



#1944980

*formerly Evergreen Analytical, Inc.*

July 29, 2009

Peter Gintautas  
Colorado Oil & Gas Conservation Comm.  
1120 Lincoln St #801  
Denver, CO 80203

Lab Work Order: 09-4548  
Client Project ID: Complaint 200212599

Dear Peter Gintautas:

#### ADDENDUM

Attached are the final Method 8260 results for the sample in this work order. The original report, mailed and e-mailed 7/10//09, contained preliminary results for this test. Those results are unchanged ; the final report just includes all the QC results and a description of any anomalies.

A copy of this project report and supporting data will be retained for a period of five years from the time of the original report unless we are otherwise advised by you. A document retrieval charge will apply.

Thank you for using the services of this Laboratory. If you require further information, I can be reached at 303-425-6021.

Sincerely,

Joseph J Egry IV/ Carl Smits  
Quality Assurance

# WORK ORDER Summary

Evergreen Analytical, Inc.

09-4548

Rpt To: Peter Gintautas  
Colorado Oil & Gas Conservation  
Comm.  
1120 Lincoln St #801  
Denver, CO 80203  
(719) 846-3091

Email To: chris.canfield@state.co.us  
Email To: peter.gintautas@state.co.us

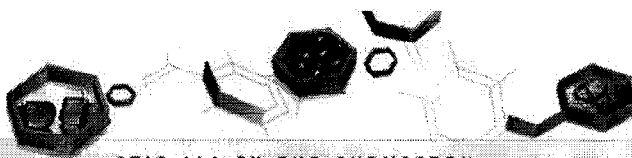
7/29/2009 6:05:33 PM

Client Project ID: Complaint 200212599

QC Level: Level I

## Comments

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Test Code	Test Name	Hold	MS	Date Due	Hold Time
09-4548-01A	York WW	Water	6/22/09 0901	6/23/09	8260_W *	8260B: VOA HSL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	7/08/09	7/06/09
09-4548-01B	York WW	Water	6/22/09 0901	6/23/09	MEEP_W *	RSK175M: MEE	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	7/06/09
09-4548-01C	York WW	Water	6/22/09 0901	6/23/09	200.7_D *	200.7: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	12/19/09
09-4548-01C	York WW	Water	6/22/09 0901	6/23/09	200.8_D *	200.8: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	12/19/09
09-4548-01D	York WW	Water	6/22/09 0901	6/23/09	ANIONS_NonDW *	300.0: Anions by IC	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	6/24/09
09-4548-01D	York WW	Water	6/22/09 0901	6/23/09	C/A_BAL	Cation / Anion Balance calculation	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	
09-4548-01E	York WW	Water	6/22/09 0901	6/23/09	ALK_WGRP *	Alkalinity	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	7/06/09
09-4548-01E	York WW	Water	6/22/09 0901	6/23/09	COND_W	Specific Conductance @ 25°C	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	7/20/09
09-4548-01E	York WW	Water	6/22/09 0901	6/23/09	F_W	Fluoride	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	7/20/09
09-4548-01E	York WW	Water	6/22/09 0901	6/23/09	PH_DW	E150.1 pH	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	6/23/09
09-4548-01E	York WW	Water	6/22/09 0901	6/23/09	TDS_W	Total Dissolved Solids (TDS)	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	6/29/09
09-4548-01F	York WW	Water	6/22/09 0901	6/23/09	6010_D *	6010: Dissolved Metals	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	12/19/09
09-4548-01F	York WW	Water	6/22/09 0901	6/23/09	SAR_W	Sodium Adsorption Ratio for Water	<input type="checkbox"/>	<input type="checkbox"/>	7/08/09	12/19/09



07/06/09

## Technical Report for

Accutest Mountain States

COGCCCCOD: COGCC Denver, CO

Complaint 200212599

Accutest Job Number: D4548

Sampling Date: 06/22/09

### Report to:

Accutest Mountain States  
4036 Youngfield St.  
Wheat Ridge, CO 80033-3862

Total number of pages in report: 20



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

*David N. Speis*  
David N. Speis  
VP Ops, Laboratory Director

Client Service contact: Tony Esposito 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, PA, RI, SC, TN, VA, WV

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.  
Test results relate only to samples analyzed.

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Accutest Laboratories

## Sample Summary

Accutest Mountain States

Job No: D4548

COGCCCCOD: COGCC Denver, CO  
Project No: Complaint 200212599

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
D4548-1	06/22/09	09:01	06/23/09	AQ Water	YORK WW
D4548-1F	06/22/09	09:01	06/23/09	AQ Water	YORK WW

**CASE NARRATIVE / CONFORMANCE SUMMARY****Client:** Accutest Mountain States**Job No** D4548**Site:** COGCCCCOD: COGCC Denver, CO**Report Date** 7/6/2009 4:50:43 PM

On 06/23/2009, 1 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at Accutest Laboratories at a temperature of 3.2 C. Samples were intact and properly preserved, unless noted below. An Accutest Job Number of D4548 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

**Volatiles by GCMS By Method SW846 8260B****Matrix:** AQ**Batch ID:** V3A2823

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JA21861-1MS, JA21861-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits. Probable cause due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 2-Chloroethyl vinyl ether are outside control limits. Probable cause due to matrix interference.
- JA21861-1MS for 2-Chloroethyl vinyl ether: Outside control limits due to acid preservation.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover



### Sample Results

### Report of Analysis

## Report of Analysis

Client Sample ID: YORK WW

Lab Sample ID: D4548-1

Matrix: AQ - Water

Method: SW846 8260B

Project: COGCCCOD: COGCC Denver, CO

Date Sampled: 06/22/09

Date Received: 06/23/09

Percent Solids: n/a

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3A65932.D	1	07/02/09	KPP	n/a	n/a	V3A2823
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

## VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.9	ug/l	
71-43-2	Benzene	2.9	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	4.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.30	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.74	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.26	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.39	ug/l	
75-00-3	Chloroethane	ND	1.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10	1.4	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.26	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.28	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.29	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.25	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.27	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.4	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	0.86	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.30	ug/l	
100-42-5	Styrene	ND	5.0	0.58	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.24	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.27	ug/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



## Report of Analysis

Client Sample ID:	YORK WW	Date Sampled:	06/22/09
Lab Sample ID:	D4548-1	Date Received:	06/23/09
Matrix:	AQ - Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	COGCCCCOD: COGCC Denver, CO		

## VOA HSL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-88-3	Toluene	3.8	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.26	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.23	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.24	ug/l	
108-05-4	Vinyl Acetate	ND	10	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.44	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	91%		76-120%
17060-07-0	1,2-Dichloroethane-D4	92%		64-135%
2037-26-5	Toluene-D8	92%		76-117%
460-00-4	4-Bromofluorobenzene	87%		72-122%

ND = Not detected      MDL - Method Detection Limit  
RL = Reporting Limit  
E = Indicates value exceeds calibration range

J = Indicates an estimated value  
B = Indicates analyte found in associated method blank  
N = Indicates presumptive evidence of a compound



## Misc. Forms

### Custody Documents and Other Forms

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Includes the following where applicable:

- Chain of Custody

Job Number: **D4548**  
Client project: Complaint 200222599  
Account: **COGCCCCO** Colorado Oil & Gas, Denver  
Project: **COGCCCCO1025** COGCC Denver, CO **NEW PROJECT 18-JUN-09**  
Report to: Peter Gintautas EC Date: 08-JUL-09 Deliv: COMBEN StateCode: CO

Client  
Project  
Deliverables  
Metric  
TAT  
Tests  
Metals **SW560**

Sample Number	Client ID	Site	Matrix	Batch	Batch Date	Batch Time	TAT Date	Ship	Product List
---------------	-----------	------	--------	-------	------------	------------	----------	------	--------------

D4548-1	YORK WW	WW	23-JUN-09	22-JUN-09	09:01	15	08-JUL-09		ERO, CHL, ENERGY, F, METDIO, MISC, NO2NO3, NO3NO3, PH, SAR, SCOM, SO4, TDS, VS0150GMS, VS260HSL, XCARBICALK
D4548-1P	YORK WW	WW	23-JUN-09	22-JUN-09	09:01	15	08-JUL-09		AGMS, ASHS, S, BA, BE, CA, CDMS, CO, CR, CU, FE, FILTERMNT, E, LI, METDIO, NO, NH, NOME, NA, NI, PEMS, SEMS, SESS, SR, TMS, UMS, XN

Comments: **D4548-1**  
Nisco Cation/ Anion Balance Calculation  
Comments: **D4548-1P**  
Metals=epa

Package Aq XCARBICALK - ALK, BIC, CAR

EMAIL Address:  
Peter Gintautas  
Colorado Oil & Gas, Denver  
1120 Lincoln Street #801  
Denver, CO 80203 (303)846-3091  
peter.gintautas@state.co.us

REPORTING Address:  
Peter Gintautas  
Colorado Oil & Gas, Denver  
213 Cornudas Road  
Trinidad, CO 81082 (719)846-3091

INVOICE/INQ Address:  
Margaret Ash  
Colorado Oil & Gas, Denver  
1120 Lincoln Street #801  
Denver, CO 80203 (303)894-3100

2 UIALS

2283

3.2°  
reling by: Fedex rec'd by: PR- 7/1/09 10:30

Login: \_\_\_\_\_ Date: \_\_\_\_\_  
Login Review: \_\_\_\_\_ Date: \_\_\_\_\_  
CS Review: \_\_\_\_\_ Date: \_\_\_\_\_  
ID Review: \_\_\_\_\_ Date: \_\_\_\_\_



## Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D4548 Client: \_\_\_\_\_ Immediate Client Services Action Required: No  
Date / Time Received: 7/1/2009 Delivery Method: \_\_\_\_\_ Client Service Action Required at Login: No  
Project: \_\_\_\_\_ No. Coolers: 1 Airbill #'s: \_\_\_\_\_

**Cooler Security** Y or N Y or N  
1. Custody Seals Present: ☒ ☐ 3. COC Present: ☒ ☐  
2. Custody Seals Intact: ☒ ☐ 4. Smpl Dates/Time OK: ☒ ☐

**Cooler Temperature** Y or N  
1. Temp criteria achieved: ☒ ☐  
2. Cooler temp verification: Infrared gun  
3. Cooler media: Ice (bag)

**Quality Control Preservation** Y or N N/A  
1. Trip Blank present / cooler: ☒ ☐  
2. Trip Blank listed on COC: ☒ ☐  
3. Samples preserved properly: ☒ ☐  
4. VOCs headspace free: ☐ ☐ ☒

**Sample Integrity - Documentation** Y or N  
1. Sample labels present on bottles: ☒ ☐  
2. Container labeling complete: ☒ ☐  
3. Sample container label / COC agree: ☒ ☐

**Sample Integrity - Condition** Y or N  
1. Sample recvd within HT: ☒ ☐  
2. All containers accounted for: ☒ ☐  
3. Condition of sample: Intact

**Sample Integrity - Instructions** Y or N N/A  
1. Analysis requested is clear: ☒ ☐  
2. Bottles received for unspecified tests: ☐ ☒  
3. Sufficient volume recvd for analysis: ☒ ☐  
4. Compositing instructions clear: ☐ ☐ ☒  
5. Filtering instructions clear: ☐ ☐ ☒

Comments

Accutest Laboratories  
V: 732.329.0200

2235 US Highway 130  
F: 732.329.3499

Dayton, New Jersey  
www.accutest.com

D4548: Chain of Custody  
Page 2 of 2



IT'S ALL IN THE CHEMISTRY

## **GC/MS Volatiles**



### **QC Data Summaries**

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**Includes the following where applicable:**

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries

## Method Blank Summary

Page 1 of 2

Job Number: D4548

Account: ALMS Accutest Mountain States

Project: COGCCCCOD: COGCC Denver, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A2823-MB	3A65916.D	1	07/02/09	KPP	n/a	n/a	V3A2823

The QC reported here applies to the following samples:

Method: SW846 8260B

D4548-1

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	10	2.9	ug/l	
71-43-2	Benzene	ND	1.0	0.23	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	0.22	ug/l	
75-25-2	Bromoform	ND	4.0	0.23	ug/l	
74-83-9	Bromomethane	ND	2.0	0.30	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	1.6	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.74	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.26	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.39	ug/l	
75-00-3	Chloroethane	ND	1.0	0.37	ug/l	
110-75-8	2-Chloroethyl vinyl ether	ND	10	1.4	ug/l	
67-66-3	Chloroform	ND	1.0	0.23	ug/l	
74-87-3	Chloromethane	ND	1.0	0.29	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	0.22	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	0.26	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	0.25	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.28	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	0.29	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.33	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	0.22	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	0.25	ug/l	
78-87-5	1,2-Dichloropropane	ND	1.0	0.27	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	1.0	0.25	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	1.0	0.21	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.27	ug/l	
591-78-6	2-Hexanone	ND	5.0	1.4	ug/l	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	5.0	0.86	ug/l	
75-09-2	Methylene chloride	ND	2.0	0.30	ug/l	
100-42-5	Styrene	ND	5.0	0.58	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	0.24	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.30	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	0.26	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	0.23	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.24	ug/l	

## Method Blank Summary

Page 2 of 2

Job Number: D4548

Account: ALMS Accutest Mountain States

Project: COGCCCCOD: COGCC Denver, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A2823-MB	3A65916.D	1	07/02/09	KPP	n/a	n/a	V3A2823

The QC reported here applies to the following samples:

Method: SW846 8260B

D4548-1

CAS No.	Compound	Result	RL	MDL	Units	Q
108-05-4	Vinyl Acetate	ND	10	1.3	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.44	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.25	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	91% 76-120%
17060-07-0	1,2-Dichloroethane-D4	91% 64-135%
2037-26-5	Toluene-D8	92% 76-117%
460-00-4	4-Bromofluorobenzene	87% 72-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

5.1.1  
5

# Blank Spike Summary

Page 1 of 2

Job Number: D4548  
Account: ALMS Accutest Mountain States  
Project: COGCCCCOD: COGCC Denver, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A2823-BS	3A65917.D	1	07/02/09	KPP	n/a	n/a	V3A2823

The QC reported here applies to the following samples:

Method: SW846 8260B

D4548-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	50.5	101	51-151
71-43-2	Benzene	50	51.6	103	75-122
75-27-4	Bromodichloromethane	50	56.0	112	77-128
75-25-2	Bromoform	50	54.5	109	67-141
74-83-9	Bromomethane	50	55.8	112	53-152
78-93-3	2-Butanone (MEK)	50	52.6	105	64-130
75-15-0	Carbon disulfide	50	47.8	96	59-140
56-23-5	Carbon tetrachloride	50	54.8	110	75-148
108-90-7	Chlorobenzene	50	51.6	103	76-124
75-00-3	Chloroethane	50	55.7	111	54-147
110-75-8	2-Chloroethyl vinyl ether	250	265	106	66-131
67-66-3	Chloroform	50	52.3	105	77-124
74-87-3	Chloromethane	50	57.9	116	46-144
124-48-1	Dibromochloromethane	50	53.7	107	76-132
95-50-1	1,2-Dichlorobenzene	50	52.4	105	74-125
541-73-1	1,3-Dichlorobenzene	50	52.4	105	73-124
106-46-7	1,4-Dichlorobenzene	50	51.0	102	71-123
75-34-3	1,1-Dichloroethane	50	52.0	104	72-124
107-06-2	1,2-Dichloroethane	50	52.3	105	66-150
75-35-4	1,1-Dichloroethene	50	53.1	106	61-132
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	71-119
156-60-5	trans-1,2-Dichloroethene	50	50.1	100	71-123
78-87-5	1,2-Dichloropropane	50	53.5	107	75-120
10061-01-5	cis-1,3-Dichloropropene	50	55.0	110	77-124
10061-02-6	trans-1,3-Dichloropropene	50	55.3	111	75-132
100-41-4	Ethylbenzene	50	51.2	102	77-124
591-78-6	2-Hexanone	50	52.7	105	58-136
108-10-1	4-Methyl-2-pentanone(MIBK)	50	50.7	101	63-135
75-09-2	Methylene chloride	50	47.6	95	69-122
100-42-5	Styrene	50	53.1	106	78-126
79-34-5	1,1,2,2-Tetrachloroethane	50	53.3	107	66-125
127-18-4	Tetrachloroethene	50	52.9	106	70-136
108-88-3	Toluene	50	52.3	105	76-126
71-55-6	1,1,1-Trichloroethane	50	54.4	109	77-136
79-00-5	1,1,2-Trichloroethane	50	54.5	109	75-123
79-01-6	Trichloroethene	50	52.7	105	79-126



## Blank Spike Summary

Page 2 of 2

Job Number: D4548

Account: ALMS Accutest Mountain States

Project: COGCCCCOD: COGCC Denver, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3A2823-BS	3A65917.D	1	07/02/09	KPP	n/a	n/a	V3A2823

The QC reported here applies to the following samples:

Method: SW846 8260B

D4548-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
108-05-4	Vinyl Acetate	50	46.8	94	60-128
75-01-4	Vinyl chloride	50	60.5	121	56-146
1330-20-7	Xylene (total)	150	159	106	77-125

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	93%	76-120%
17060-07-0	1,2-Dichloroethane-D4	92%	64-135%
2037-26-5	Toluene-D8	95%	76-117%
460-00-4	4-Bromofluorobenzene	88%	72-122%

# Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 2

Job Number: D4548

Account: ALMS Accutest Mountain States

Project: COGCCCCOD: COGCC Denver, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA21861-1MS	3A65923.D	1	07/02/09	KPP	n/a	n/a	V3A2823
JA21861-1MSD	3A65924.D	1	07/02/09	KPP	n/a	n/a	V3A2823
JA21861-1	3A65918.D	1	07/02/09	KPP	n/a	n/a	V3A2823

The QC reported here applies to the following samples:

Method: SW846 8260B

D4548-1

CAS No.	Compound	JA21861-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	50	45.2	90	45.9	92	2	44-157/20	
71-43-2	Benzene	ND	50	42.5	85	39.5	79	7	38-139/13	
75-27-4	Bromodichloromethane	ND	50	47.1	94	44.8	90	5	70-135/13	
75-25-2	Bromoform	ND	50	46.7	93	46.6	93	0	53-139/13	
74-83-9	Bromomethane	ND	50	42.6	85	38.4	77	10	44-150/18	
78-93-3	2-Butanone (MEK)	ND	50	48.2	96	48.6	97	1	58-140/14	
75-15-0	Carbon disulfide	ND	50	29.9	60	26.6	53	12	34-136/21	
56-23-5	Carbon tetrachloride	ND	50	39.1	78	34.3	69	13	50-161/18	
108-90-7	Chlorobenzene	ND	50	44.6	89	42.4	85	5	65-128/12	
75-00-3	Chloroethane	ND	50	39.0	78	34.3	69	13	41-151/18	
110-75-8	2-Chloroethyl vinyl ether	ND	250	ND	0* a	ND	0* a	nc	1-150/38	
67-66-3	Chloroform	ND	50	43.4	87	40.9	82	6	66-132/14	
74-87-3	Chloromethane	ND	50	35.5	71	31.3	63	13	35-149/22	
124-48-1	Dibromochloromethane	ND	50	48.8	98	48.6	97	0	67-134/12	
95-50-1	1,2-Dichlorobenzene	ND	50	46.9	94	46.0	92	2	65-128/12	
541-73-1	1,3-Dichlorobenzene	ND	50	45.3	91	44.0	88	3	63-128/13	
106-46-7	1,4-Dichlorobenzene	ND	50	45.0	90	43.5	87	3	63-126/13	
75-34-3	1,1-Dichloroethane	ND	50	42.2	84	38.8	78	8	59-132/15	
107-06-2	1,2-Dichloroethane	ND	50	46.8	94	45.5	91	3	59-153/15	
75-35-4	1,1-Dichloroethene	ND	50	37.0	74	32.3	65	14	41-144/17	
156-59-2	cis-1,2-Dichloroethene	ND	50	43.3	87	41.0	82	5	57-131/13	
156-60-5	trans-1,2-Dichloroethene	ND	50	39.4	79	35.6	71	10	55-131/15	
78-87-5	1,2-Dichloropropane	ND	50	46.3	93	43.4	87	6	67-125/12	
10061-01-5	cis-1,3-Dichloropropene	ND	50	45.4	91	44.1	88	3	68-126/13	
10061-02-6	trans-1,3-Dichloropropene	ND	50	46.7	93	45.9	92	2	68-134/13	
100-41-4	Ethylbenzene	ND	50	42.8	86	39.4	79	8	37-143/13	
591-78-6	2-Hexanone	ND	50	49.4	99	48.4	97	2	53-145/17	
108-10-1	4-Methyl-2-pentanone(MIBK)	ND	50	50.2	100	48.9	98	3	57-141/14	
75-09-2	Methylene chloride	ND	50	41.7	83	40.0	80	4	59-129/12	
100-42-5	Styrene	ND	50	47.4	95	45.6	91	4	60-135/13	
79-34-5	1,1,2,2-Tetrachloroethane	ND	50	50.6	101	50.7	101	0	62-126/13	
127-18-4	Tetrachloroethene	ND	50	43.7	87	39.0	78	11	48-145/15	
108-88-3	Toluene	ND	50	43.8	88	40.2	80	9	44-141/14	
71-55-6	1,1,1-Trichloroethane	ND	50	39.9	80	35.2	70	13	55-149/18	
79-00-5	1,1,2-Trichloroethane	ND	50	49.1	98	48.3	97	2	70-127/12	
79-01-6	Trichloroethene	ND	50	41.8	84	37.9	76	10	53-141/15	

# Matrix Spike/Matrix Spike Duplicate Summary

Page 2 of 2

Job Number: D4548  
Account: ALMS Accutest Mountain States  
Project: COGCCCCOD: COGCC Denver, CO

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JA21861-1MS	3A65923.D	1	07/02/09	KPP	n/a	n/a	V3A2823
JA21861-1MSD	3A65924.D	1	07/02/09	KPP	n/a	n/a	V3A2823
JA21861-1	3A65918.D	1	07/02/09	KPP	n/a	n/a	V3A2823

The QC reported here applies to the following samples:

Method: SW846 8260B

D4548-1

CAS No.	Compound	JA21861-1 ug/l	Spike Q	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
108-05-4	Vinyl Acetate	ND	50	36.2	72	35.6	71	2	38-142/16
75-01-4	Vinyl chloride	ND	50	35.3	71	30.5	61	15	34-151/20
1330-20-7	Xylene (total)	ND	150	131	87	123	82	6	36-144/13

CAS No.	Surrogate Recoveries	MS	MSD	JA21861-1	Limits
1868-53-7	Dibromofluoromethane	92%	91%	91%	76-120%
17060-07-0	1,2-Dichloroethane-D4	87%	86%	90%	64-135%
2037-26-5	Toluene-D8	93%	92%	92%	76-117%
460-00-4	4-Bromofluorobenzene	85%	86%	87%	72-122%

(a) Outside control limits due to acid preservation.

# Instrument Performance Check (BFB)

Page 1 of 1

Job Number: D4548  
Account: ALMS Accutest Mountain States  
Project: COGCCCCOD: COGCC Denver, CO

Sample: V3A2821-BFB Injection Date: 07/01/09  
Lab File ID: 3A65874.D Injection Time: 11:13  
Instrument ID: GCMS3A

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	17323	17.9	Pass
75	30.0 - 60.0% of mass 95	44565	46.1	Pass
95	Base peak, 100% relative abundance	96610	100.0	Pass
96	5.0 - 9.0% of mass 95	6409	6.6	Pass
173	Less than 2.0% of mass 174	488	0.51 (0.58) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	83661	86.6	Pass
175	5.0 - 9.0% of mass 174	6041	6.3 (7.2) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	81216	84.1 (97.1) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	5369	5.6 (6.6) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A2821-IC2821	3A65875.D	07/01/09	11:48	00:35	Initial cal 0.5
V3A2821-IC2821	3A65877.D	07/01/09	12:46	01:33	Initial cal 2
V3A2821-IC2821	3A65879.D	07/01/09	13:43	02:30	Initial cal 20
V3A2821-ICC2821	3A65880.D	07/01/09	14:12	02:59	Initial cal 50
V3A2821-IC2821	3A65881.D	07/01/09	14:41	03:28	Initial cal 100
V3A2821-IC2821	3A65882.D	07/01/09	15:10	03:57	Initial cal 200
V3A2821-ICV2821	3A65883.D	07/01/09	15:39	04:26	Initial cal verification 50
V3A2821-IC2821	3A65884.D	07/01/09	16:07	04:54	Initial cal 5
V3A2821-IC2821	3A65885.D	07/01/09	16:35	05:22	Initial cal 1

# Instrument Performance Check (BFB)

Page 1 of 1

Job Number: D4548  
Account: ALMS Accutest Mountain States  
Project: COGCCCCOD: COGCC Denver, CO

Sample: V3A2823-BFB Injection Date: 07/02/09  
Lab File ID: 3A65914.D Injection Time: 08:08  
Instrument ID: GCMS3A

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	15.0 - 40.0% of mass 95	13746	16.1	Pass
75	30.0 - 60.0% of mass 95	36944	43.4	Pass
95	Base peak, 100% relative abundance	85197	100.0	Pass
96	5.0 - 9.0% of mass 95	5815	6.8	Pass
173	Less than 2.0% of mass 174	440	0.52 (0.56) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	78290	91.9	Pass
175	5.0 - 9.0% of mass 174	5582	6.6 (7.1) <sup>a</sup>	Pass
176	95.0 - 101.0% of mass 174	76325	89.6 (97.5) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	4961	5.8 (6.5) <sup>b</sup>	Pass

(a) Value is % of mass 174

(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V3A2823-CC2821	3A65915.D	07/02/09	08:50	00:42	Continuing cal 20
V3A2823-MB	3A65916.D	07/02/09	09:30	01:22	Method Blank
V3A2823-BS	3A65917.D	07/02/09	10:09	02:01	Blank Spike
JA21861-1	3A65918.D	07/02/09	10:49	02:41	(used for QC only; not part of job D4548)
ZZZZZZ	3A65919.D	07/02/09	11:18	03:10	(unrelated sample)
ZZZZZZ	3A65920.D	07/02/09	11:47	03:39	(unrelated sample)
ZZZZZZ	3A65921.D	07/02/09	12:16	04:08	(unrelated sample)
ZZZZZZ	3A65922.D	07/02/09	12:44	04:36	(unrelated sample)
JA21861-1MS	3A65923.D	07/02/09	13:13	05:05	Matrix Spike
JA21861-1MSD	3A65924.D	07/02/09	13:42	05:34	Matrix Spike Duplicate
ZZZZZZ	3A65926.D	07/02/09	14:40	06:32	(unrelated sample)
ZZZZZZ	3A65927.D	07/02/09	15:08	07:00	(unrelated sample)
ZZZZZZ	3A65928.D	07/02/09	15:37	07:29	(unrelated sample)
ZZZZZZ	3A65929.D	07/02/09	16:06	07:58	(unrelated sample)
ZZZZZZ	3A65931.D	07/02/09	17:26	09:18	(unrelated sample)
D4548-1	3A65932.D	07/02/09	17:54	09:46	YORK WW
ZZZZZZ	3A65933.D	07/02/09	18:23	10:15	(unrelated sample)
ZZZZZZ	3A65934.D	07/02/09	18:52	10:44	(unrelated sample)
ZZZZZZ	3A65935.D	07/02/09	19:21	11:13	(unrelated sample)
ZZZZZZ	3A65936.D	07/02/09	19:50	11:42	(unrelated sample)

# Volatile Surrogate Recovery Summary

Page 1 of 1

Job Number: D4548  
Account: ALMS Accutest Mountain States  
Project: COGCCCCOD: COGCC Denver, CO

Method: SW846 8260B

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
D4548-1	3A65932.D	91.0	92.0	92.0	87.0
JA21861-1MS	3A65923.D	92.0	87.0	93.0	85.0
JA21861-1MSD	3A65924.D	91.0	86.0	92.0	86.0
V3A2823-BS	3A65917.D	93.0	92.0	95.0	88.0
V3A2823-MB	3A65916.D	91.0	91.0	92.0	87.0

Surrogate Compounds	Recovery Limits
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S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	64-135%
S3 = Toluene-D8	76-117%
S4 = 4-Bromofluorobenzene	72-122%

5.5.1

5