time: 1020	Date: Time:
Company: ALS	Company:

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1005024

Project Manager: ARW Initials: LAS Date: 5/5/10

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):	4.6
No. of custody seals on cooler:	1
DOT Survey/ Acceptance Information — External µR/hr reading:	13
DOT Survey/ Acceptance Information — 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

(#8) Metals - filter and preserve prior to analysis.

(*14) 1005024-1-3 (Lizardy WW voa) had headspace < pea size

If applicable, was the client contacted? (YES) / NO / NA Contact: Peter Cointantas Date/Time: 5/6/10 e-mail

Project Manager Signature / Date: 5/6/10

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

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Lab ID: VL100512-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63664

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: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Lab ID: VL100512-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63664

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: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Lab ID: VL100512-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63664

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	23.3		25	93	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25.5		25	102	80 - 124
2037-26-5	TOLUENE-D8	24.7		25	99	81 - 119

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID:

Lab ID: VL100512-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 12-May-10
Date Analyzed: 12-May-10

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: B63664

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

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Lizardy WW
Lab ID: 1005024-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received
File Name: B63669

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: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Lizardy WW
Lab ID: 1005024-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received
File Name: B63669

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: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Lizardy WW
Lab ID: 1005024-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received
File Name: B63669

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	22.8		25	91	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25.3		25	101	80 - 124
2037-26-5	TOLUENE-D8	24		25	96	81 - 119

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Lizardy WW
Lab ID: 1005024-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: B63669

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

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Trip Blank
Lab ID: 1005024-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received
File Name: B63670

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: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Trip Blank
Lab ID: 1005024-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received
File Name: B63670

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: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 1005024
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200241120

Field ID: Trip Blank
Lab ID: 1005024-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10
Prep Method: SW5030 Rev C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received
File Name: B63670

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	23.1		25	92	78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25.2		25	101	80 - 124
2037-26-5	TOLUENE-D8	24.3		25	97	81 - 119

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Field ID: Trip Blank
Lab ID: 1005024-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 04-May-10
Date Extracted: 12-May-10
Date Analyzed: 12-May-10

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: B63670

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

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 1005024

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200241120

Lab ID: VL100512-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/12/2010
Date Analyzed: 05/12/2010
Prep Method: SW5030C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63660

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	9.8	1		98	38 - 131%
74-87-3	CHLOROMETHANE	10	10.2	1		102	62 - 141%
75-01-4	VINYL CHLORIDE	10	11.6	1		116	77 - 124%
74-83-9	BROMOMETHANE	10	10.1	1		101	76 - 133%
75-00-3	CHLOROETHANE	10	10	1		100	81 - 130%
75-69-4	TRICHLOROFLUOROMETHANE	10	9.94	1		99	84 - 146%
75-35-4	1,1-DICHLOROETHENE	10	9.48	1		95	75 - 126%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	20	19.7	1		98	71 - 144%
67-64-1	ACETONE	40	40.4	10		101	50 - 150%
74-88-4	IODOMETHANE	10	9.93	1		99	76 - 116%
75-15-0	CARBON DISULFIDE	10	9.95	1		99	68 - 129%
75-09-2	METHYLENE CHLORIDE	10	9.93	1		99	22 - 146%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.75	1		97	76 - 135%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	19.1	1		95	75 - 125%
75-34-3	1,1-DICHLOROETHANE	10	10.8	1		108	77 - 131%
108-05-4	VINYL ACETATE	10	9.67	2		97	56 - 151%
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.1	1		101	81 - 121%
78-93-3	2-BUTANONE	40	40.2	10		101	50 - 150%
74-97-5	BROMOCHLOROMETHANE	10	10.4	1		104	85 - 126%
67-66-3	CHLOROFORM	10	10.8	1		108	84 - 125%
71-55-6	1,1,1-TRICHLOROETHANE	10	10.6	1		106	82 - 129%
594-20-7	2,2-DICHLOROPROPANE	10	10.9	1		109	79 - 130%
56-23-5	CARBON TETRACHLORIDE	10	10.6	1		106	83 - 135%
563-58-6	1,1-DICHLOROPROPENE	10	10.5	1		105	85 - 127%
107-06-2	1,2-DICHLOROETHANE	10	10.9	1		109	84 - 126%
71-43-2	BENZENE	10	10.3	1		103	82 - 122%

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 1005024
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200241120

Lab ID: VL100512-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/12/2010
Date Analyzed: 05/12/2010
Prep Method: SW5030C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63660

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	10.3	1		103	82 - 121%
78-87-5	1,2-DICHLOROPROPANE	10	11	1		110	81 - 121%
74-95-3	DIBROMOMETHANE	10	10.5	1		105	81 - 125%
75-27-4	BROMODICHLOROMETHANE	10	10.6	1		106	82 - 120%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.5	1		105	79 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	36	10		90	50 - 150%
108-88-3	TOLUENE	10	9.99	1		100	83 - 121%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.4	1		104	78 - 113%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.53	1		95	82 - 122%
591-78-6	2-HEXANONE	40	35.3	10		88	50 - 150%
127-18-4	TETRACHLOROETHENE	10	10	1		100	79 - 136%
142-28-9	1,3-DICHLOROPROPANE	10	10.1	1		101	80 - 126%
124-48-1	DIBROMOCHLOROMETHANE	10	9.5	1		95	80 - 123%
106-93-4	1,2-DIBROMOETHANE	10	9.32	1		93	85 - 124%
544-10-5	1-CHLOROHEXANE	10	9.91	1		99	77 - 135%
108-90-7	CHLOROBENZENE	10	10.2	1		102	82 - 121%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10.3	1		103	85 - 128%
100-41-4	ETHYLBENZENE	10	10.1	1		101	83 - 126%
136777-61-2	M+P-XYLENE	20	20.4	1		102	82 - 129%
95-47-6	O-XYLENE	10	10.2	1		102	87 - 132%
100-42-5	STYRENE	10	9.31	1		93	82 - 123%
75-25-2	BROMOFORM	10	9.25	1		93	79 - 118%
98-82-8	ISOPROPYLBENZENE	10	10.2	1		102	75 - 132%
96-18-4	1,2,3-TRICHLOROPROPANE	10	10.4	1		104	77 - 128%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	9.73	1		97	74 - 130%
108-86-1	BROMOBENZENE	10	10.5	1		105	78 - 124%
103-65-1	N-PROPYLBENZENE	10	10.7	1		107	75 - 134%

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 1005024
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200241120

Lab ID: VL100512-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/12/2010
Date Analyzed: 05/12/2010
Prep Method: SW5030C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63660

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	10.9	1		109	77 - 128%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	10.8	1		108	77 - 131%
106-43-4	4-CHLOROTOLUENE	10	10.6	1		106	79 - 128%
98-06-6	TERT-BUTYLBENZENE	10	11.1	1		111	76 - 134%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	10.7	1		107	80 - 138%
135-98-8	SEC-BUTYLBENZENE	10	10.5	1		105	73 - 135%
541-73-1	1,3-DICHLOROBENZENE	10	10.6	1		106	79 - 126%
99-87-6	P-ISOPROPYLTOLUENE	10	10.8	1		108	72 - 132%
106-46-7	1,4-DICHLOROBENZENE	10	10.5	1		105	81 - 125%
104-51-8	N-BUTYLBENZENE	10	10.8	1		108	77 - 141%
95-50-1	1,2-DICHLOROBENZENE	10	10.4	1		104	82 - 128%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.77	2		98	64 - 134%
120-82-1	1,2,4-TRICHLOROBENZENE	10	10	1		100	80 - 128%
87-68-3	HEXACHLOROBUTADIENE	10	10.3	1		103	70 - 136%
91-20-3	NAPHTHALENE	10	9.59	1		96	78 - 125%
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.2	1		102	79 - 131%

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 1005024
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200241120

Lab ID: VL100512-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/12/2010
Date Analyzed: 05/12/2010
Prep Method: SW5030C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63661

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	10.2	1		102	20	4
74-87-3	CHLOROMETHANE	10	10.2	1		102	20	1
75-01-4	VINYL CHLORIDE	10	11.7	1		117	20	0
74-83-9	BROMOMETHANE	10	10.3	1		103	20	1
75-00-3	CHLOROETHANE	10	10.1	1		101	20	1
75-69-4	TRICHLOROFLUOROMETHANE	10	10.2	1		102	20	3
75-35-4	1,1-DICHLOROETHENE	10	9.95	1		100	20	5
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	20	19.9	1		100	20	1
67-64-1	ACETONE	40	39.9	10		100	30	1
74-88-4	IODOMETHANE	10	10.1	1		101	20	2
75-15-0	CARBON DISULFIDE	10	10.3	1		103	20	4
75-09-2	METHYLENE CHLORIDE	10	9.85	1		99	20	1
156-60-5	TRANS-1,2-DICHLOROETHENE	10	10.1	1		101	20	4
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	19.6	1		98	20	3
75-34-3	1,1-DICHLOROETHANE	10	11.1	1		111	20	2
108-05-4	VINYL ACETATE	10	9.59	2		96	20	1
156-59-2	CIS-1,2-DICHLOROETHENE	10	10.2	1		102	20	1
78-93-3	2-BUTANONE	40	40.2	10		101	30	0
74-97-5	BROMOCHLOROMETHANE	10	10.6	1		106	20	2
67-66-3	CHLOROFORM	10	11	1		110	20	3
71-55-6	1,1,1-TRICHLOROETHANE	10	10.9	1		109	20	3
594-20-7	2,2-DICHLOROPROPANE	10	11.3	1		113	20	3
56-23-5	CARBON TETRACHLORIDE	10	10.7	1		107	20	1
563-58-6	1,1-DICHLOROPROPENE	10	10.9	1		109	20	4
107-06-2	1,2-DICHLOROETHANE	10	11.4	1		114	20	4
71-43-2	BENZENE	10	10.6	1		106	20	3
79-01-6	TRICHLOROETHENE	10	10.8	1		108	20	4

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 1005024
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200241120

Lab ID: VL100512-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/12/2010
Date Analyzed: 05/12/2010
Prep Method: SW5030C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63661

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	1		110	20	0
74-95-3	DIBROMOMETHANE	10	10	1		100	20	5
75-27-4	BROMODICHLOROMETHANE	10	10.9	1		109	20	2
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.9	1		109	20	3
108-10-1	4-METHYL-2-PENTANONE	40	36.3	10		91	30	1
108-88-3	TOLUENE	10	10.3	1		103	20	3
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	10.2	1		102	20	2
79-00-5	1,1,2-TRICHLOROETHANE	10	9.53	1		95	20	0
591-78-6	2-HEXANONE	40	35.2	10		88	30	0
127-18-4	TETRACHLOROETHENE	10	10.4	1		104	20	3
142-28-9	1,3-DICHLOROPROPANE	10	10.2	1		102	20	0
124-48-1	DIBROMOCHLOROMETHANE	10	9.83	1		98	20	3
106-93-4	1,2-DIBROMOETHANE	10	9.29	1		93	20	0
544-10-5	1-CHLOROHEXANE	10	9.83	1		98	20	1
108-90-7	CHLOROBENZENE	10	10.2	1		102	20	0
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	10.4	1		104	20	0
100-41-4	ETHYLBENZENE	10	10.2	1		102	20	1
136777-61-2	M+P-XYLENE	20	20.7	1		103	20	1
95-47-6	O-XYLENE	10	10.4	1		104	20	2
100-42-5	STYRENE	10	9.28	1		93	20	0
75-25-2	BROMOFORM	10	9.25	1		92	20	0
98-82-8	ISOPROPYLBENZENE	10	10.4	1		104	20	2
96-18-4	1,2,3-TRICHLOROPROPANE	10	10.2	1		102	20	2
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	1
103-65-1	N-PROPYLBENZENE	10	11.1	1		111	20	4
95-49-8	2-CHLOROTOLUENE	10	11.2	1		112	20	2

Data Package ID: *VL1005024-1*

GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC
Work Order Number: 1005024
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200241120

Lab ID: VL100512-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 05/12/2010
Date Analyzed: 05/12/2010
Prep Method: SW5030C

Prep Batch: VL100512-2
QCBatchID: VL100512-2-3
Run ID: VL100512-2A
Cleanup: NONE
Basis: N/A
File Name: B63661

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	11.1	1		111	20	3
106-43-4	4-CHLOROTOLUENE	10	11.2	1		112	20	5
98-06-6	TERT-BUTYLBENZENE	10	10.9	1		109	20	2
95-63-6	1,2,4-TRIMETHYLBENZENE	10	11	1		110	20	2
135-98-8	SEC-BUTYLBENZENE	10	10.8	1		108	20	3
541-73-1	1,3-DICHLOROBENZENE	10	10.7	1		107	20	1
99-87-6	P-ISOPROPYLTOLUENE	10	11.1	1		111	20	3
106-46-7	1,4-DICHLOROBENZENE	10	10.9	1		109	20	3
104-51-8	N-BUTYLBENZENE	10	11.1	1		111	20	3
95-50-1	1,2-DICHLOROBENZENE	10	10.7	1		107	20	3
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	9.59	2		96	20	2
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.3	1		103	20	3
87-68-3	HEXACHLOROBUTADIENE	10	10.8	1		108	20	4
91-20-3	NAPHTHALENE	10	10	1		100	20	5
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.1	1		101	20	2

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	91		93		78 - 129
1868-53-7	DIBROMOFLUOROMETHANE	25	102		101		80 - 124
2037-26-5	TOLUENE-D8	25	98		98		81 - 119

Data Package ID: *VL1005024-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\051210\B63664.D Vial: 8
Acq On : 12 May 2010 11:09 Operator: twk-sop525r12
Sample : VL100512-2MB Inst : CSS Instr
Misc : 10mL un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 13 9:27 2010 Quant Results File: 051010W.RES

Quant Method : C:\HPCHEM\1\METHODS\051010W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 13 09:23:32 2010
Response via : Initial Calibration
DataAcq Meth : 051010W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.88	96	925370	25.00	ppb	0.00
56) Chlorobenzene-d5	12.75	82	388959	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	14.64	152	261470	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.02	113	285500	25.47	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 101.88%			
41) 1,2-dichloroethane-d4	9.60	65	312479	27.27	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 109.08%			
57) Toluene-d8	11.36	98	887027	24.69	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 98.76%			
77) 4-Bromofluorobenzene	13.74	176	200692	23.30	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 93.20%			
Target Compounds						Qvalue

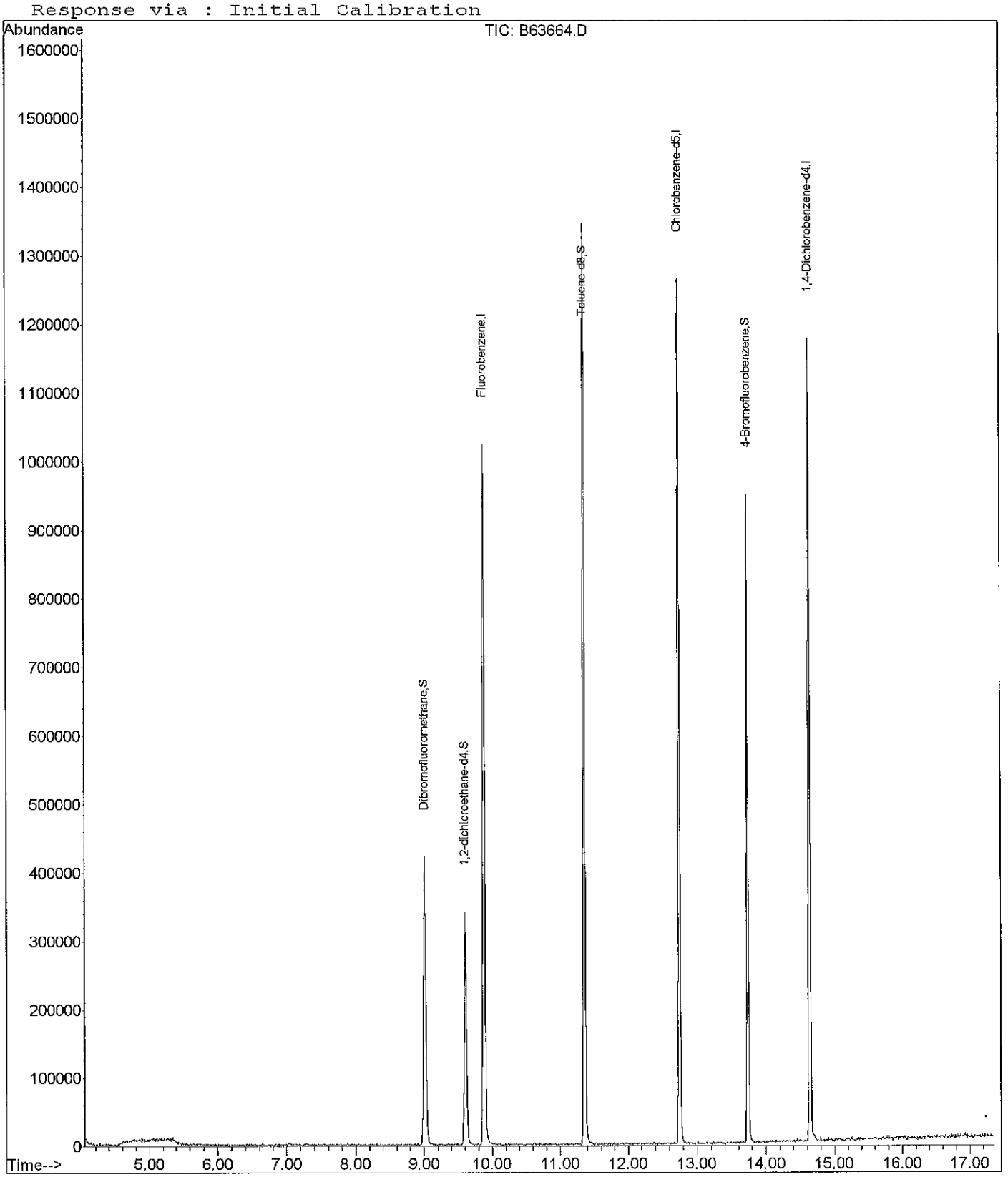
m 5/13/10

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051210\B63664.D Vial: 8
Acq On : 12 May 2010 11:09 Operator: twk-sop525r12
Sample : VL100512-2MB Inst : CSS Instr
Misc : 10mL un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 13 9:27 2010 Quant Results File: 051010W.RES

Method : C:\HPCHEM\1\METHODS\051010W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 13 09:23:32 2010
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: twk-sop525r12 Date Acquired: 12 May 2010 11:09
Data File: C:\HPCHEM\1\DATA\051210\B63664.D
Name: VL100512-2MB
Misc: 10mL un-heated water
Method: C:\HPCHEM\1\METHODS\051010W.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

B63664.D 051010W.M Thu May 13 13:22:51 2010

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\051210\B63669.D Vial: 13
Acq On : 12 May 2010 13:03 Operator: twk-sop525r12
Sample : 1005024-1 Inst : CSS Instr
Misc : 10mL un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 13 9:27 2010 Quant Results File: 051010W.RES

Quant Method : C:\HPCHEM\1\METHODS\051010W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 13 09:23:32 2010
Response via : Initial Calibration
DataAcq Meth : 051010W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.88	96	920575	25.00	ppb	0.00
56) Chlorobenzene-d5	12.75	82	392961	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	14.64	152	261318	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.01	113	282130	25.30	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 101.20%			
41) 1,2-dichloroethane-d4	9.60	65	305286	26.78	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 107.12%			
57) Toluene-d8	11.36	98	871289	24.00	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 96.00%			
77) 4-Bromofluorobenzene	13.74	176	198433	22.80	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 91.20%			
Target Compounds						Qvalue

ac 5/13/10

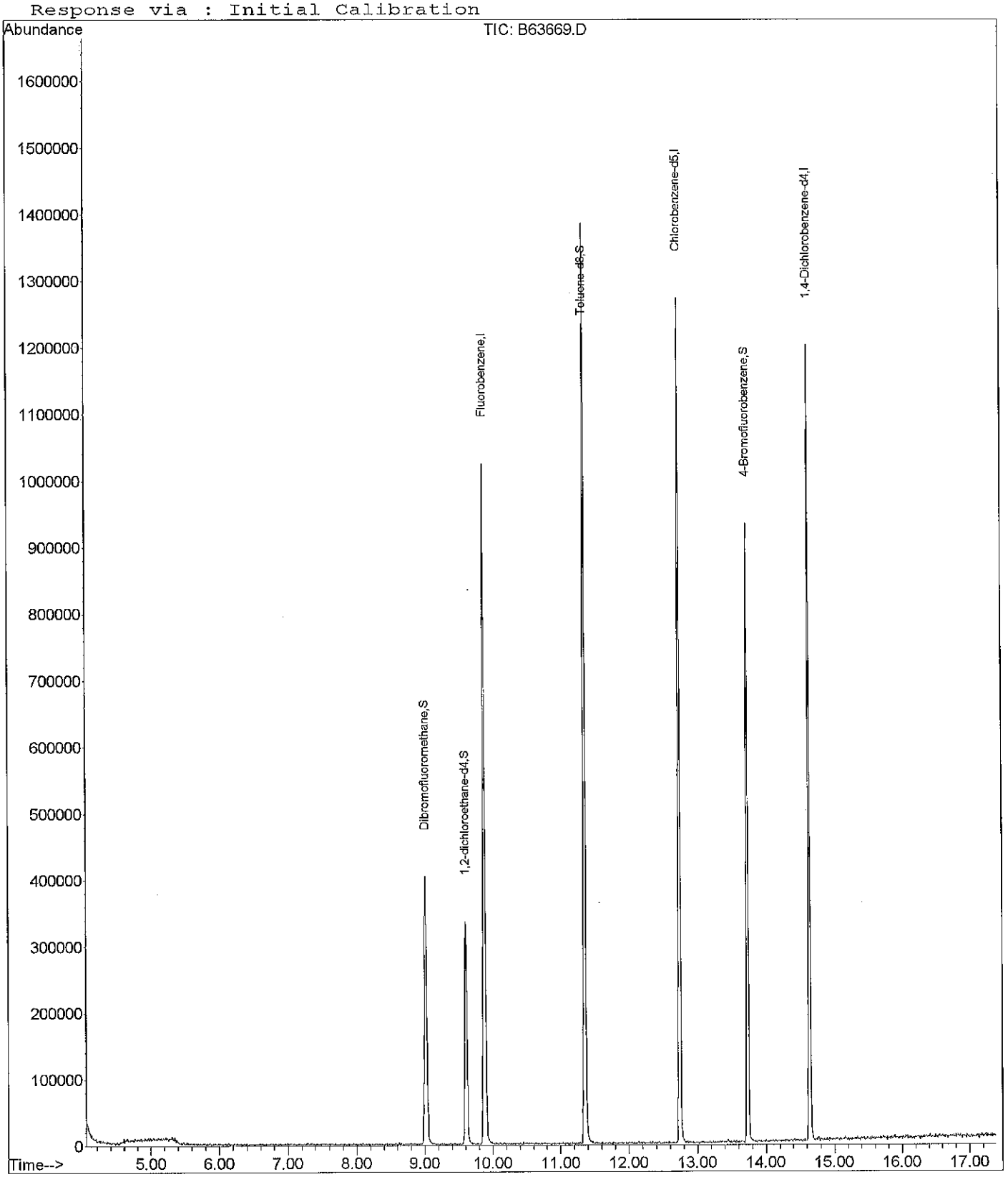
(#) = qualifier out of range (m) = manual integration
B63669.D 051010W.M Thu May 13 09:27:17 2010

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051210\B63669.D
Acq On : 12 May 2010 13:03
Sample : 1005024-1
Misc : 10mL un-heated water
MS Integration Params: ettics.p
Quant Time: May 13 9:27 2010

Vial: 13
Operator: twk-sop525r12
Inst : CSS Instr
Multiplr: 1.00
Quant Results File: 051010W.RES

Method : C:\HPCHEM\1\METHODS\051010W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 13 09:23:32 2010
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: twk-sop525r12 Date Acquired: 12 May 2010 13:03
Data File: C:\HPCHEM\1\DATA\051210\B63669.D
Name: 1005024-1
Misc: 10mL un-heated water
Method: C:\HPCHEM\1\METHODS\051010W.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

B63669.D 051010W.M Thu May 13 14:26:16 2010

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\051210\B63670.D Vial: 14
Acq On : 12 May 2010 13:26 Operator: twk-sop525r12
Sample : 1005024-2 Inst : CSS Instr
Misc : 10mL un-heated water Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: May 13 9:27 2010 Quant Results File: 051010W.RES

Quant Method : C:\HPCHEM\1\METHODS\051010W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 13 09:23:32 2010
Response via : Initial Calibration
DataAcq Meth : 051010W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.88	96	911712	25.00	ppb	0.00
56) Chlorobenzene-d5	12.74	82	386672	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	14.64	152	261645	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	9.01	113	277756	25.15	ppb	0.00
Spiked Amount 25.000	Range 80 - 124		Recovery = 100.60%			
41) 1,2-dichloroethane-d4	9.61	65	308367	27.32	ppb	0.00
Spiked Amount 25.000	Range 62 - 139		Recovery = 109.28%			
57) Toluene-d8	11.36	98	866572	24.26	ppb	0.00
Spiked Amount 25.000	Range 81 - 119		Recovery = 97.04%			
77) 4-Bromofluorobenzene	13.74	176	197385	23.05	ppb	0.00
Spiked Amount 25.000	Range 78 - 129		Recovery = 92.20%			
Target Compounds						Qvalue

m 5/13/10

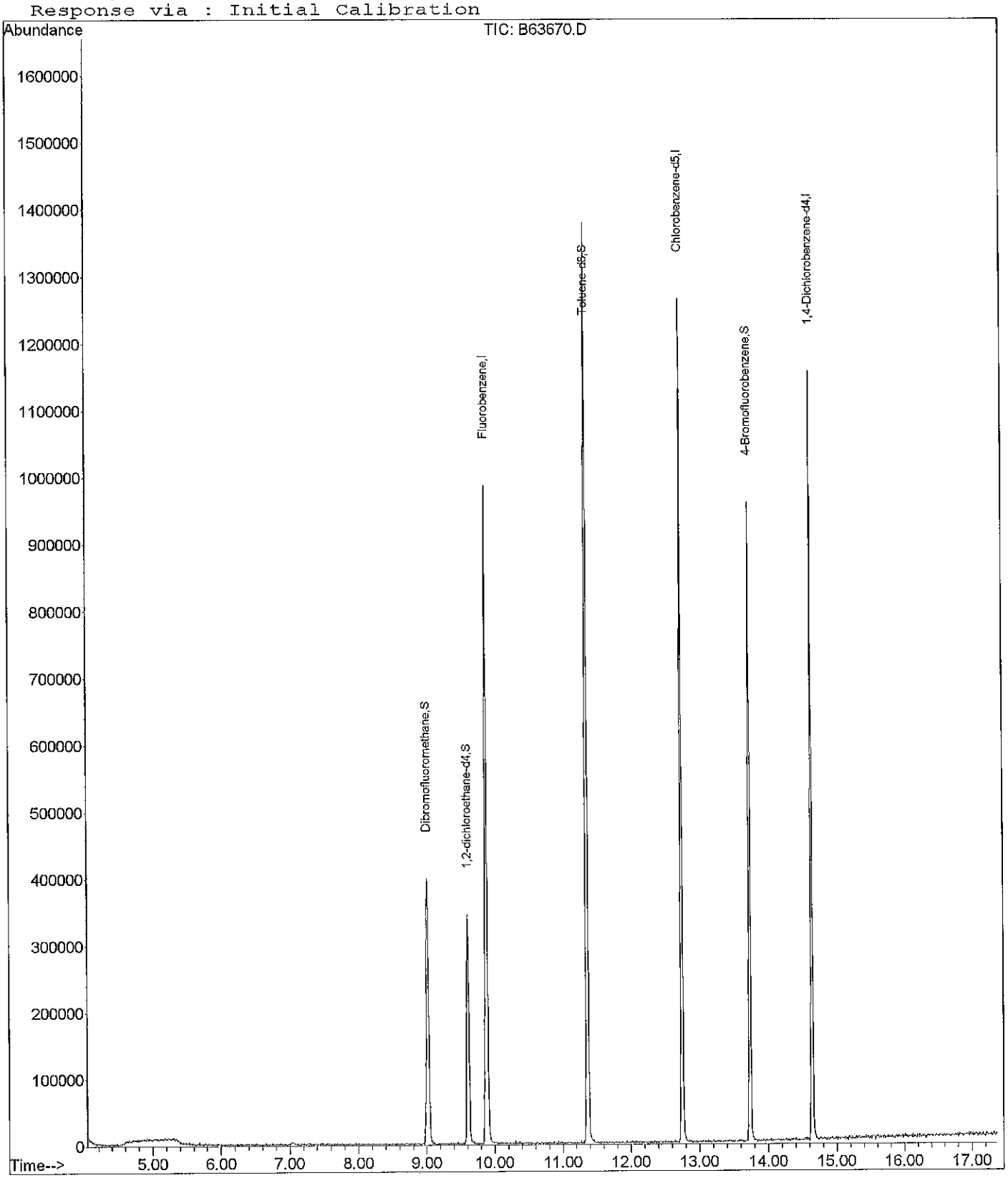
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\051210\B63670.D
Acq On : 12 May 2010 13:26
Sample : 1005024-2
Misc : 10mL un-heated water
MS Integration Params: ettics.p
Quant Time: May 13 9:27 2010

Vial: 14
Operator: twk-sop525r12
Inst : CSS Instr
Multiplr: 1.00
Quant Results File: 051010W.RES

Method : C:\HPCHEM\1\METHODS\051010W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Thu May 13 09:23:32 2010
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: twk-sop525r12 Date Acquired: 12 May 2010 13:26
Data File: C:\HPCHEM\1\DATA\051210\B63670.D
Name: 1005024-2
Misc: 10mL un-heated water
Method: C:\HPCHEM\1\METHODS\051010W.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

B63670.D 051010W.M Thu May 13 14:26:27 2010