



ALS Paragon



GC/MS Volatiles Case Narrative

Colorado Oil & Gas Conservation Commission

Complaint 200204503

Work Order Number: 0903158

1. This report consists of 1 water sample. The sample was received cool and intact by ALS Paragon on 03/20/09. All aqueous samples were free of headspace prior to analysis.
2. The sample was prepared according to SW-846, 3rd Edition procedures. Specifically, the water sample was prepared by purging 10 mL using purge and trap procedures based on Method 5030C.
3. The samples were analyzed using GC/MS with an RTX-624, RTX-VMS, or equivalent capillary column according to SOP 525 Revision 12 based on SW-846 Method 8260B. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.
4. All initial calibration criteria for SPCC's and CCC's were met. If average response factors were used in the initial calibration, %RSD was $\leq 15\%$. If linear or higher order regression calibrations were used in the initial calibration, the coefficient of determination (r^2) ≥ 0.99 .
5. All initial calibrations are verified by comparing a second source standard calibration verification (ICV) against the calibration curve. All target compounds in the second source verification had a %D of less than 25%.
6. All criteria for SPCC's and CCC's were met in daily (continuing) calibration verifications (CCV).
7. Methylene chloride, acetone and 2-butanone are common laboratory contaminants. In order to minimize the levels of these compounds detected in the gc/ms analysis, ALS Paragon has designated its volatile laboratory as a restricted access area. In addition, the laboratory has been equipped with a dedicated, air intake and exhaust system that operates under positive pressure in order to minimize cross contamination of these compounds. Due to fluctuations in ambient laboratory conditions, reported sample values for common laboratory contaminants may be due to lab contamination even if the compound in question is not detected in the associated method blank.

All method blank criteria were met.



8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
9. Since a sample from this order number was not the selected quality control (QC) sample, matrix specific QC results are not included in this report.
10. The sample was analyzed within the established holding time.
11. All surrogate recoveries were within acceptance criteria.
12. All internal standard recoveries were within acceptance criteria.
13. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in SOP 939 Revision 3.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS Paragon certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

sey
Sharon L. Jobes
Organics Primary Data Reviewer

3-29-09
Date

Steven D. White
Organics Final Data Reviewer

3-27-09
Date



ALS Paragon
Data Qualifier Flags
Chromatography and Mass Spectrometry

| | |
|-----------------|---|
| U or ND: | This flag indicates that the compound was analyzed for but not detected. |
| J: | This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated. |
| B: | This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound. |
| E: | This flag identifies compounds whose concentration exceeds the upper level of the calibration range. |
| A: | This flag indicates that a tentatively identified compound is a suspected aldol-condensation product. |
| X: | This flag indicates that the analyte was diluted below an accurate quantitation level. |
| *: | This flag indicates that a spike recovery is equal to or outside the control criteria used. |
| +: | This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria. |

ALS Paragon

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

Client Project Name: Complaint 200204503

Client Project Number:

Client PO Number: OE PHA 090000000004

| Client Sample Number | Lab Sample Number | COC Number | Matrix | Date Collected | Time Collected |
|----------------------|-------------------|------------|--------|----------------|----------------|
| VanAlestyn 090319 | 0903158-1 | | WATER | 19-Mar-09 | 12:40 |

0903158

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

Originator: Retain pink copy!

Project Name/No.: NER
 Sampler(s): C. Wainwright
 Turnaround (circle one) Standard or Rush (Due 14) Dispose: 360 or 360
 Return to Client

Report To: Peter Gintantus
Phone: 719-846-3091
Fax:
E-mail: peter.gintantus@state.co.us
Company: Colo. Oil & Gas Conservation Comm.
Address:
Comments: ADSEFER WU200304502
VANAE57IN WU200204503

Circle method (right); provide additional information as needed (comments).

[illegible]

* Time Zone: EST CST MST PST Matrix Key: O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Comments: Filter + pressure modification react

Amms = Br, Cl, F, NCl_3 , NCl_2 , NCl , NCl_2 , NCl_3 , NCl_4

$$200.7 = \text{Ba, Be, B, Ca, Cr, Cu, Fe, Li, Mn, Mg, Ni, K, Na, Sr, Zn}$$

200.8 = Sb, As, Cd, Pb, Mo, Se, Ag, Te, U

| | | | |
|--|-----|-------------------------------------|-----|
| Relinquished By: <u>Chris White</u> | (1) | Relinquished By: <u>Chris White</u> | (2) |
| Signature _____ | | Signature _____ | |
| Printed Name <u>CHRISTIE E. WHITE</u> | | Printed Name _____ | |
| Date <u>3/19/09</u> Time <u>16:30</u> | | Date _____ Time _____ | |
| Company <u>WHITESTONE ASSOCIATES</u> | | Company _____ | |
| Received By: <u>Jane Torban</u> | (1) | Received By: _____ | (2) |
| Signature _____ | | Signature _____ | |
| Printed Name <u>Jane Torban</u> | | Printed Name _____ | |
| Date <u>3/26/09</u> Time <u>09:30 1008</u> | | Date _____ Time _____ | |
| Company <u>ALS PARAGON</u> | | Company _____ | |

CONDITION OF SAMPLE UPON RECEIPT FORM

Paragon Analytics

Client: COGCCWorkorder No: 09 03 158Project Manager: AWInitials: LJO Date: 3/20/09

| | | |
|--|--------------|----------------------|
| 1. Does this project require any special handling in addition to standard Paragon procedures? | YES | <u>NO</u> |
| 2. Are custody seals on shipping containers intact? | NONE | <u>YES</u> NO |
| 3. Are Custody seals on sample containers intact? | <u>NONE</u> | YES NO |
| 4. Is there a COC (Chain-of-Custody) present or other representative documents? | <u>YES</u> | YES NO |
| 5. Are the COC and bottle labels complete and legible ? | <u>YES</u> | YES NO |
| 6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.) | * <u>YES</u> | YES NO |
| 7. Were airbills / shipping documents present and/or removable? | DROP OFF | <u>YES</u> NO |
| 8. Are all aqueous samples requiring preservation preserved correctly ? (excluding volatiles) | N/A | <u>YES</u> <u>NO</u> |
| 9. Are all aqueous non-preserved samples pH 4-9 ? | N/A | <u>YES</u> NO |
| 10. Is there sufficient sample for the requested analyses? | <u>YES</u> | YES NO |
| 11. Were all samples placed in the proper containers for the requested analyses? | <u>YES</u> | YES NO |
| 12. Are all samples within holding times for the requested analyses? | <u>YES</u> | YES NO |
| 13. Were all sample containers received intact ? (not broken or leaking, etc.) | <u>YES</u> | 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 | <u>YES</u> NO |
| 15. Do perchlorate LCMS-MS samples have headspace? (at least 1/3 of container required) | <u>N/A</u> | 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.) | <u>N/A</u> | YES NO |
| 17. Were the samples shipped on ice ? | <u>YES</u> | YES NO |
| 18. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <u>#2</u> #4 RAD ONLY | <u>YES</u> | YES NO |
| Cooler #: <u>1</u> | | |
| Temperature (°C): <u>2.2</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? <u>YES</u> NO / NA (If no. see Form 008.) | | |

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

* 3 of 16 40 ml vials for methane analysis listed no sample time on labels.
3/20/09

• The 500ml poly for metals analysis needs to be filtered and preserved in house.

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

Project Manager Signature / Date: Candy 3/23/09

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

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

GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Method: SW5030 Rev C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13948

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | DF | Result | Reporting Limit | Result Qualifier | EPA Qualifier |
|-----------|-----------------------------------|----|--------|-----------------|------------------|---------------|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 1 | 1 | 1 | U | |
| 74-87-3 | CHLOROMETHANE | 1 | 1 | 1 | U | |
| 75-01-4 | VINYL CHLORIDE | 1 | 1 | 1 | U | |
| 74-83-9 | BROMOMETHANE | 1 | 1 | 1 | U | |
| 75-00-3 | CHLOROETHANE | 1 | 1 | 1 | U | |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 1 | 1 | 1 | U | |
| 75-35-4 | 1,1-DICHLOROETHENE | 1 | 1 | 1 | U | |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROET | 1 | 1 | 1 | U | |
| 67-64-1 | ACETONE | 1 | 10 | 10 | U | |
| 74-88-4 | IODOMETHANE | 1 | 1 | 1 | U | |
| 75-15-0 | CARBON DISULFIDE | 1 | 1 | 1 | U | |
| 75-09-2 | METHYLENE CHLORIDE | 1 | 1 | 1 | U | |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 1 | 1 | 1 | U | |
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 1 | 1 | 1 | U | |
| 75-34-3 | 1,1-DICHLOROETHANE | 1 | 1 | 1 | U | |
| 108-05-4 | VINYL ACETATE | 1 | 2 | 2 | U | |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 1 | 1 | 1 | U | |
| 78-93-3 | 2-BUTANONE | 1 | 10 | 10 | U | |
| 74-97-5 | BROMOCHLOROMETHANE | 1 | 1 | 1 | U | |
| 67-66-3 | CHLOROFORM | 1 | 1 | 1 | U | |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 1 | 1 | 1 | U | |
| 594-20-7 | 2,2-DICHLOROPROPANE | 1 | 1 | 1 | U | |
| 56-23-5 | CARBON TETRACHLORIDE | 1 | 1 | 1 | U | |
| 563-58-6 | 1,1-DICHLOROPROPENE | 1 | 1 | 1 | U | |
| 107-06-2 | 1,2-DICHLOROETHANE | 1 | 1 | 1 | U | |
| 71-43-2 | BENZENE | 1 | 1 | 1 | U | |
| 79-01-6 | TRICHLOROETHENE | 1 | 1 | 1 | U | |

Data Package ID: VL0903158-1

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GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Method: SW5030 Rev C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13948

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| | | | | | | |
|-------------|---------------------------|---|----|----|---|--|
| 78-87-5 | 1,2-DICHLOROPROPANE | 1 | 1 | 1 | U | |
| 74-95-3 | DIBROMOMETHANE | 1 | 1 | 1 | U | |
| 75-27-4 | BROMODICHLOROMETHANE | 1 | 1 | 1 | U | |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 1 | 1 | 1 | U | |
| 108-10-1 | 4-METHYL-2-PENTANONE | 1 | 10 | 10 | U | |
| 108-88-3 | TOLUENE | 1 | 1 | 1 | U | |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 1 | 1 | 1 | U | |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 1 | 1 | 1 | U | |
| 591-78-6 | 2-HEXANONE | 1 | 10 | 10 | U | |
| 127-18-4 | TETRACHLOROETHENE | 1 | 1 | 1 | U | |
| 142-28-9 | 1,3-DICHLOROPROPANE | 1 | 1 | 1 | U | |
| 124-48-1 | DIBROMOCHLOROMETHANE | 1 | 1 | 1 | U | |
| 106-93-4 | 1,2-DIBROMOETHANE | 1 | 1 | 1 | U | |
| 544-10-5 | 1-CHLOROHEXANE | 1 | 1 | 1 | U | |
| 108-90-7 | CHLOROBENZENE | 1 | 1 | 1 | U | |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 1 | 1 | 1 | U | |
| 100-41-4 | ETHYLBENZENE | 1 | 1 | 1 | U | |
| 136777-61-2 | M+P-XYLENE | 1 | 1 | 1 | U | |
| 95-47-6 | O-XYLENE | 1 | 1 | 1 | U | |
| 100-42-5 | STYRENE | 1 | 1 | 1 | U | |
| 75-25-2 | BROMOFORM | 1 | 1 | 1 | U | |
| 98-82-8 | ISOPROPYLBENZENE | 1 | 1 | 1 | U | |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 1 | 1 | 1 | U | |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 1 | 1 | 1 | U | |
| 108-86-1 | BROMOBENZENE | 1 | 1 | 1 | U | |
| 103-65-1 | N-PROPYLBENZENE | 1 | 1 | 1 | U | |
| 95-49-8 | 2-CHLOROTOLUENE | 1 | 1 | 1 | U | |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 1 | 1 | 1 | U | |
| 106-43-4 | 4-CHLOROTOLUENE | 1 | 1 | 1 | U | |

Data Package ID: VL0903158-1

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GC/MS Volatiles

Method SW8260_25B

Method Blank

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Method: SW5030 Rev C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13948

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| | | | | | | |
|----------|-----------------------------|---|---|---|---|--|
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 1 | 1 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 1 | 1 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 1 | 1 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 1 | 1 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 1 | 1 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 1 | 1 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 1 | 1 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 1 | 1 | U | |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 2 | 2 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 1 | 1 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 1 | 1 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 1 | 1 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 1 | 1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|-----------|----------------------|--------|------|--------------|------------------|----------------|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 26.3 | | 25 | 105 | 78 - 129 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 24.9 | | 25 | 100 | 80 - 124 |
| 2037-26-5 | TOLUENE-D8 | 26 | | 25 | 104 | 81 - 119 |

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GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

| | |
|-----------|--------------|
| Field ID: | |
| Lab ID: | VL090323-3MB |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: As Received

Sample Aliquot: 10 ml

Final Volume: 10 ml

Clean DF: 1

File Name: C13948

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

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GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

| | |
|-----------|-------------------|
| Field ID: | VanAlestyn 090319 |
| Lab ID: | 0903158-1 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 19-Mar-09

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Method: SW5030 Rev C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: As Received

File Name: C13956

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: VL0903158-1

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GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

| | |
|-----------|-------------------|
| Field ID: | VanAlestyn 090319 |
| Lab ID: | 0903158-1 |

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

Prep Batch: VL090323-3
QCBatchID: VL090323-3-1
Run ID: VL090323-3A
Cleanup: NONE
Basis: As Received
File Name: C13956

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: VL0903158-1

Date Printed: Thursday, March 26, 2009

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GC/MS Volatiles

Method SW8260_25B

Sample Results

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

| | |
|-----------|-------------------|
| Field ID: | VanAlestyn 090319 |
| Lab ID: | 0903158-1 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 19-Mar-09

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Method: SW5030 Rev C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: As Received

File Name: C13956

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| | | | | | | |
|----------|-----------------------------|---|---|---|---|--|
| 98-06-6 | TERT-BUTYLBENZENE | 1 | 1 | 1 | U | |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 1 | 1 | 1 | U | |
| 135-98-8 | SEC-BUTYLBENZENE | 1 | 1 | 1 | U | |
| 541-73-1 | 1,3-DICHLOROBENZENE | 1 | 1 | 1 | U | |
| 99-87-6 | P-ISOPROPYLTOLUENE | 1 | 1 | 1 | U | |
| 106-46-7 | 1,4-DICHLOROBENZENE | 1 | 1 | 1 | U | |
| 104-51-8 | N-BUTYLBENZENE | 1 | 1 | 1 | U | |
| 95-50-1 | 1,2-DICHLOROBENZENE | 1 | 1 | 1 | U | |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 1 | 2 | 2 | U | |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 1 | 1 | 1 | U | |
| 87-68-3 | HEXACHLOROBUTADIENE | 1 | 1 | 1 | U | |
| 91-20-3 | NAPHTHALENE | 1 | 1 | 1 | U | |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 1 | 1 | 1 | U | |

Surrogate Recovery

| CASNO | Surrogate Analyte | Result | Flag | Spike Amount | Percent Recovery | Control Limits |
|-----------|----------------------|--------|------|--------------|------------------|----------------|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 25.4 | | 25 | 102 | 78 - 129 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 25.9 | | 25 | 104 | 80 - 124 |
| 2037-26-5 | TOLUENE-D8 | 24.9 | | 25 | 100 | 81 - 119 |

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

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GC/MS Volatiles

Method SW8260_25

Tentatively Identified Compounds

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

| | |
|-----------|-------------------|
| Field ID: | VanAlestyn 090319 |
| Lab ID: | 0903158-1 |

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 19-Mar-09

Date Extracted: 23-Mar-09

Date Analyzed: 23-Mar-09

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: As Received

Sample Aliquot: 10 ml

Final Volume: 10 ml

Clean DF: 1

File Name: C13956

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

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

ALS Paragon

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GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/23/2009

Date Analyzed: 03/23/2009

Prep Method: SW5030C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13945

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCS Result | Reporting Limit | Result Qualifier | LCS % Rec. | Control Limits |
|-----------|-------------------------------------|-------------|------------|-----------------|------------------|------------|----------------|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 10 | 9.73 | 1 | | 97 | 38 - 131% |
| 74-87-3 | CHLOROMETHANE | 10 | 9.57 | 1 | | 96 | 62 - 141% |
| 75-01-4 | VINYL CHLORIDE | 10 | 9.79 | 1 | | 98 | 77 - 124% |
| 74-83-9 | BROMOMETHANE | 10 | 10.5 | 1 | | 105 | 76 - 133% |
| 75-00-3 | CHLOROETHANE | 10 | 9.7 | 1 | | 97 | 81 - 130% |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 10 | 10 | 1 | | 100 | 84 - 146% |
| 75-35-4 | 1,1-DICHLOROETHENE | 10 | 10.2 | 1 | | 102 | 75 - 126% |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA | 10 | 10.3 | 1 | | 103 | 71 - 144% |
| 67-64-1 | ACETONE | 40 | 34.5 | 10 | | 86 | 50 - 150% |
| 74-88-4 | IODOMETHANE | 10 | 10.5 | 1 | | 105 | 76 - 116% |
| 75-15-0 | CARBON DISULFIDE | 10 | 10.2 | 1 | | 102 | 68 - 129% |
| 75-09-2 | METHYLENE CHLORIDE | 10 | 9.46 | 1 | | 95 | 22 - 146% |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 10 | 10.5 | 1 | | 105 | 76 - 135% |
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 20 | 16.9 | 1 | | 85 | 75 - 125% |
| 75-34-3 | 1,1-DICHLOROETHANE | 10 | 10.2 | 1 | | 102 | 77 - 131% |
| 108-05-4 | VINYL ACETATE | 10 | 9.82 | 2 | | 98 | 56 - 151% |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 10 | 10.3 | 1 | | 103 | 81 - 121% |
| 78-93-3 | 2-BUTANONE | 40 | 34.2 | 10 | | 85 | 50 - 150% |
| 74-97-5 | BROMOCHLOROMETHANE | 10 | 9.65 | 1 | | 96 | 85 - 126% |
| 67-66-3 | CHLOROFORM | 10 | 10.3 | 1 | | 103 | 84 - 125% |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 10 | 10.4 | 1 | | 104 | 82 - 129% |
| 594-20-7 | 2,2-DICHLOROPROPANE | 10 | 11.7 | 1 | | 117 | 79 - 130% |
| 56-23-5 | CARBON TETRACHLORIDE | 10 | 10.7 | 1 | | 107 | 83 - 135% |
| 563-58-6 | 1,1-DICHLOROPROPENE | 10 | 10.6 | 1 | | 106 | 85 - 127% |
| 107-06-2 | 1,2-DICHLOROETHANE | 10 | 9.35 | 1 | | 94 | 84 - 126% |
| 71-43-2 | BENZENE | 10 | 10 | 1 | | 100 | 82 - 122% |

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

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GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/23/2009

Date Analyzed: 03/23/2009

Prep Method: SW5030C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13945

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

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

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

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GC/MS Volatiles

Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/23/2009

Date Analyzed: 03/23/2009

Prep Method: SW5030C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13945

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCS Result | Reporting Limit | Result Qualifier | LCS % Rec. | Control Limits |
|----------|-----------------------------|-------------|------------|-----------------|------------------|------------|----------------|
| 95-49-8 | 2-CHLOROTOLUENE | 10 | 11.5 | 1 | | 115 | 77 - 128% |
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 10 | 11.7 | 1 | | 117 | 77 - 131% |
| 106-43-4 | 4-CHLOROTOLUENE | 10 | 11.3 | 1 | | 113 | 79 - 128% |
| 98-06-6 | TERT-BUTYLBENZENE | 10 | 11.8 | 1 | | 118 | 76 - 134% |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 10 | 11.2 | 1 | | 112 | 80 - 138% |
| 135-98-8 | SEC-BUTYLBENZENE | 10 | 11.4 | 1 | | 114 | 73 - 135% |
| 541-73-1 | 1,3-DICHLOROBENZENE | 10 | 11.1 | 1 | | 111 | 79 - 126% |
| 99-87-6 | P-ISOPROPYLTOLUENE | 10 | 11.5 | 1 | | 115 | 72 - 132% |
| 106-46-7 | 1,4-DICHLOROBENZENE | 10 | 10.4 | 1 | | 104 | 81 - 125% |
| 104-51-8 | N-BUTYLBENZENE | 10 | 11.9 | 1 | | 119 | 77 - 141% |
| 95-50-1 | 1,2-DICHLOROBENZENE | 10 | 10.5 | 1 | | 105 | 82 - 128% |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 10 | 9.41 | 2 | | 94 | 64 - 134% |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 10 | 10.3 | 1 | | 103 | 80 - 128% |
| 87-68-3 | HEXACHLOROBUTADIENE | 10 | 11.7 | 1 | | 117 | 70 - 136% |
| 91-20-3 | NAPHTHALENE | 10 | 10.1 | 1 | | 101 | 78 - 125% |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 10 | 10.2 | 1 | | 102 | 79 - 131% |

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

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Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/23/2009

Date Analyzed: 03/23/2009

Prep Method: SW5030C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13946

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCSD Result | Reporting Limit | Result Qualifier | LCSD % Rec. | RPD Limit | RPD |
|-----------|-------------------------------------|-------------|-------------|-----------------|------------------|-------------|-----------|-----|
| 75-71-8 | DICHLORODIFLUOROMETHANE | 10 | 9.86 | 1 | | 99 | 20 | 1 |
| 74-87-3 | CHLOROMETHANE | 10 | 9.76 | 1 | | 98 | 20 | 2 |
| 75-01-4 | VINYL CHLORIDE | 10 | 9.67 | 1 | | 97 | 20 | 1 |
| 74-83-9 | BROMOMETHANE | 10 | 10.5 | 1 | | 105 | 20 | 0 |
| 75-00-3 | CHLOROETHANE | 10 | 9.84 | 1 | | 98 | 20 | 1 |
| 75-69-4 | TRICHLOROFLUOROMETHANE | 10 | 9.68 | 1 | | 97 | 20 | 4 |
| 75-35-4 | 1,1-DICHLOROETHENE | 10 | 10.1 | 1 | | 101 | 20 | 1 |
| 76-13-1 | 1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHA | 10 | 10.4 | 1 | | 104 | 20 | 1 |
| 67-64-1 | ACETONE | 40 | 38.1 | 10 | | 95 | 30 | 10 |
| 74-88-4 | IODOMETHANE | 10 | 10.3 | 1 | | 103 | 20 | 2 |
| 75-15-0 | CARBON DISULFIDE | 10 | 10 | 1 | | 100 | 20 | 2 |
| 75-09-2 | METHYLENE CHLORIDE | 10 | 9.8 | 1 | | 98 | 20 | 3 |
| 156-60-5 | TRANS-1,2-DICHLOROETHENE | 10 | 10.5 | 1 | | 105 | 20 | 0 |
| 1634-04-4 | METHYL TERTIARY BUTYL ETHER | 20 | 18.9 | 1 | | 94 | 20 | 11 |
| 75-34-3 | 1,1-DICHLOROETHANE | 10 | 10.1 | 1 | | 101 | 20 | 0 |
| 108-05-4 | VINYL ACETATE | 10 | 11 | 2 | | 110 | 20 | 12 |
| 156-59-2 | CIS-1,2-DICHLOROETHENE | 10 | 10.3 | 1 | | 103 | 20 | 0 |
| 78-93-3 | 2-BUTANONE | 40 | 38.4 | 10 | | 96 | 30 | 12 |
| 74-97-5 | BROMOCHLOROMETHANE | 10 | 10.3 | 1 | | 103 | 20 | 7 |
| 67-66-3 | CHLOROFORM | 10 | 10.4 | 1 | | 104 | 20 | 1 |
| 71-55-6 | 1,1,1-TRICHLOROETHANE | 10 | 10.4 | 1 | | 104 | 20 | 0 |
| 594-20-7 | 2,2-DICHLOROPROPANE | 10 | 11.6 | 1 | | 116 | 20 | 1 |
| 56-23-5 | CARBON TETRACHLORIDE | 10 | 10.5 | 1 | | 105 | 20 | 2 |
| 563-58-6 | 1,1-DICHLOROPROPENE | 10 | 10.4 | 1 | | 104 | 20 | 2 |
| 107-06-2 | 1,2-DICHLOROETHANE | 10 | 9.93 | 1 | | 99 | 20 | 6 |
| 71-43-2 | BENZENE | 10 | 10.2 | 1 | | 102 | 20 | 1 |
| 79-01-6 | TRICHLOROETHENE | 10 | 10.4 | 1 | | 104 | 20 | 3 |

Data Package ID: VL0903158-1

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Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

Client Project ID: Complaint 200204503

Lab ID: VL090323-3LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/23/2009

Date Analyzed: 03/23/2009

Prep Method: SW5030C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13946

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCSD Result | Reporting Limit | Result Qualifier | LCSD % Rec. | RPD Limit | RPD |
|------------|---------------------------|-------------|-------------|-----------------|------------------|-------------|-----------|-----|
| 78-87-5 | 1,2-DICHLOROPROPANE | 10 | 10.4 | 1 | | 104 | 20 | 6 |
| 74-95-3 | DIBROMOMETHANE | 10 | 9.96 | 1 | | 100 | 20 | 8 |
| 75-27-4 | BROMODICHLOROMETHANE | 10 | 10.6 | 1 | | 106 | 20 | 6 |
| 10061-01-5 | CIS-1,3-DICHLOROPROPENE | 10 | 10.7 | 1 | | 107 | 20 | 5 |
| 108-10-1 | 4-METHYL-2-PENTANONE | 40 | 38.8 | 10 | | 97 | 30 | 17 |
| 108-88-3 | TOLUENE | 10 | 10.7 | 1 | | 107 | 20 | 2 |
| 10061-02-6 | TRANS-1,3-DICHLOROPROPENE | 10 | 11 | 1 | | 110 | 20 | 7 |
| 79-00-5 | 1,1,2-TRICHLOROETHANE | 10 | 10.8 | 1 | | 108 | 20 | 10 |
| 591-78-6 | 2-HEXANONE | 40 | 41 | 10 | | 102 | 30 | 16 |
| 127-18-4 | TETRACHLOROETHENE | 10 | 11.1 | 1 | | 111 | 20 | 2 |
| 142-28-9 | 1,3-DICHLOROPROPANE | 10 | 10.3 | 1 | | 103 | 20 | 5 |
| 124-48-1 | DIBROMOCHLOROMETHANE | 10 | 10.7 | 1 | | 107 | 20 | 9 |
| 106-93-4 | 1,2-DIBROMOETHANE | 10 | 10.5 | 1 | | 105 | 20 | 10 |
| 544-10-5 | 1-CHLOROHEXANE | 10 | 10.6 | 1 | | 106 | 20 | 5 |
| 108-90-7 | CHLOROBENZENE | 10 | 10.8 | 1 | | 108 | 20 | 0 |
| 630-20-6 | 1,1,1,2-TETRACHLOROETHANE | 10 | 11 | 1 | | 110 | 20 | 4 |
| 100-41-4 | ETHYLBENZENE | 10 | 10.8 | 1 | | 108 | 20 | 3 |
| 136777-61- | M+P-XYLENE | 20 | 21.7 | 1 | | 109 | 20 | 2 |
| 95-47-6 | O-XYLENE | 10 | 10.9 | 1 | | 109 | 20 | 3 |
| 100-42-5 | STYRENE | 10 | 11 | 1 | | 110 | 20 | 1 |
| 75-25-2 | BROMOFORM | 10 | 10.4 | 1 | | 104 | 20 | 9 |
| 98-82-8 | ISOPROPYLBENZENE | 10 | 10.9 | 1 | | 109 | 20 | 3 |
| 96-18-4 | 1,2,3-TRICHLOROPROPANE | 10 | 10.5 | 1 | | 105 | 20 | 11 |
| 79-34-5 | 1,1,2,2-TETRACHLOROETHANE | 10 | 10.2 | 1 | | 102 | 20 | 4 |
| 108-86-1 | BROMOBENZENE | 10 | 10.6 | 1 | | 106 | 20 | 0 |
| 103-65-1 | N-PROPYLBENZENE | 10 | 10.9 | 1 | | 109 | 20 | 6 |
| 95-49-8 | 2-CHLOROTOLUENE | 10 | 11.2 | 1 | | 112 | 20 | 3 |

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

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Method SW8260_25B

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS Paragon

Work Order Number: 0903158

Client Name: Colorado Oil & Gas Conservation Commission

ClientProject ID: Complaint 200204503

Lab ID: VL090323-3LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 03/23/2009

Date Analyzed: 03/23/2009

Prep Method: SW5030C

Prep Batch: VL090323-3

QCBatchID: VL090323-3-1

Run ID: VL090323-3A

Cleanup: NONE

Basis: N/A

File Name: C13946

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: UG/L

Clean DF: 1

| CASNO | Target Analyte | Spike Added | LCSD Result | Reporting Limit | Result Qualifier | LCSD % Rec. | RPD Limit | RPD |
|----------|-----------------------------|-------------|-------------|-----------------|------------------|-------------|-----------|-----|
| 108-67-8 | 1,3,5-TRIMETHYLBENZENE | 10 | 11.2 | 1 | | 112 | 20 | 4 |
| 106-43-4 | 4-CHLOROTOLUENE | 10 | 10.9 | 1 | | 109 | 20 | 4 |
| 98-06-6 | TERT-BUTYLBENZENE | 10 | 10.9 | 1 | | 109 | 20 | 7 |
| 95-63-6 | 1,2,4-TRIMETHYLBENZENE | 10 | 11.1 | 1 | | 111 | 20 | 0 |
| 135-98-8 | SEC-BUTYLBENZENE | 10 | 10.8 | 1 | | 108 | 20 | 5 |
| 541-73-1 | 1,3-DICHLOROBENZENE | 10 | 10.8 | 1 | | 108 | 20 | 3 |
| 99-87-6 | P-ISOPROPYLTOLUENE | 10 | 10.9 | 1 | | 109 | 20 | 6 |
| 106-46-7 | 1,4-DICHLOROBENZENE | 10 | 10.5 | 1 | | 105 | 20 | 1 |
| 104-51-8 | N-BUTYLBENZENE | 10 | 11.2 | 1 | | 112 | 20 | 6 |
| 95-50-1 | 1,2-DICHLOROBENZENE | 10 | 10.7 | 1 | | 107 | 20 | 2 |
| 96-12-8 | 1,2-DIBROMO-3-CHLOROPROPANE | 10 | 10.3 | 2 | | 103 | 20 | 9 |
| 120-82-1 | 1,2,4-TRICHLOROBENZENE | 10 | 11 | 1 | | 110 | 20 | 7 |
| 87-68-3 | HEXACHLOROBUTADIENE | 10 | 10.9 | 1 | | 109 | 20 | 7 |
| 91-20-3 | NAPHTHALENE | 10 | 10.9 | 1 | | 109 | 20 | 8 |
| 87-61-6 | 1,2,3-TRICHLOROBENZENE | 10 | 10.8 | 1 | | 108 | 20 | 5 |

Surrogate Recovery LCS/LCSD

| CASNO | Target Analyte | Spike Added | LCS % Rec. | LCS Flag | LCSD % Rec. | LCSD Flag | Control Limits |
|-----------|----------------------|-------------|------------|----------|-------------|-----------|----------------|
| 460-00-4 | 4-BROMOFLUOROBENZENE | 25 | 104 | | 99 | | 78 - 129 |
| 1868-53-7 | DIBROMOFLUOROMETHANE | 25 | 100 | | 98 | | 80 - 124 |
| 2037-26-5 | TOLUENE-D8 | 25 | 108 | | 103 | | 81 - 119 |

Data Package ID: VL0903158-1

Date Printed: Thursday, March 26, 2009

ALS Paragon

LIMS Version: 6.252A

Page 6 of 6

Data File : C:\HPCHEM\1\DATA\032309\C13948.D

Acq On : 23 Mar 2009 11:29

Sample : VL090323-3MB

Misc : 10mL un-heated purge

MS Integration Params: ettics.p

Quant Time: Mar 23 13:07 2009

Vial: 8

Operator: TWK-sop525r12

Inst : CSS Instr

Multiplr: 1.00

Quant Results File: 032209W.RES

Quant Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)

Title : GC/MS Volatiles (S.O.P. 525)

Last Update : Mon Mar 23 13:04:42 2009

Response via : Initial Calibration

DataAcq Meth : 032209W

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Fluorobenzene | 9.34 | 96 | 1755067 | 25.00 | ppb | 0.00 |
| 53) Chlorobenzene-d5 | 12.48 | 82 | 654687 | 25.00 | ppb | 0.00 |
| 73) 1,4-Dichlorobenzene-d4 | 14.48 | 152 | 457889 | 25.00 | ppb | 0.00 |

System Monitoring Compounds

| | | | | | | |
|---------------------------|--------|-------|----------|----------|-----|---------|
| 34) Dibromofluoromethane | 8.54 | 113 | 524111 | 24.91 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 80 - 124 | Recovery | = | 99.64% |
| 39) 1,2-dichloroethane-d4 | 9.01 | 65 | 393063 | 24.23 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 62 - 139 | Recovery | = | 96.92% |
| 54) Toluene-d8 | 11.03 | 98 | 1774712 | 26.03 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 81 - 119 | Recovery | = | 104.12% |
| 74) 4-Bromofluorobenzene | 13.52 | 95 | 627374 | 26.29 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 78 - 129 | Recovery | = | 105.16% |

Target Compounds

| | | | | | | |
|----------------------------|-------|-----|-------|------|-----|--------------------------|
| 84) 1,2,4-Trimethylbenzene | 14.17 | 105 | 12356 | 0.19 | ppb | Qvalue # N 33 |
|----------------------------|-------|-----|-------|------|-----|--------------------------|

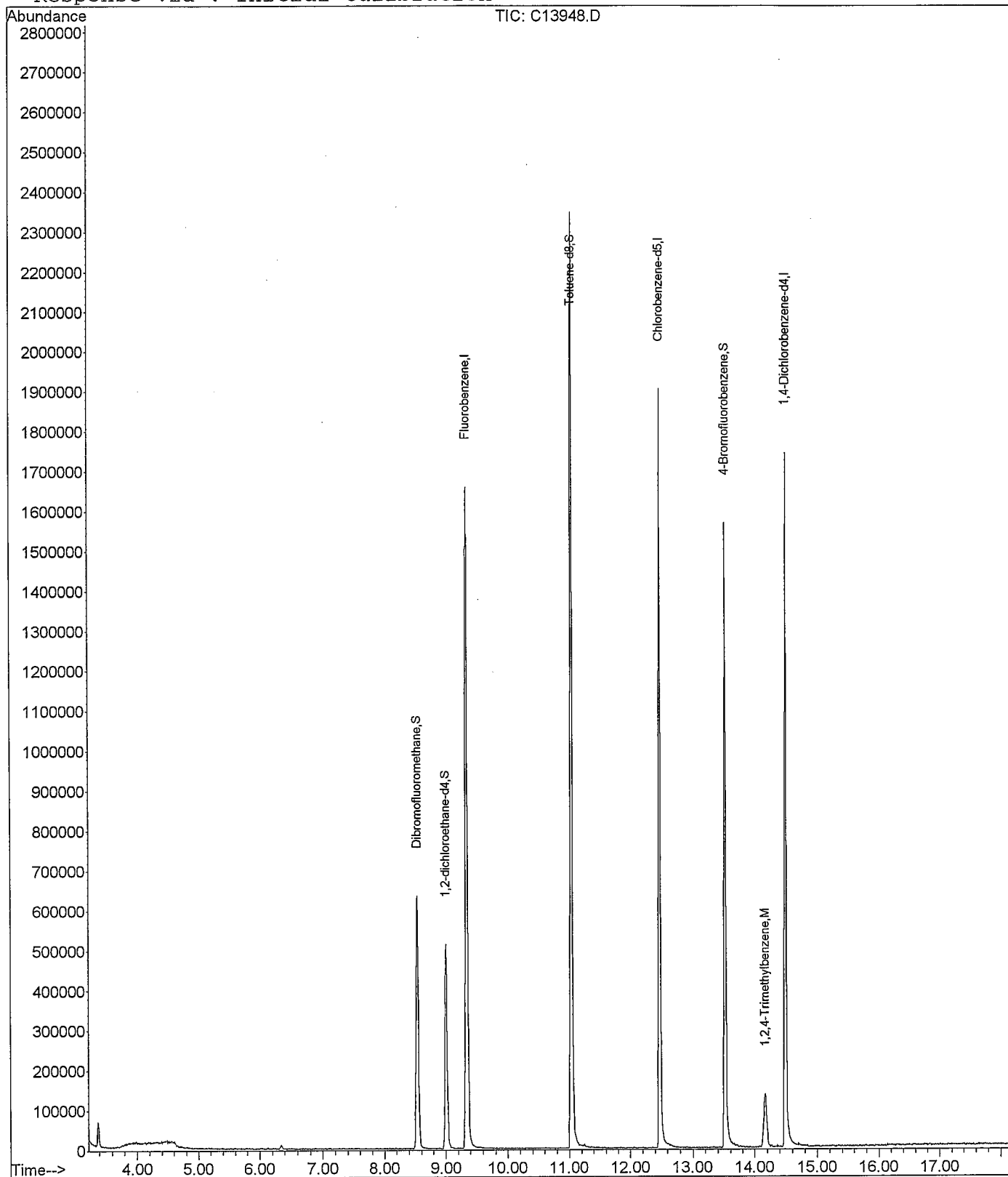
Quantitation Report

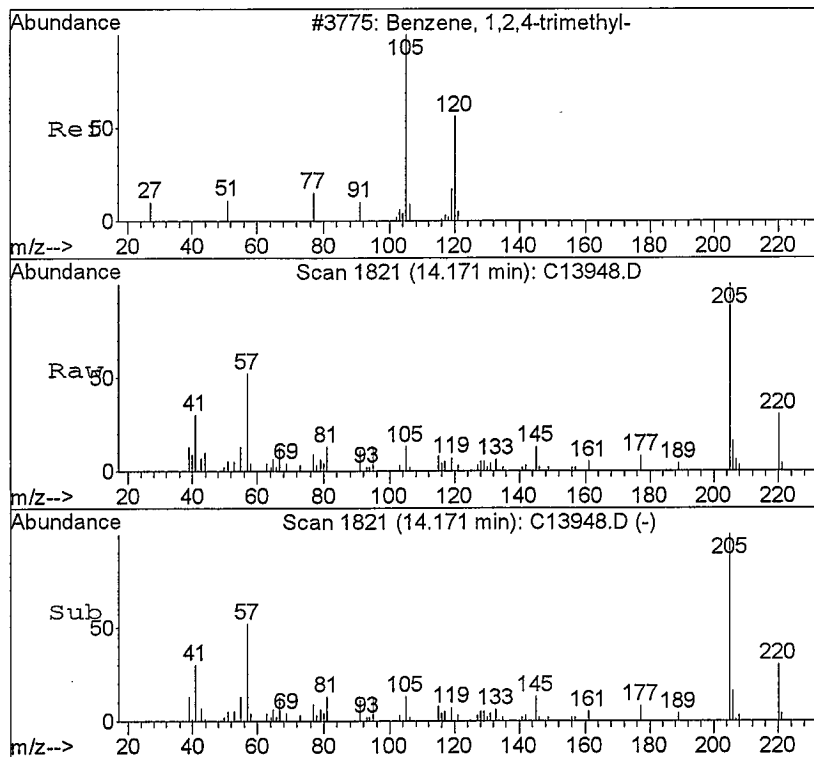
Data File : C:\HPCHEM\1\DATA\032309\C13948.D
 Acq On : 23 Mar 2009 11:29
 Sample : VL090323-3MB
 Misc : 10mL un-heated purge
 MS Integration Params: ettics.p
 Quant Time: Mar 23 13:07 2009

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

Quant Results File: 032209W.RES

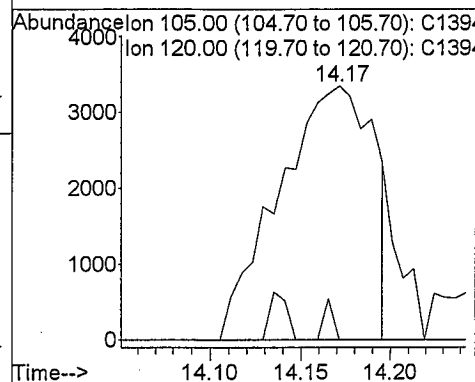
Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
 Title : GC/MS Volatiles (S.O.P. 525)
 Last Update : Mon Mar 23 13:04:42 2009
 Response via : Initial Calibration





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

Tgt Ion: 105 Resp: 12356
 Ion Ratio Lower Upper
 105 100
 120 0.0 25.6 59.8#



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

Library Search Compound Report

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

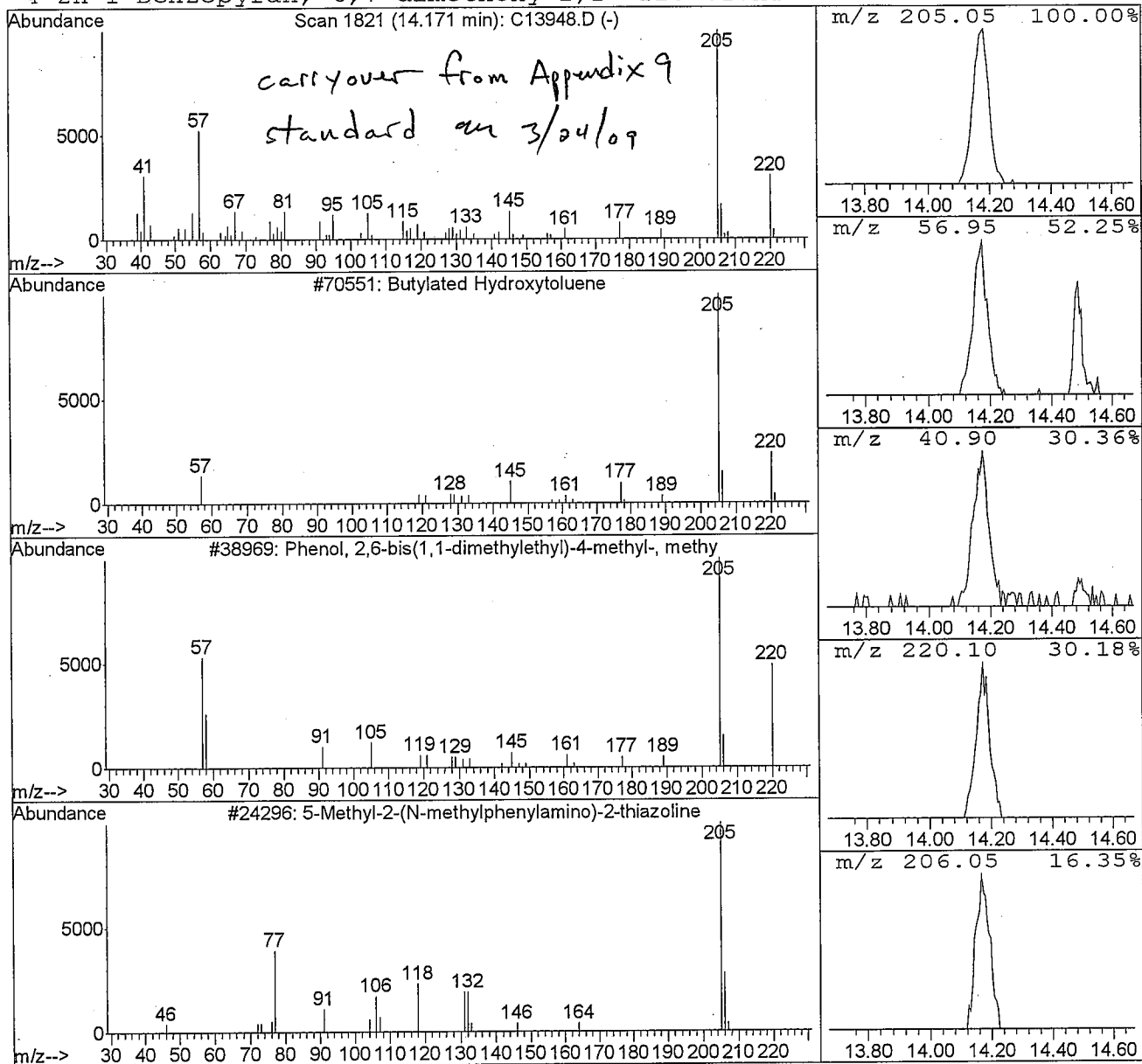
Vial: 8
Operator: TWK-sop525r12
Inst : CSS Instr
Multiplr: 1.00

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

Peak Number 1 Butylated Hydroxytoluene Concentration Rank 1

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

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



Data File : C:\HPCHEM\1\DATA\032309\C13956.D
Acq On : 23 Mar 2009 14:43
Sample : 0903158-1
Misc : 10mL un-heated purge
MS Integration Params: ettics.p
Quant Time: Mar 23 15:10 2009

Vial: 16
Operator: TWK-sop525r12
Inst : CSS Instr
Multiplr: 1.00

Quant Results File: 032209W.RES

Quant Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
Title : GC/MS Volatiles (S.O.P. 525)
Last Update : Mon Mar 23 13:04:42 2009
Response via : Initial Calibration
DataAcq Meth : 032209W

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|----------------------------|-------|------|----------|-------|-------|----------|
| 1) Fluorobenzene | 9.34 | 96 | 1735563 | 25.00 | ppb | 0.00 |
| 53) Chlorobenzene-d5 | 12.47 | 82 | 660740 | 25.00 | ppb | 0.00 |
| 73) 1,4-Dichlorobenzene-d4 | 14.48 | 152 | 455701 | 25.00 | ppb | 0.00 |

System Monitoring Compounds

| | | | | | | |
|---------------------------|--------|-------|----------|----------|-----|---------|
| 34) Dibromofluoromethane | 8.53 | 113 | 539743 | 25.94 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 80 - 124 | Recovery | = | 103.76% |
| 39) 1,2-dichloroethane-d4 | 9.00 | 65 | 385760 | 24.04 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 62 - 139 | Recovery | = | 96.16% |
| 54) Toluene-d8 | 11.03 | 98 | 1712498 | 24.89 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 81 - 119 | Recovery | = | 99.56% |
| 74) 4-Bromofluorobenzene | 13.51 | 95 | 602819 | 25.38 | ppb | 0.00 |
| Spiked Amount | 25.000 | Range | 78 - 129 | Recovery | = | 101.52% |

Target Compounds

Qvalue

on 3/24/09

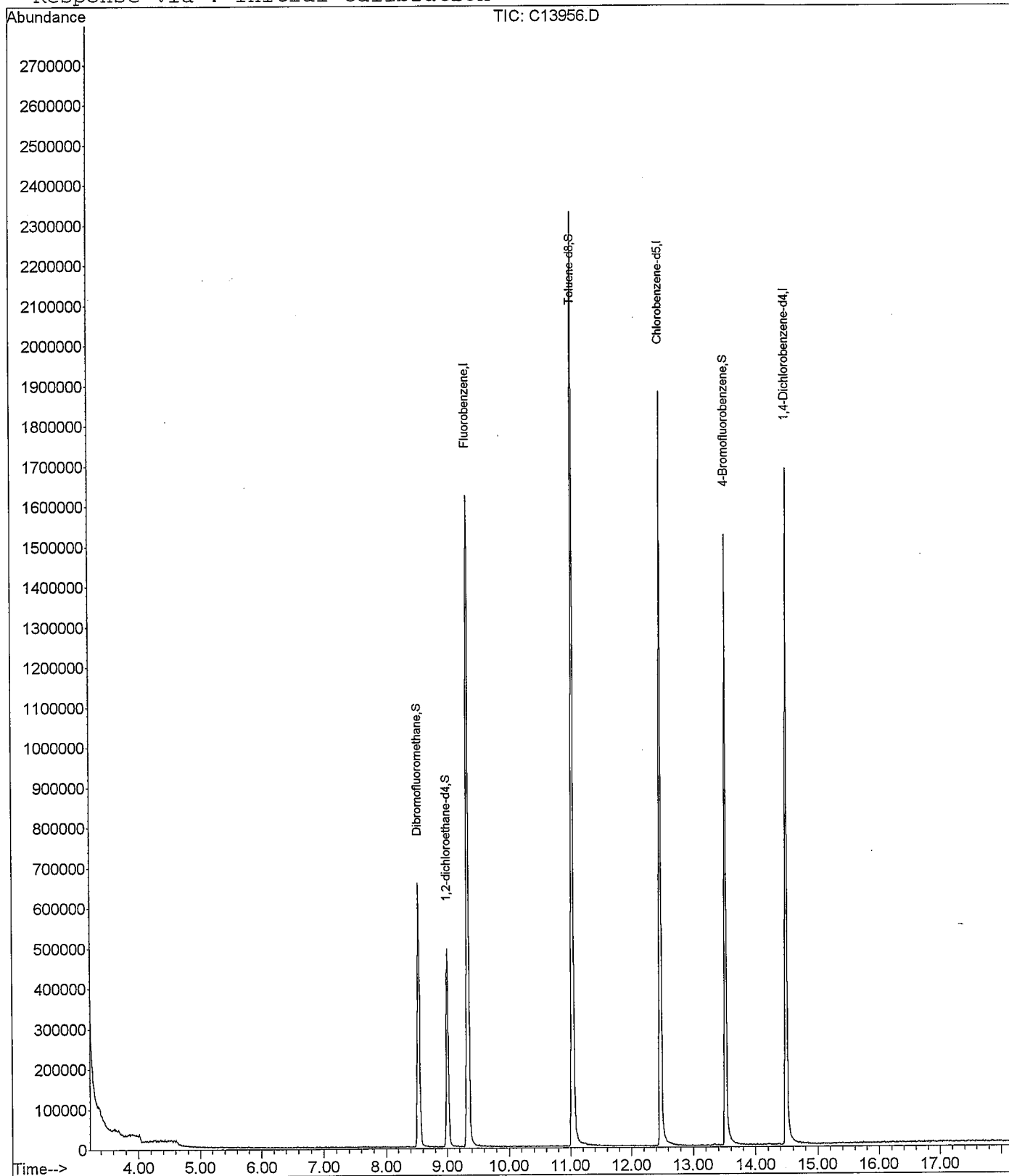
Quantitation Report

Data File : C:\HPCHEM\1\DATA\032309\C13956.D
 Acq On : 23 Mar 2009 14:43
 Sample : 0903158-1
 Misc : 10mL un-heated purge
 MS Integration Params: ettics.p
 Quant Time: Mar 23 15:10 2009

Vial: 16
 Operator: TWK-sop525r12
 Inst : CSS Instr
 Multiplr: 1.00

Quant Results File: 032209W.RES

Method : C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
 Title : GC/MS Volatiles (S.O.P. 525)
 Last Update : Mon Mar 23 13:04:42 2009
 Response via : Initial Calibration



Tentatively Identified Compound (LSC) summary

Operator ID: TWK-sop525r12 Date Acquired: 23 Mar 2009 14:43
 Data File: C:\HPCHEM\1\DATA\032309\C13956.D
 Name: 0903158-1
 Misc: 10mL un-heated purge
 Method: C:\HPCHEM\1\METHODS\032209W.M (RTE Integrator)
 Title: GC/MS Volatiles (S.O.P. 525)
 Library Searched: C:\DATABASE\NBS75K.L

| TIC Top Hit name | RT | EstConc | Units | Area | IntStd | ISRT | ISArea | ISConc |
|--------------------|----|---------|-------|------|--------|------|--------|--------|
| ----- | | | | | | | | |
| C13956.D 032209W.M | | | | | | | | |
| | | | | | | | | |