



Dissolved Gasses

Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200209993

Work Order Number: 0905095

1. This report consists of 1 water sample. The sample was received cool and intact by ALS on 05/13/09. The sample was free of headspace prior to analysis. Samples 0905095-1 and -1DUP had a pH > 2 at the time of analysis.
2. The sample was prepared and analyzed according to method RSK-175 procedures and SOP449R0.
3. The preparation batch included a method blank, laboratory control sample, laboratory control sample duplicate, and sample duplicate. Per method requirements, a matrix spike was also performed for this analysis. Since the matrix spike was not performed on a sample from this order number, matrix spike results are not included in this report. The following is the sample used for the matrix QC:

Sample ID	QC Type	Batch ID
0905095-1	DUP	HC090514-2

Similarity of matrix and therefore relevance of the QC results should not be automatically inferred for any sample other than the native sample selected for QC.

4. All preparation QC results were within the acceptance criteria.
5. All samples are associated with one or more of the following analytical QC: initial calibrations, initial calibration verifications (ICV), and continuing calibration verifications (CCV).
6. All analytical QC were within the acceptance criteria.
7. Sample dilutions were not required for the requested analysis.
8. The sample was prepared and analyzed within the established holding times.



9. 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.

Emily Knødel
Emily Knødel
Organics Primary Data Reviewer

05-18-09
Date

Dan Stephenson
Dan Stephenson
Organics Final Data Reviewer

05-18-09
Date



ALS
Data Qualifier Flags
Chromatography and Mass Spectrometry

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the 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 outside the control criteria.
- +:** This flag indicates that the relative percent difference (RPD) exceeds the control criteria.

ALS Laboratory Group -- FC

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

Client Project Name: Complaint 200209993

Client Project Number:

Client PO Number: OE PHA 09000000004

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
Williams WW	0905095-1		WATER	12-May-09	8:36
Trip Blank	0905095-2		WATER	12-May-09	8:30

CONDITION OF SAMPLE UPON RECEIPT FORM

Paragon Analytics

Client: COGCC

Workorder No: 0905095

Project Manager: AW

Initials: CDT Date: 5-13-09

1. Does this project require any special handling in addition to standard Paragon procedures?	YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	NONE	<input checked="" type="radio"/> YES <input type="radio"/> NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	<input checked="" type="radio"/> YES <input type="radio"/> NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
5. Are the COC and bottle labels complete and legible ?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)	<input checked="" type="radio"/> YES	<input type="radio"/> NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF <input checked="" type="radio"/> YES	<input type="radio"/> NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A <input checked="" type="radio"/> YES	<input checked="" type="radio"/> NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A <input checked="" type="radio"/> YES	<input type="radio"/> NO
10. Is there sufficient sample for the requested analyses?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
11. Were all samples placed in the proper containers for the requested analyses?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
12. Are all samples within holding times for the requested analyses?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
13. Were all sample containers received intact? (not broken or leaking, etc.)	<input checked="" type="radio"/> YES	<input type="radio"/> 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	<input checked="" type="radio"/> YES <input type="radio"/> NO
15. Do perchlorate LCMS-MS samples have headspace? (at least 1/3 of container required)	<input checked="" type="radio"/> N/A	<input type="radio"/> YES <input type="radio"/> 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.)	<input checked="" type="radio"/> N/A	<input type="radio"/> YES <input type="radio"/> NO
17. Were the samples shipped on ice?	<input checked="" type="radio"/> YES	<input type="radio"/> NO
18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 <input checked="" type="radio"/> #4 <input type="radio"/> RAD ONLY <input checked="" type="radio"/> YES <input type="radio"/> NO		
Cooler #: <u>1</u>		
Temperature (°C): <u>5.6</u>		
No. of custody seals on cooler: <u>1</u>		
External µR/hr reading: <u>13</u>		
Background µR/hr reading: <u>11</u>		
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> 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.

HEADSPACE: 0905095-1-1 < green pea
 Metals will be filtered and preserved in house.
 aw 5/13/09

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

Project Manager Signature / Date: Aw 5/13/09

*IR Gun #2: Oakton. SN 29922500201-0066

*IR Gun #4: Oakton. SN 2372220101-0002

Dissolved Gasses

Method RSK175

Method Blank

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Lab ID: HC090514-2MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 14-May-09

Date Analyzed: 14-May-09

Prep Method: METHOD

Prep Batch: HC090514-2

QCBatchID: HC090514-2-2

Run ID: HC090514-1A

Cleanup: NONE

Basis: N/A

File Name: 01254.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
74-82-8	METHANE	1	1	1	U	
74-85-1	ETHENE	1	1	1	U	
74-84-0	ETHANE	1	2	2	U	

Data Package ID: HC0905095-1

Dissolved Gasses

Method RSK175

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Field ID:	Williams WW
Lab ID:	0905095-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 12-May-09

Date Extracted: 14-May-09

Date Analyzed: 14-May-09

Prep Method: METHOD

Prep Batch: HC090514-2

QCBatchID: HC090514-2-2

Run ID: HC090514-1A

Cleanup: NONE

Basis: As Received

File Name: 01256.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
74-82-8	METHANE	1	900	1		
74-85-1	ETHENE	1	1	1	U	
74-84-0	ETHANE	1	2	2	U	

Data Package ID: HC0905095-1

Dissolved Gasses

Method RSK175

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Lab ID: HC090514-2LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/14/2009

Date Analyzed: 05/14/2009

Prep Method: METHOD

Prep Batch: HC090514-2

QCBatchID: HC090514-2-2

Run ID: HC090514-1A

Cleanup: NONE

Basis: N/A

File Name: 01255.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
74-82-8	METHANE	142	147	1		103	80 - 120%
74-85-1	ETHENE	249	250	1		100	80 - 120%
74-84-0	ETHANE	267	275	2		103	80 - 120%

Lab ID: HC090514-2LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 05/14/2009

Date Analyzed: 05/14/2009

Prep Method: METHOD

Prep Batch: HC090514-2

QCBatchID: HC090514-2-2

Run ID: HC090514-1A

Cleanup: NONE

Basis: N/A

File Name: 01266.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
74-82-8	METHANE	142	150	1		106	25	2
74-85-1	ETHENE	249	258	1		104	25	3
74-84-0	ETHANE	267	283	2		106	25	3

Data Package ID: HC0905095-1

Dissolved Gasses

Method RSK175

Duplicate Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0905095

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200209993

Field ID: Williams WW

Lab ID: 0905095-1D

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 05/12/2009

Date Extracted: 05/14/2009

Date Analyzed: 05/14/2009

Prep Batch: HC090514-2

QCBatchID: HC090514-2-2

Run ID: HC090514-1A

Cleanup: NONE

Basis: As Received

File Name: 01257.dat

Sample Aliquot: 38.5 ml

Final Volume: 38.5 ml

Result Units: UG/L

Clean DF: 1

CASNO	Target Analyte	Sample Result	Samp Qual	Duplicate Result	Dup Qual	Reporting Limit	Dilution Factor	RPD	RPD Limit
74-82-8	METHANE	900		966		1	1	7	25
74-85-1	ETHENE	1	U	1	U	1	1		25
74-84-0	ETHANE	2	U	2	U	2	1		25

Data Package ID: HC0905095-1

Date Printed: Monday, May 18, 2009

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