ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division
Fort Collins, Colorado

GC/MS Volatiles

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200272771

Work Order Number: 1010128

1. This report consists of 2 water samples. The samples were received cool and intact by ALS on 10/08/10. 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 14 based on SW-846 Method 8260. 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 K. Jobes
Organics Primary Data Reviewer

10-26-10
Date

Steven D. White
Organics Final Data Reviewer

10/26/10
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 Environmental -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 1010128
Client Name: Colorado Oil & Gas Conservation Commission
Client Project Name: Complaint 200272771
Client Project Number:
Client PO Number: OE PHA 11000000014

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Burge WW	1010128-1		WATER	06-Oct-10	11:25
Trip Blank	1010128-2		WATER	06-Oct-10	

ALS Laboratory Group

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

Chain-of-Custody

Form 202r8

WORKORDER # 1010128

PAGE 1 of 1

DISPOSAL (By Lab) or Return to Client

PROJECT NAME	Complaint 200272771	SAMPLER	
PROJECT No.		SITE ID	
		EDD FORMAT	
		PURCHASE ORDER	PHA ~~1006~~ 11-14
COMPANY NAME	Colo Oil & Gas Cons. Comm.	BILL TO COMPANY	
SEND REPORT TO	Peter Gintautas	INVOICE ATTN TO	
ADDRESS	PO Box 108	ADDRESS	
CITY / STATE / ZIP	Trinidad CO 81082	CITY / STATE / ZIP	
PHONE	719-846-3091	PHONE	
FAX		FAX	
E-MAIL	peter.gintautas@state.co.us	E-MAIL	

DATE

TURNAROUND 14 day

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	200.7 + 200.8 dissolved	Dissolved Gases	8260 - 25 + TICs	502 + TICs	TEPH - DRO	Anions	pH and EC	TDS - TSS	Alk - Tot. HCO_3, CO_3	SAR calc	Cation Anion Balance	TOC
1	Burge WW	W	10/6/10	11:25A		~~HNO3~~		X	X	X	X	X	X	X	X	X	X	X	
	Burge WW		↓	↓	1	H_2SO_4													X
2	Trip Blank	W	↓	↓	2	1				X									

Anions = Br, Cl, F, NO_2, NO_3, SO_4
200.8 = Al, Sb, As, Cd, Pb, Mo, Se, Ag, Tl, U
200.7 = Ba, Be, B, Ca, Cr, Co, Cu, Fe, Li, Mg, Mn, Ni, K, Si, Na, Sr, Zn

Time 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 analytes below.

Comments: Dissolved = Filter + preserve at lab.

QC PACKAGE (check below)	
✓	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Angela Bellenbaum	10/7/10	9:00AM
RECEIVED BY		CAuchard	10/8/10	0845
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

CONDITION OF SAMPLE UPON RECEIPT FORM

Client: COGCC Workorder No: 1010128

Project Manager: AW Initials: CRS Date: 10-8-10

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): 4.5

No. of custody seals on cooler: 1

DOT Survey/ Acceptance Information

External µR/hr reading: 12

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

Received ~~out of Hold~~ with only a few hours of hold time remaining.
AW 10/8/10

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

Project Manager Signature / Date: _____

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

GC/MS Volatiles

Method SW8260_2514

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68264

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: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68264

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: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Method Blank

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68264

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	87 - 108
1868-53-7	DIBROMOFLUOROMETHANE	23.8		25	95	89 - 112
2037-26-5	TOLUENE-D8	25.5		25	102	87 - 109

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID:

Lab ID: VL101011-2MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: B68264

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

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Burge WW
Lab ID: 1010128-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received
File Name: B68278

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: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Burge WW
Lab ID: 1010128-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received
File Name: B68278

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: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Burge WW
Lab ID: 1010128-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received
File Name: B68278

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		25	96	87 - 108
1868-53-7	DIBROMOFLUOROMETHANE	24.8		25	99	89 - 112
2037-26-5	TOLUENE-D8	24.6		25	98	87 - 109

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Burge WW
Lab ID: 1010128-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: B68278

CASNO	Retention Time	Target Analyte	Dilution Factor	Result	Units	Qualifier
109-99-9	8.51	TETRAHYDROFURAN1	1	0.67	UG/L	J

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Trip Blank
Lab ID: 1010128-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received
File Name: B68279

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: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Trip Blank
Lab ID: 1010128-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received
File Name: B68279

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: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Sample Results

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Trip Blank
Lab ID: 1010128-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10
Prep Method: SW5030 Rev C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received
File Name: B68279

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		25	96	87 - 108
1868-53-7	DIBROMOFLUOROMETHANE	23.4		25	94	89 - 112
2037-26-5	TOLUENE-D8	25		25	100	87 - 109

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Field ID: Trip Blank
Lab ID: 1010128-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 06-Oct-10
Date Extracted: 11-Oct-10
Date Analyzed: 11-Oct-10

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: As Received

Sample Aliquot: 10 ml
Final Volume: 10 ml
Clean DF: 1
File Name: B68279

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

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/11/2010
Date Analyzed: 10/11/2010
Prep Method: SW5030C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68261

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	9.51	1		95	63 - 125%
74-87-3	CHLOROMETHANE	10	10.4	1		104	73 - 122%
75-01-4	VINYL CHLORIDE	10	11.9	1		119	72 - 123%
74-83-9	BROMOMETHANE	10	10.3	1		103	68 - 123%
75-00-3	CHLOROETHANE	10	9.55	1		95	74 - 124%
75-69-4	TRICHLOROFLUOROMETHANE	10	9.75	1		97	74 - 124%
75-35-4	1,1-DICHLOROETHENE	10	9.59	1		96	77 - 119%
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10.4	1		104	79 - 122%
67-64-1	ACETONE	40	31.4	10		79	62 - 142%
74-88-4	IODOMETHANE	10	9.98	1		100	72 - 126%
75-15-0	CARBON DISULFIDE	10	10.4	1		104	76 - 121%
75-09-2	METHYLENE CHLORIDE	10	9.53	1		95	71 - 130%
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.95	1		100	82 - 117%
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	17.9	1		89	77 - 119%
75-34-3	1,1-DICHLOROETHANE	10	10.2	1		102	83 - 119%
108-05-4	VINYL ACETATE	10	9.43	2		94	76 - 121%
156-59-2	CIS-1,2-DICHLOROETHENE	10	9.93	1		99	83 - 117%
78-93-3	2-BUTANONE	40	36.2	10		91	70 - 135%
74-97-5	BROMOCHLOROMETHANE	10	10.1	1		101	83 - 121%
67-66-3	CHLOROFORM	10	9.5	1		95	82 - 119%
71-55-6	1,1,1-TRICHLOROETHANE	10	9.9	1		99	80 - 120%
594-20-7	2,2-DICHLOROPROPANE	10	10.3	1		103	83 - 125%
56-23-5	CARBON TETRACHLORIDE	10	9.91	1		99	77 - 122%
563-58-6	1,1-DICHLOROPROPENE	10	10.3	1		103	84 - 118%
107-06-2	1,2-DICHLOROETHANE	10	8.97	1		90	74 - 128%
71-43-2	BENZENE	10	9.97	1		100	83 - 117%

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/11/2010
Date Analyzed: 10/11/2010
Prep Method: SW5030C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68261

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		100	83 - 117%
78-87-5	1,2-DICHLOROPROPANE	10	10.4	1		104	84 - 120%
74-95-3	DIBROMOMETHANE	10	9.03	1		90	79 - 122%
75-27-4	BROMODICHLOROMETHANE	10	9.57	1		96	76 - 122%
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.4	1		104	81 - 120%
108-10-1	4-METHYL-2-PENTANONE	40	36.7	10		92	73 - 125%
108-88-3	TOLUENE	10	9.75	1		98	82 - 113%
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.46	1		95	81 - 114%
79-00-5	1,1,2-TRICHLOROETHANE	10	9.05	1		91	78 - 116%
591-78-6	2-HEXANONE	40	32.7	10		82	71 - 124%
127-18-4	TETRACHLOROETHENE	10	10	1		100	81 - 115%
142-28-9	1,3-DICHLOROPROPANE	10	9.51	1		95	80 - 115%
124-48-1	DIBROMOCHLOROMETHANE	10	9.44	1		94	76 - 115%
106-93-4	1,2-DIBROMOETHANE	10	9.32	1		93	79 - 114%
544-10-5	1-CHLOROHEXANE	10	10.3	1		103	80 - 117%
108-90-7	CHLOROBENZENE	10	9.92	1		99	81 - 113%
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.66	1		97	78 - 113%
100-41-4	ETHYLBENZENE	10	9.95	1		100	81 - 113%
136777-61-2	M+P-XYLENE	20	20.3	1		101	82 - 115%
95-47-6	O-XYLENE	10	10.5	1		105	81 - 115%
100-42-5	STYRENE	10	9.93	1		99	78 - 118%
75-25-2	BROMOFORM	10	8.56	1		86	70 - 120%
98-82-8	ISOPROPYLBENZENE	10	10.2	1		102	80 - 113%
96-18-4	1,2,3-TRICHLOROPROPANE	10	8.75	1		88	78 - 117%
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	8.89	1		89	75 - 121%
108-86-1	BROMOBENZENE	10	9.09	1		91	81 - 114%
103-65-1	N-PROPYLBENZENE	10	10.2	1		102	79 - 116%

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1010128
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200272771

Lab ID: VL101011-2LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/11/2010
Date Analyzed: 10/11/2010
Prep Method: SW5030C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68261

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	10.1	1		101	79 - 116%
108-67-8	1,3,5-TRIMETHYLBENZENE	10	10.1	1		101	78 - 116%
106-43-4	4-CHLOROTOLUENE	10	9.71	1		97	78 - 115%
98-06-6	TERT-BUTYLBENZENE	10	10.7	1		107	76 - 120%
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.73	1		97	80 - 117%
135-98-8	SEC-BUTYLBENZENE	10	10.4	1		104	78 - 115%
541-73-1	1,3-DICHLOROBENZENE	10	9.86	1		99	79 - 115%
99-87-6	P-ISOPROPYLTOLUENE	10	10.3	1		103	77 - 116%
106-46-7	1,4-DICHLOROBENZENE	10	9.44	1		94	82 - 114%
104-51-8	N-BUTYLBENZENE	10	10.7	1		107	79 - 117%
95-50-1	1,2-DICHLOROBENZENE	10	9.55	1		95	82 - 114%
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	8.42	2		84	73 - 125%
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.3	1		103	75 - 120%
87-68-3	HEXACHLOROBUTADIENE	10	11.3	1		113	71 - 124%
91-20-3	NAPHTHALENE	10	9.63	1		96	71 - 131%
87-61-6	1,2,3-TRICHLOROBENZENE	10	10.4	1		104	70 - 131%

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/11/2010
Date Analyzed: 10/11/2010
Prep Method: SW5030C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68262

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	9.18	1		92	20	4
74-87-3	CHLOROMETHANE	10	10.5	1		105	20	1
75-01-4	VINYL CHLORIDE	10	11.6	1		116	20	3
74-83-9	BROMOMETHANE	10	10.4	1		104	20	0
75-00-3	CHLOROETHANE	10	9.51	1		95	20	0
75-69-4	TRICHLOROFLUOROMETHANE	10	9.39	1		94	20	4
75-35-4	1,1-DICHLOROETHENE	10	9.38	1		94	20	2
76-13-1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA	10	10	1		100	20	3
67-64-1	ACETONE	40	33	10		83	30	5
74-88-4	IODOMETHANE	10	9.58	1		96	20	4
75-15-0	CARBON DISULFIDE	10	10	1		100	20	4
75-09-2	METHYLENE CHLORIDE	10	9.13	1		91	20	4
156-60-5	TRANS-1,2-DICHLOROETHENE	10	9.78	1		98	20	2
1634-04-4	METHYL TERTIARY BUTYL ETHER	20	18	1		90	20	1
75-34-3	1,1-DICHLOROETHANE	10	10.2	1		102	20	0
108-05-4	VINYL ACETATE	10	10.1	2		101	20	7
156-59-2	CIS-1,2-DICHLOROETHENE	10	9.6	1		96	20	3
78-93-3	2-BUTANONE	40	37.1	10		93	30	3
74-97-5	BROMOCHLOROMETHANE	10	9.61	1		96	20	5
67-66-3	CHLOROFORM	10	9.46	1		95	20	0
71-55-6	1,1,1-TRICHLOROETHANE	10	9.52	1		95	20	4
594-20-7	2,2-DICHLOROPROPANE	10	9.78	1		98	20	6
56-23-5	CARBON TETRACHLORIDE	10	9.41	1		94	20	5
563-58-6	1,1-DICHLOROPROPENE	10	9.97	1		100	20	3
107-06-2	1,2-DICHLOROETHANE	10	8.87	1		89	20	1
71-43-2	BENZENE	10	10	1		100	20	0
79-01-6	TRICHLOROETHENE	10	9.79	1		98	20	3

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC

Work Order Number: 1010128

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200272771

Lab ID: VL101011-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/11/2010
Date Analyzed: 10/11/2010
Prep Method: SW5030C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68262

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	1
74-95-3	DIBROMOMETHANE	10	9.13	1		91	20	1
75-27-4	BROMODICHLOROMETHANE	10	9.69	1		97	20	1
10061-01-5	CIS-1,3-DICHLOROPROPENE	10	10.4	1		104	20	0
108-10-1	4-METHYL-2-PENTANONE	40	38.2	10		96	30	4
108-88-3	TOLUENE	10	10.2	1		102	20	4
10061-02-6	TRANS-1,3-DICHLOROPROPENE	10	9.81	1		98	20	4
79-00-5	1,1,2-TRICHLOROETHANE	10	9.54	1		95	20	5
591-78-6	2-HEXANONE	40	35.5	10		89	30	8
127-18-4	TETRACHLOROETHENE	10	10.4	1		104	20	3
142-28-9	1,3-DICHLOROPROPANE	10	9.92	1		99	20	4
124-48-1	DIBROMOCHLOROMETHANE	10	9.59	1		96	20	2
106-93-4	1,2-DIBROMOETHANE	10	9.66	1		97	20	4
544-10-5	1-CHLOROHEXANE	10	10.7	1		107	20	4
108-90-7	CHLOROBENZENE	10	10.2	1		102	20	3
630-20-6	1,1,1,2-TETRACHLOROETHANE	10	9.68	1		97	20	0
100-41-4	ETHYLBENZENE	10	9.95	1		99	20	0
136777-61-2	M+P-XYLENE	20	20.8	1		104	20	3
95-47-6	O-XYLENE	10	10.4	1		104	20	1
100-42-5	STYRENE	10	10.2	1		102	20	2
75-25-2	BROMOFORM	10	8.67	1		87	20	1
98-82-8	ISOPROPYLBENZENE	10	10.2	1		102	20	0
96-18-4	1,2,3-TRICHLOROPROPANE	10	9.13	1		91	20	4
79-34-5	1,1,2,2-TETRACHLOROETHANE	10	9.03	1		90	20	2
108-86-1	BROMOBENZENE	10	9.27	1		93	20	2
103-65-1	N-PROPYLBENZENE	10	10.2	1		102	20	0
95-49-8	2-CHLOROTOLUENE	10	10.3	1		103	20	2

Data Package ID: *VL1010128-1*

GC/MS Volatiles

Method SW8260_2514

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Environmental -- FC
Work Order Number: 1010128
Client Name: Colorado Oil & Gas Conservation Commission
ClientProject ID: Complaint 200272771

Lab ID: VL101011-2LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 10/11/2010
Date Analyzed: 10/11/2010
Prep Method: SW5030C

Prep Batch: VL101011-2
QCBatchID: VL101011-2-3
Run ID: VL101011-2A
Cleanup: NONE
Basis: N/A
File Name: B68262

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	1		100	20	0
106-43-4	4-CHLOROTOLUENE	10	10.1	1		101	20	4
98-06-6	TERT-BUTYLBENZENE	10	10.7	1		107	20	0
95-63-6	1,2,4-TRIMETHYLBENZENE	10	9.74	1		97	20	0
135-98-8	SEC-BUTYLBENZENE	10	10.5	1		105	20	1
541-73-1	1,3-DICHLOROBENZENE	10	9.87	1		99	20	0
99-87-6	P-ISOPROPYLTOLUENE	10	10.2	1		102	20	1
106-46-7	1,4-DICHLOROBENZENE	10	9.41	1		94	20	0
104-51-8	N-BUTYLBENZENE	10	10.6	1		106	20	1
95-50-1	1,2-DICHLOROBENZENE	10	9.36	1		94	20	2
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE	10	8.51	2		85	20	1
120-82-1	1,2,4-TRICHLOROBENZENE	10	10.4	1		104	20	2
87-68-3	HEXACHLOROBUTADIENE	10	11	1		110	20	2
91-20-3	NAPHTHALENE	10	9.99	1		100	20	4
87-61-6	1,2,3-TRICHLOROBENZENE	10	11.1	1		111	20	6

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	25	97		98		87 - 108
1868-53-7	DIBROMOFLUOROMETHANE	25	100		96		89 - 112
2037-26-5	TOLUENE-D8	25	100		101		87 - 109

Data Package ID: *VL1010128-1*

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\101110\B68264.D Vial: 5
Acq On : 11 Oct 2010 9:00 Operator: twk-sop525r14
Sample : VL101011-2MB Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 11 10:38 2010 Quant Results File: 092410W.RES

Quant Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Oct 11 10:37:17 2010
Response via : Initial Calibration
DataAcq Meth : 092410W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.49	96	2154478	25.00	ppb	0.00
56) Chlorobenzene-d5	12.50	82	808053	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	14.43	152	533986	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.74	113	604694	23.78	ppb	0.00
Spiked Amount 25.000	Range 89 - 112		Recovery = 95.12%			
41) 1,2-dichloroethane-d4	9.19	65	428971	22.72	ppb	0.00
Spiked Amount 25.000	Range 80 - 125		Recovery = 90.88%			
57) Toluene-d8	11.11	98	1918535	25.50	ppb	0.00
Spiked Amount 25.000	Range 87 - 109		Recovery = 102.00%			
77) 4-Bromofluorobenzene	13.49	176	412274	23.32	ppb	0.00
Spiked Amount 25.000	Range 87 - 108		Recovery = 93.28%			
Target Compounds						Qvalue
13) Acetone	6.03	43	4135	Below Cal		87
16) Allyl chloride	6.29	76	3310	0.19	ppb	#No 1
18) Methylene chloride	6.61	84	3466	Below Cal	#	61

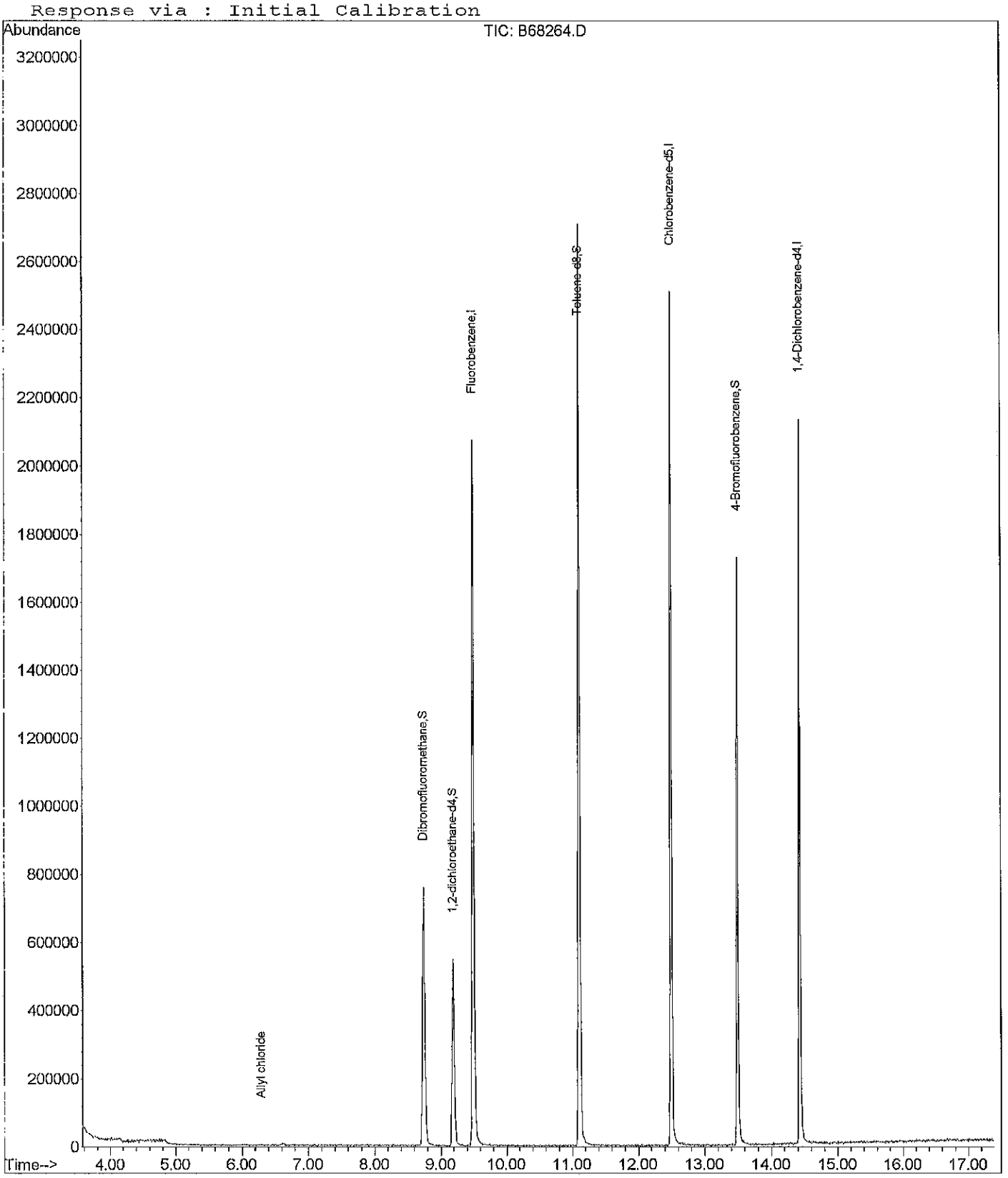
am 10/11/10

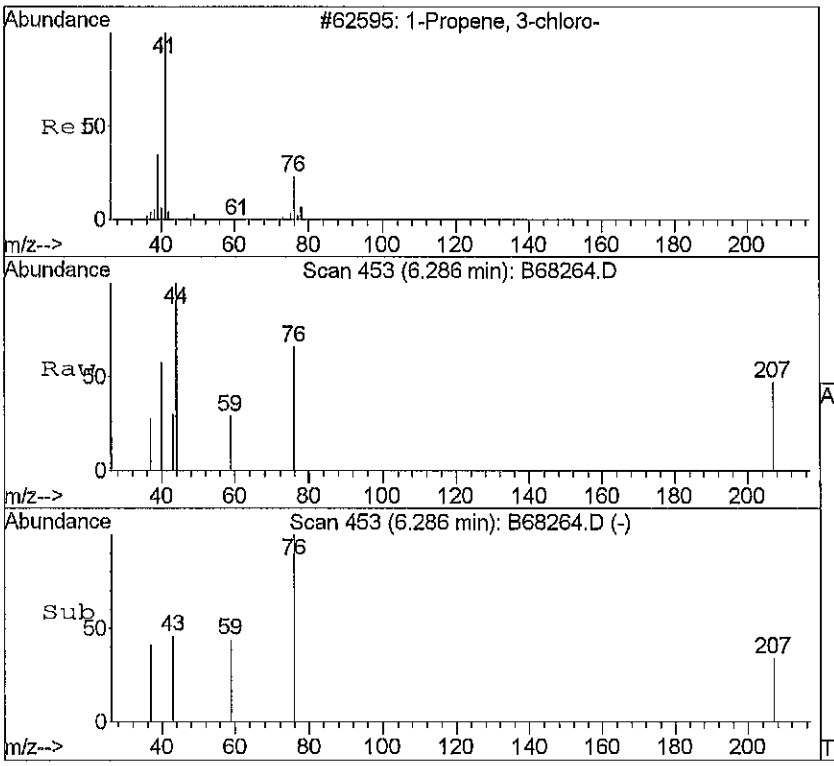
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : C:\HPCHEM\1\DATA\101110\B68264.D Vial: 5
Acq On : 11 Oct 2010 9:00 Operator: twk-sop525r14
Sample : VL101011-2MB Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 11 10:38 2010 Quant Results File: 092410W.RES

Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Oct 11 10:37:17 2010
Response via : Initial Calibration

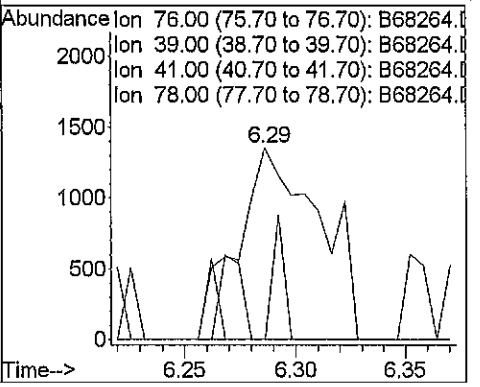


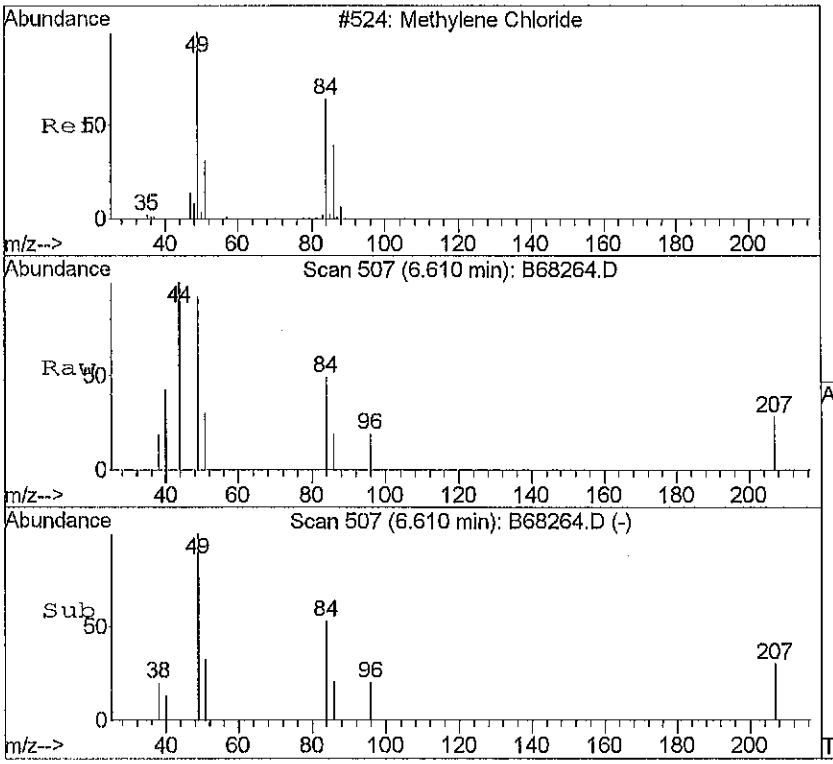


#16
Allyl chloride
Concen: 0.19 ppb NO
RT: 6.29 min Scan# 453
Delta R.T. -0.12 min
Lab File: B68264.D
Acq: 11 Oct 2010 9:00

Tgt Ion: 76 Resp: 3310

Ion	Ratio	Lower	Upper
76	100		
39	0.0	118.1	177.1#
41	0.0	200.3	300.5#
78	0.0	24.9	37.3#

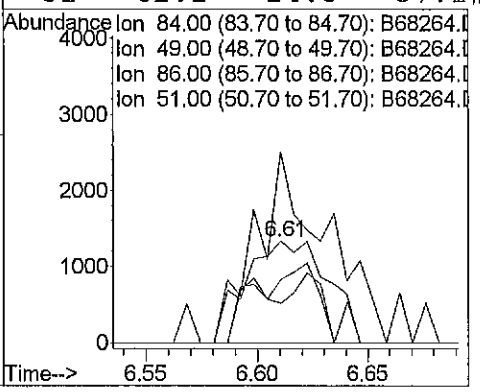




#18
Methylene chloride
Concen: Below Cal
RT: 6.61 min Scan# 507
Delta R.T. -0.00 min
Lab File: B68264.D
Acq: 11 Oct 2010 9:00

Tgt Ion: 84 Resp: 3466

Ion	Ratio	Lower	Upper
84	100		
49	188.7	81.2	189.4
86	39.3	37.5	87.5
51	62.2	24.5	57.1#



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\101110\B68264.D Vial: 5
Acq On : 11 Oct 2010 9:00 Operator: twk-sop525r14
Sample : VL101011-2MB Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 13 16:38 2010 Quant Results File: 110309WH.RES

Quant Method : C:\HPCHEM\1\METHODS\110309WH.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Tue Aug 10 13:51:21 2010
Response via : Initial Calibration
DataAcq Meth : 092410W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.49	96	2154478	25.00	ppb	-0.02

Target Compounds	Qvalue

10/13/10

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

Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\101110\B68278.D Vial: 17
Acq On : 11 Oct 2010 14:14 Operator: twk-sop525r14
Sample : 1010128-1 Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 11 14:46 2010 Quant Results File: 092410W.RES

Quant Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Oct 11 10:37:17 2010
Response via : Initial Calibration
DataAcq Meth : 092410W

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.50	96	1978970	25.00	ppb	0.00
56) Chlorobenzene-d5	12.50	82	785378	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	14.44	152	515433	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.75	113	579654	24.82	ppb	0.00
Spiked Amount 25.000	Range 89 - 112		Recovery = 99.28%			
41) 1,2-dichloroethane-d4	9.19	65	403446	23.26	ppb	0.00
Spiked Amount 25.000	Range 80 - 125		Recovery = 93.04%			
57) Toluene-d8	11.11	98	1798159	24.59	ppb	0.00
Spiked Amount 25.000	Range 87 - 109		Recovery = 98.36%			
77) 4-Bromofluorobenzene	13.50	176	411484	23.95	ppb	0.00
Spiked Amount 25.000	Range 87 - 108		Recovery = 95.80%			

Target Compounds Qvalue

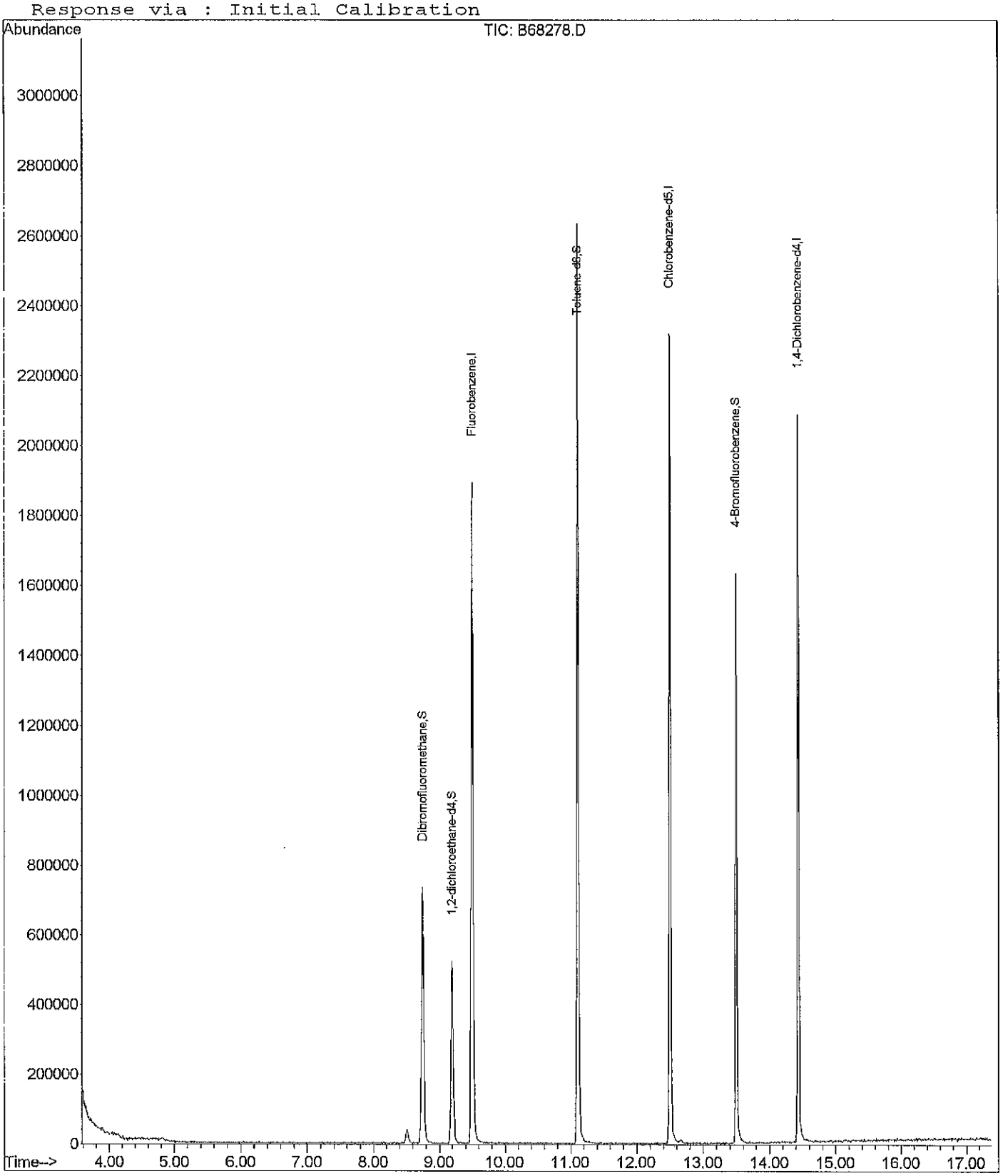
10/11/10

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\101110\B68278.D Vial: 17
Acq On : 11 Oct 2010 14:14 Operator: twk-sop525r14
Sample : 1010128-1 Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 11 14:46 2010 Quant Results File: 092410W.RES

Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Oct 11 10:37:17 2010
Response via : Initial Calibration



Library Search Compound Report

Data File : C:\HPCHEM\1\DATA\101110\B68278.D Vial: 17
Acq On : 11 Oct 2010 14:14 Operator: twk-sop525r14
Sample : 1010128-1 Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p

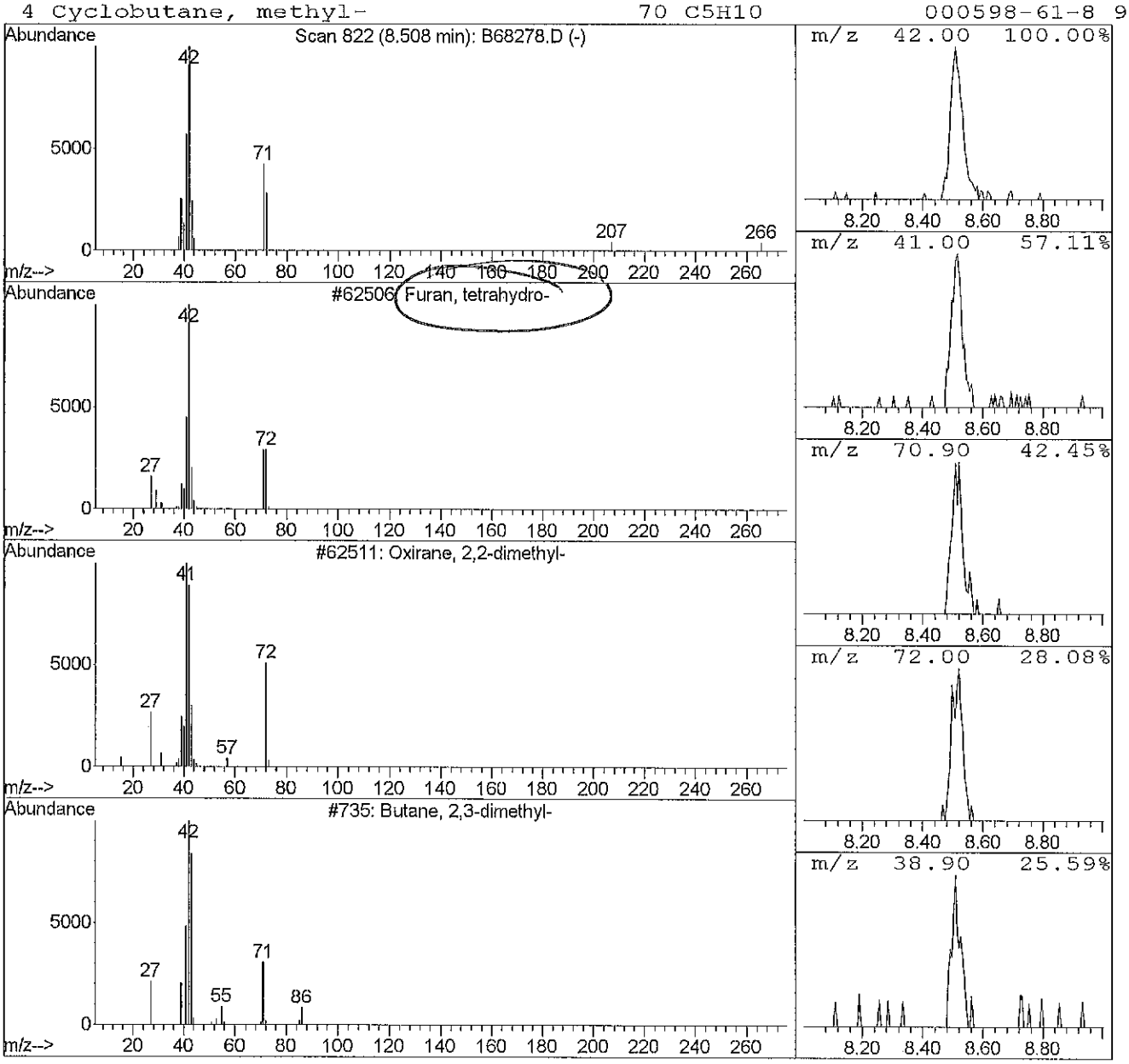
Quant Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Library : C:\DATABASE\NBS75K.L

****

Peak Number 1 Furan, tetrahydro- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.51	0.67 ppb	111086	Fluorobenzene	9.50

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Furan, tetrahydro-	72	C4H8O	000109-99-9	78
2	Oxirane, 2,2-dimethyl-	72	C4H8O	000558-30-5	9
3	Butane, 2,3-dimethyl-	86	C6H14	000079-29-8	9
4	Cyclobutane, methyl-	70	C5H10	000598-61-8	9



Quantitation Report (Not Reviewed)

Data File : C:\HPCHEM\1\DATA\101110\B68279.D Vial: 17
Acq On : 11 Oct 2010 14:36 Operator: twk-sop525r14
Sample : 1010128-2 Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 11 15:02 2010 Quant Results File: 092410W.RES

Quant Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Oct 11 10:37:17 2010
Response via : Initial Calibration
DataAcq Meth : 092410W

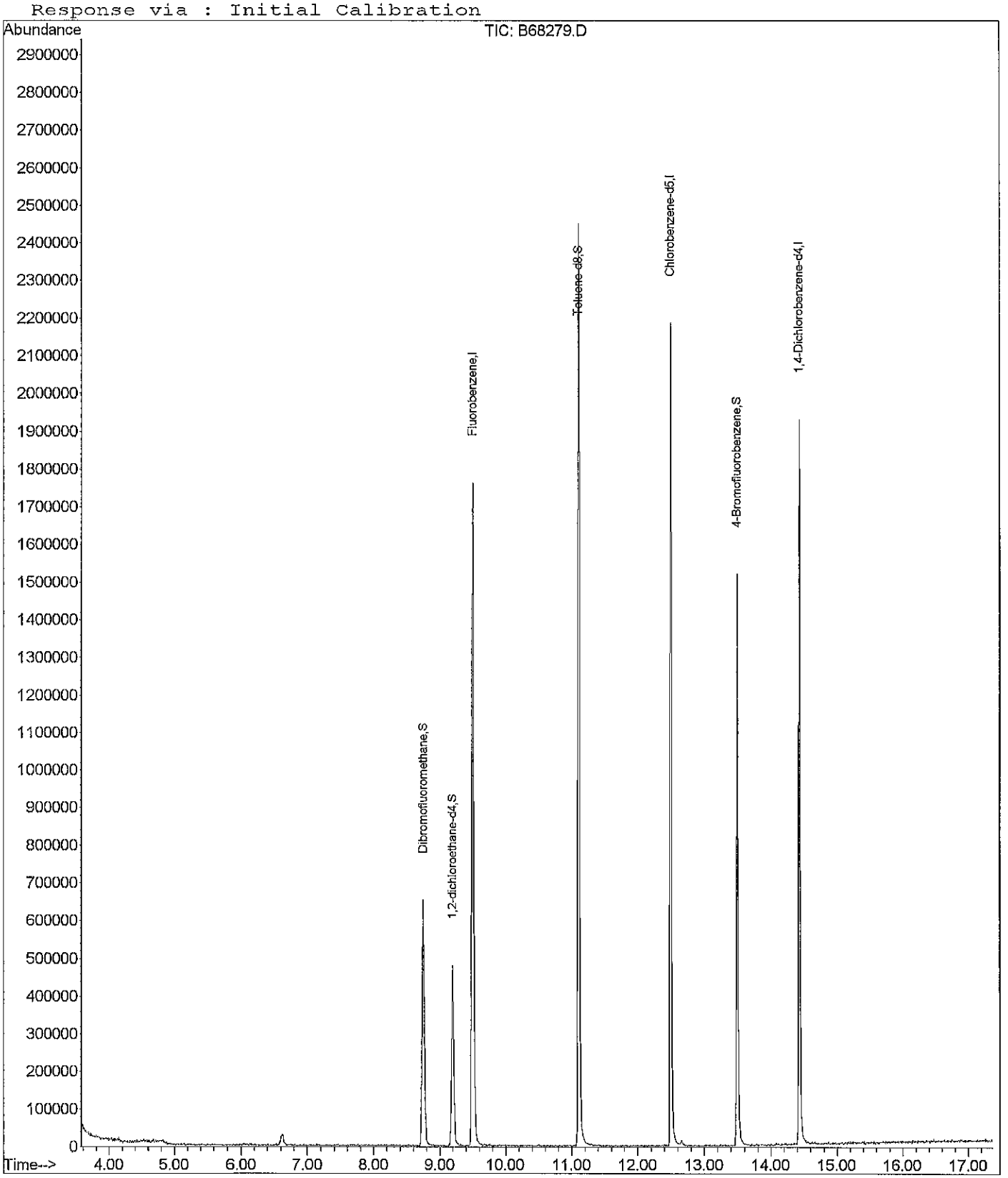
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorobenzene	9.50	96	1816382	25.00	ppb	0.00
56) Chlorobenzene-d5	12.50	82	704928	25.00	ppb	0.00
78) 1,4-Dichlorobenzene-d4	14.43	152	468075	25.00	ppb	0.00
System Monitoring Compounds						
37) Dibromofluoromethane	8.75	113	501558	23.39	ppb	0.00
Spiked Amount 25.000	Range 89 - 112		Recovery = 93.56%			
41) 1,2-dichloroethane-d4	9.19	65	377271	23.70	ppb	0.00
Spiked Amount 25.000	Range 80 - 125		Recovery = 94.80%			
57) Toluene-d8	11.11	98	1639458	24.98	ppb	0.00
Spiked Amount 25.000	Range 87 - 109		Recovery = 99.92%			
77) 4-Bromofluorobenzene	13.49	176	369569	23.97	ppb	0.00
Spiked Amount 25.000	Range 87 - 108		Recovery = 95.88%			
Target Compounds						Qvalue
18) Methylene chloride	6.62	84	21395	Below Cal		90

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

Quantitation Report

Data File : C:\HPCHEM\1\DATA\101110\B68279.D Vial: 17
Acq On : 11 Oct 2010 14:36 Operator: twk-sop525r14
Sample : 1010128-2 Inst : CSS Instr
Misc : 10mL un-heated purge (water) Multiplr: 1.00
MS Integration Params: ettics.p
Quant Time: Oct 11 15:02 2010 Quant Results File: 092410W.RES

Method : C:\HPCHEM\1\METHODS\092410W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Oct 11 10:37:17 2010
Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: twk-sop525r14 Date Acquired: 11 Oct 2010 14:36
Data File: C:\HPCHEM\1\DATA\101110\B68279.D
Name: 1010128-2
Misc: 10mL un-heated purge (water)
Method: C:\HPCHEM\1\METHODS\092410W.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

B68279.D 092410W.M Wed Oct 13 16:39:16 2010