*NELAP CERTIFICATE NUMBER 01955*
*DOD ELAP CERTIFICATE NUMBER ADE - 1482*

# ANALYTICAL RESULTS

**PERFORMED BY**


**GULF COAST ANALYTICAL LABORATORIES, INC.**

**7979 GSRI Avenue**

**Baton Rouge, LA 70820**


**Report Date** 09/11/2012

**GCAL Report** 212090535

| | |
|---|---|
| ***Deliver To*** | LDEQ<br>602 N. 5th St<br>Baton Rouge, LA 70802<br>219-3676 |
| ***Attn*** | Sandy Wackett |

***Project*** Bayou Corne

CASE NARRATIVE

**Client:** La. Dept. of Environmental Quality **Report:** 212090535

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

## VOLATILES GAS CHROMATOGRAPHY

In the RSK 175 analysis, samples 21209053501 (327-090512-87-M11), 21209053503 (327-090512-81-M12), 21209053505 (327-090512-95-M1), 21209053507 (327-090512-73-M2), 21209053509 (327-090512-M16), 21209053511 (327-090512-80-M10), 21209053513 (327-090512-89-M7), 21209053515 (327-090512-90-M8), 21209053518 (327-090512-98-M4), and 21209053520 (327-090512-88-M6) had to be diluted to bracket the concentration of target analytes within the calibration range of the instrument.

# Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

**Common Abbreviations Utilized in this Report**

| | |
|---|---|
| **ND** | Indicates the result was Not Detected at the specified RDL |
| **DO** | Indicates the result was Diluted Out |
| **MI** | Indicates the result was subject to Matrix Interference |
| **TNTC** | Indicates the result was Too Numerous To Count |
| **SUBC** | Indicates the analysis was Sub-Contracted |
| **FLD** | Indicates the analysis was performed in the Field |
| **PQL** | Practical Quantitation Limit |
| **MDL** | Method Detection Limit |
| **RDL** | Reporting Detection Limit |
| **00:00** | Reported as a time equivalent to 12:00 AM |

**Reporting Flags Utilized in this Report**

| | |
|---|---|
| **J** | Indicates the result is between the MDL and RDL |
| **U** | Indicates the compound was analyzed for but not detected |
| **B** | Indicates the analyte was detected in the associated Method Blank |

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Robyn Migues

Robyn Migues
Technical Director
**GCAL REPORT** 212090535

# Report Sample Summary

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053501 | 327-090512-87-M11 | Water | 09/05/2012 12:30 | 09/05/2012 16:00 |
| 21209053502 | 327-090512-87-M11-FB | Water | 09/05/2012 12:30 | 09/05/2012 16:00 |
| 21209053503 | 327-090512-81-M12 | Water | 09/05/2012 12:40 | 09/05/2012 16:00 |
| 21209053504 | 327-090512-81-M12-FB | Water | 09/05/2012 12:40 | 09/05/2012 16:00 |
| 21209053505 | 327-090512-95-M1 | Water | 09/05/2012 11:30 | 09/05/2012 16:00 |
| 21209053506 | 327-090512-95-M1-FB | Water | 09/05/2012 11:30 | 09/05/2012 16:00 |
| 21209053507 | 327-090512-73-M2 | Water | 09/05/2012 12:00 | 09/05/2012 16:00 |
| 21209053508 | 327-090512-73-M2-FB | Water | 09/05/2012 12:00 | 09/05/2012 16:00 |
| 21209053509 | 327-090512-M16 | Water | 09/05/2012 12:05 | 09/05/2012 16:00 |
| 21209053510 | 327-090512-M16-FB | Water | 09/05/2012 12:05 | 09/05/2012 16:00 |
| 21209053511 | 327-090512-80-M10 | Water | 09/05/2012 12:20 | 09/05/2012 16:00 |
| 21209053512 | 327-090512-80-M10-FB | Water | 09/05/2012 12:20 | 09/05/2012 16:00 |
| 21209053513 | 327-090512-89-M7 | Water | 09/05/2012 13:10 | 09/05/2012 16:00 |
| 21209053514 | 327-090512-89-M7-FB | Water | 09/05/2012 13:10 | 09/05/2012 16:00 |
| 21209053515 | 327-090512-90-M8 | Water | 09/05/2012 13:00 | 09/05/2012 16:00 |
| 21209053516 | 327-090512-90-M8-FB | Water | 09/05/2012 13:00 | 09/05/2012 16:00 |
| 21209053517 | 327-090512-TB | Water | 09/05/2012 00:00 | 09/05/2012 16:00 |
| 21209053518 | 327-090512-98-M4 | Water | 09/05/2012 13:35 | 09/05/2012 16:00 |
| 21209053519 | 327-090512-98-M4-FB | Water | 09/05/2012 13:35 | 09/05/2012 16:00 |
| 21209053520 | 327-090512-88-M6 | Water | 09/05/2012 13:45 | 09/05/2012 16:00 |
| 21209053521 | 327-090512-88-M6-FB | Water | 09/05/2012 13:45 | 09/05/2012 16:00 |

# Summary of Compounds Detected

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053501 | **327-090512-87-M11** | Water | 09/05/2012 12:30 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 27700 | 3000 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 75.7 | 10.0 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053503 | **327-090512-81-M12** | Water | 09/05/2012 12:40 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 295 | 50.0 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 21800 | 3000 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053505 | **327-090512-95-M1** | Water | 09/05/2012 11:30 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | 31.3 | 5.50 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-98-6 | Propane | 670 | 100 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 1200 | 600 | | ug/L |
| 74-82-8 | Methane | 21000 | 3000 | | ug/L |

# Summary of Compounds Detected (con't)

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053507 | **327-090512-73-M2** | Water | 09/05/2012 12:00 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | 8.60 | 5.50 | | ug/L |
| 74-98-6 | Propane | 59.1 | 10.0 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 20400 | 3000 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 734 | 100 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053509 | **327-090512-M16** | Water | 09/05/2012 12:05 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-98-6 | Propane | 11.9 | 10.0 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 167 | 20.0 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 10100 | 3000 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053511 | **327-090512-80-M10** | Water | 09/05/2012 12:20 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 5.86 | 1.00 | | ug/L |

# Summary of Compounds Detected (con't)

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053511 | **327-090512-80-M10** | Water | 09/05/2012 12:20 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 10300 | 3000 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053513 | **327-090512-89-M7** | Water | 09/05/2012 13:10 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 405 | 50.0 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 11000 | 1500 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053515 | **327-090512-90-M8** | Water | 09/05/2012 13:00 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-98-6 | Propane | 20.7 | 10.0 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-82-8 | Methane | 9550 | 1500 | | ug/L |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 260 | 50.0 | | ug/L |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053518 | **327-090512-98-M4** | Water | 09/05/2012 13:35 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 74-84-0 | Ethane | 1.64 | 1.00 | | ug/L |

# Summary of Compounds Detected (con't)

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053518 | **327-090512-98-M4** | Water | 09/05/2012 13:35 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **20500** | **4500** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053520 | **327-090512-88-M6** | Water | 09/05/2012 13:45 | 09/05/2012 16:00 |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **1.31** | **1.00** | | **ug/L** |

RSK 175

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **15400** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053501 | **327-090512-87-M11** | Water | 09/05/2012 12:30 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 12:57 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 28.6 | ug/L | 71 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 10 | 09/10/2012 13:06 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **75.7** | **10.0** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 13:15 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **27700** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053502 | **327-090512-87-M11-FB** | Water | 09/05/2012 12:30 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 13:23 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 32.5 | ug/L | 80 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053503 | **327-090512-81-M12** | Water | 09/05/2012 12:40 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 13:30 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 26.6 | ug/L | 66 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 50 | 09/10/2012 13:38 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **295** | **50.0** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 13:47 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **21800** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053504 | **327-090512-81-M12-FB** | Water | 09/05/2012 12:40 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 13:55 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 32.3 | ug/L | 80 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053505 | **327-090512-95-M1** | Water | 09/05/2012 11:30 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 14:04 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **106-97-8** | **Butane** | **31.3** | **5.50** | | **ug/L** |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 24.8 | ug/L | 61 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 10 | 09/10/2012 14:12 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-98-6** | **Propane** | **670** | **100** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 14:30 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **1200** | **600** | | **ug/L** |
| **74-82-8** | **Methane** | **21000** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053506 | **327-090512-95-M1-FB** | Water | 09/05/2012 11:30 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 14:39 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 26 | ug/L | 64 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053507 | **327-090512-73-M2** | Water | 09/05/2012 12:00 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 14:47 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **106-97-8** | **Butane** | **8.60** | **5.50** | | **ug/L** |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| **74-98-6** | **Propane** | **59.1** | **10.0** | | **ug/L** |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 23.2 | ug/L | 57 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 100 | 09/10/2012 14:55 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **734** | **100** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 15:18 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **20400** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053508 | **327-090512-73-M2-FB** | Water | 09/05/2012 12:00 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 15:26 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 29.1 | ug/L | 72 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053509 | **327-090512-M16** | Water | 09/05/2012 12:05 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 15:35 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| **74-98-6** | **Propane** | **11.9** | **10.0** | | **ug/L** |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 23.6 | ug/L | 58 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 20 | 09/10/2012 15:55 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **167** | **20.0** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 16:11 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **10100** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053510 | **327-090512-M16-FB** | Water | 09/05/2012 12:05 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 16:21 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 25.9 | ug/L | 64 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053511 | **327-090512-80-M10** | Water | 09/05/2012 12:20 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 16:58 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| **74-84-0** | **Ethane** | **5.86** | **1.00** | | **ug/L** |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 23.2 | ug/L | 57 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 17:07 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **10300** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053512 | **327-090512-80-M10-FB** | Water | 09/05/2012 12:20 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 17:17 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 25.2 | ug/L | 62 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053513 | **327-090512-89-M7** | Water | 09/05/2012 13:10 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 17:29 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 25.9 | ug/L | 64 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 50 | 09/10/2012 17:39 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **405** | **50.0** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 300 | 09/10/2012 17:53 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **11000** | **1500** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053514 | **327-090512-89-M7-FB** | Water | 09/05/2012 13:10 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 18:03 | BMR | 489246 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 25.8 | ug/L | 64 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053515 | **327-090512-90-M8** | Water | 09/05/2012 13:00 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 19:01 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| **74-98-6** | **Propane** | **20.7** | **10.0** | | **ug/L** |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 26.4 | ug/L | 65 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 50 | 09/10/2012 19:11 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-84-0** | **Ethane** | **260** | **50.0** | | **ug/L** |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 300 | 09/10/2012 19:20 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **9550** | **1500** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053516 | **327-090512-90-M8-FB** | Water | 09/05/2012 13:00 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 19:29 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 24.4 | ug/L | 60 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053517 | **327-090512-TB** | Water | 09/05/2012 00:00 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 19:37 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 25.6 | ug/L | 63 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053518 | **327-090512-98-M4** | Water | 09/05/2012 13:35 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 19:52 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| **74-84-0** | **Ethane** | **1.64** | **1.00** | | **ug/L** |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 18.5 | ug/L | 46 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 900 | 09/10/2012 20:00 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **20500** | **4500** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053519 | **327-090512-98-M4-FB** | Water | 09/05/2012 13:35 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 20:08 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 23.2 | ug/L | 57 | 40 - 143 |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053520 | **327-090512-88-M6** | Water | 09/05/2012 13:45 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 20:15 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| **74-84-0** | **Ethane** | **1.31** | **1.00** | | **ug/L** |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 21.4 | ug/L | 53 | 40 - 143 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 600 | 09/10/2012 20:24 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| **74-82-8** | **Methane** | **15400** | **3000** | | **ug/L** |

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21209053521 | **327-090512-88-M6-FB** | Water | 09/05/2012 13:45 | 09/05/2012 16:00 |

## RSK 175

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 09/10/2012 20:40 | BMR | 489304 |

| CAS# | Parameter | Result | RDL | REG LIMIT | Units |
|---|---|---|---|---|---|
| 106-97-8 | Butane | <5.50 | 5.50 | | ug/L |
| 74-84-0 | Ethane | <1.00 | 1.00 | | ug/L |
| 74-85-1 | Ethene | <1.00 | 1.00 | | ug/L |
| 74-82-8 | Methane | <5.00 | 5.00 | | ug/L |
| 74-98-6 | Propane | <10.0 | 10.0 | | ug/L |

| CAS# | Surrogate | Conc. Spiked | Conc. Rec | Units | % Recovery | Rec Limits |
|---|---|---|---|---|---|---|
| 115-07-1 | Propene | 40.5 | 23.6 | ug/L | 58 | 40 - 143 |

# General Chromatography Quality Control Summary

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analytical Batch** | 489246 | **Client ID** | MB489246 | | | LCS489246 | | | LCSD489246 | | |
| **Prep Batch** | N/A | **GCAL ID** | 1103377 | | | 1103378 | | | 1103379 | | |
| | | **Sample Type** | Method Blank | | | LCS | | | LCSD | | |
| | | **Analytical Date** | 09/10/2012 11:07 | | | 09/10/2012 12:32 | | | 09/10/2012 12:47 | | |
| | | **Matrix** | Water | | | Water | | | Water | | |
| **RSK 175** | | **Units** | **Result** | ug/L **RDL** | **Spike Added** | **Result** | **% R** | **Control Limits % R** | **Result** | **% R** | **RPD** | **RPD Limit** |
| 74-82-8 | Methane | | <5.00 | 5.00 | 17.5 | 16.0 | 91 | 39 - 120 | 14.4 | 82 | 11 | 27 |
| 74-85-1 | Ethene | | <1.00 | 1.00 | 3.06 | 3.06 | 100 | 45 - 134 | 2.73 | 89 | 11 | 25 |
| 74-84-0 | Ethane | | <1.00 | 1.00 | 3.28 | 3.19 | 97 | 45 - 128 | 2.85 | 87 | 11 | 29 |
| 74-98-6 | Propane | | <10.0 | 10.0 | 50.7 | 60.0 | 118 | 30 - 170 | 57.3 | 113 | 5 | 40 |
| 106-97-8 | Butane | | <5.50 | 5.50 | 81.2 | 94.4 | 116 | 30 - 170 | 90.8 | 112 | 4 | 40 |
| **Surrogate** | | | | | | | | | | | | |
| 115-07-1 | Propene | | 34.3 | 85 | 40.5 | 33.3 | 82 | 40 - 143 | 29.6 | 73 | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Analytical Batch** | 489304 | **Client ID** | MB489304 | | | LCS489304 | | | LCSD489304 | | |
| **Prep Batch** | N/A | **GCAL ID** | 1103678 | | | 1103679 | | | 1103680 | | |
| | | **Sample Type** | Method Blank | | | LCS | | | LCSD | | |
| | | **Analytical Date** | 09/10/2012 18:52 | | | 09/10/2012 18:26 | | | 09/10/2012 18:34 | | |
| | | **Matrix** | Water | | | Water | | | Water | | |
| **RSK 175** | | **Units** | **Result** | ug/L **RDL** | **Spike Added** | **Result** | **% R** | **Control Limits % R** | **Result** | **% R** | **RPD** | **RPD Limit** |
| 74-82-8 | Methane | | <5.00 | 5.00 | 17.5 | 15.2 | 87 | 39 - 120 | 15.4 | 88 | 1 | 27 |
| 74-85-1 | Ethene | | <1.00 | 1.00 | 3.06 | 2.77 | 91 | 45 - 134 | 2.82 | 92 | 2 | 25 |
| 74-84-0 | Ethane | | <1.00 | 1.00 | 3.28 | 2.99 | 91 | 45 - 128 | 3.07 | 94 | 3 | 29 |
| 74-98-6 | Propane | | <10.0 | 10.0 | 50.7 | 56.5 | 111 | 30 - 170 | 54.3 | 107 | 4 | 40 |
| 106-97-8 | Butane | | <5.50 | 5.50 | 81.2 | 89.8 | 111 | 30 - 170 | 84.8 | 104 | 6 | 40 |
| **Surrogate** | | | | | | | | | | | | |
| 115-07-1 | Propene | | 33.2 | 82 | 40.5 | 29.1 | 72 | 40 - 143 | 29.5 | 73 | | |

LA. Dept. OF Environmental / 4422 / 2120905 35 / 9-10-12 GCAL

STATE OF LOUISIANA — DEPARTMENT OF ENVIRONMENTAL QUALITY — LABORATORY SERVICES

# CHAIN OF CUSTODY



Name: Bayou Corne ID# 182981
Address: 602 N. 5th St., B.R.
Location: Assumption
Parish: Texas Brine Team Leader: Laurie Peacock
Permit Number/Inspector's Log Number: 327
Additional Team Members: Chris Prehler
List any Field Data Sheets that accompany the sample
Office Org # Project Code

Requested Analysis: add propane butane; RSK 175

Additional Comments:

| Sample #/Sampler I.D. | Location ID/Outfall/ (Canister S.N.) | Date | Time | Sample Medium/Type | Methodology | Preservatives | Grab or Comp | # Containers | # Aliquots | add propane butane | RSK 175 | Destination* AL, BL,RL, WL | Remarks (Priority, etc.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 327-090512-87-M11 | well | 9.5.12 | 1230 | water | | none | G | 3 | | X | | | 01 |
| 327-090512-87-M11-FB | field blank | | 1230 | | | | G | 3 | | X | | | 02 |
| 327-090512-81-M12 | well | | 1240 | | | | G | 3 | | X | | | 03 |
| 327-090512-81-M12-FB | field blank | | 1240 | | | | G | 3 | | X | | | 04 |

Split Samples Accepted? If yes, Accepted By:
Name:
Signature:
Sample #(s):

| Sample Number | Aliquot | Grab | Team | Witness Name/Signature | Title |
|---|---|---|---|---|---|
| | | | | | |

CHAIN OF CUSTODY

| Relinquished by: | Date | Time | Received By: |
|---|---|---|---|
| Laurie Peacock | 9.5.12 | 1600 | Odie McCune |

Recommended Sample Disposition:

Final Sample Disposition: Date:

*AL=Air Lab, BL=Bioassay Lab, RL-Radiation Lab, WL=Water Lab

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LA. Dept. of Environmental / 4422 / 212090535 / 9-10-12

GCAL

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

LABORATORY SERVICES

# CHAIN OF CUSTODY



Name: Bayou Corne ID# 182981

Address: 602 N. 5th St., B.R.

Location: Texas Brine

Parish: Assumption Team Leader: Laurie Peacock

Permit Number/Inspector's Log Number: 327

Additional Team Members: Chris Prehler

List any Field Data Sheets that accompany the sample

Office Org # Project Code

Additional Comments:

| Sample #/Sampler I.D. | Location ID/Outfall/ (Canister S.N.) | Date | Time | Sample Medium/Type | Methodology | Preservatives | Grab or Comp | # Containers | # Aliquots | Requested Analysis: RSK 175 add propane butane | Destination* AL, BL, RL, WL | Remarks (Priority, etc.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 327-090512-95-M1 | well | 9.5.12 | 1130 | water | | none | G | 3 | | X | | 05 |
| 327-090512-95-M1-FB | field blank | | 1130 | | | | G | 3 | | X | | 06 |
| 327-090512-73-M2 | well | | 1200 | | | | G | 3 | | X | | 07 |
| 327-090512-73-M2-FB | field blank | | 1200 | | | | G | 3 | | X | | 08 |
| 327-090512-M16 | well | | 1205 | | | | G | 3 | | X | | 09 |
| 327-090512-M16-FB | field blank | | 1205 | | | | G | 3 | | X | | 10 |
| 327-090512-80-M10 | well | | 1220 | | | | G | 3 | | X | | 11 |
| 327-090512-80-M10-FB | field blank | | 1220 | | | | G | 3 | | X | | 12 |

Split Samples Accepted? If yes, Accepted By:

Name:

Signature:

Sample #(s):

| Sample Number | Aliquot | Grab | Team | Witness Name/Signature | Title |
|---|---|---|---|---|---|
| | | | | | |

CHAIN OF CUSTODY

| Relinquished by: | Date | Time | Received By: |
|---|---|---|---|
| Laurie Peacock | 9.5.12 | 1600 | Odie McGuire |

**Recommended Sample Disposition:**

**Final Sample Disposition:**

**Date:**

*AL=Air Lab, BL=Bioassay Lab, RL-Radiation Lab, WL=Water Lab

L.A. Dept of Environmental | 4422 | 212090535 | 9-10-12

GCAL

STATE OF LOUISIANA

DEPARTMENT OF ENVIRONMENTAL QUALITY

LABORATORY SERVICES

# CHAIN OF CUSTODY



Name: Bayou Corne ID# 182981

Address: 602 N. 5th St., B.R.

Location: CrossTex

Parish: Assumption Team Leader: Laurie Peacock

Permit Number/Inspector's Log Number: 327

Additional Team Members: Chris Riehler

List any Field Data Sheets that accompany the sample

Office Org # Project Code

Additional Comments:

| Sample #/Sampler I.D. | Location ID/Outfall/ (Canister S.N.) | Date | Time | Sample Medium/Type | Methodology | Preservatives | Grab or Comp | # Containers | # Aliquots | Requested Analysis: plus propane butane RSK175 | Destination* AL, BL,RL, WL | Remarks (Priority, etc.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 327-090512-89-M7 | well | 9.5.12 | 1310 | water | | none | G | 3 | | X | | 13 |
| 327-090512-89-M7-FB | field blank | | 1310 | | | | G | 3 | | X | | 14 |
| 327-090512-90-M8 | well | | 1300 | | | | G | 3 | | X | | 15 |
| 327-090512-90-M8 | field blank | | 1300 | | | | G | 3 | | X | | 16 |

Split Samples Accepted? If yes, Accepted By:

Name:

Signature:

Sample #(s):

| Sample Number | Aliquot | Grab | Team | Witness Name/Signature | Title |
|---|---|---|---|---|---|
| | | | | | |

CHAIN OF CUSTODY

| Relinquished by: | Date | Time | Received By: |
|---|---|---|---|
| Laurie Peacock | 9.5.12 | 1600 | Odie McClure |

**Recommended Sample Disposition:**

**Final Sample Disposition:** **Date:**

*AL=Air Lab, BL=Bioassay Lab, RL-Radiation Lab, WL=Water Lab

LA Dept of Environmental / 4422 / 212090535 / 9-10-12

GCAL

STATE OF LOUISIANA — DEPARTMENT OF ENVIRONMENTAL QUALITY — LABORATORY SERVICES

# CHAIN OF CUSTODY



Name: Bayou Corne ID#
Address: 602 N. 5th St. B.R
Location: PB Energy
Parish: Assumption Team Leader: Laurie Peacock
Permit Number/Inspector's Log Number: 327
Additional Team Members: Chris Prehler
List any Field Data Sheets that accompany the sample
Office Org # Project Code

Requested Analysis: add propane butane; RSK 175

Additional Comments:

| Sample #/Sampler I.D. | Location ID/Outfall/ (Canister S.N.) | Date | Time | Sample Medium/Type | Methodology | Preservatives | Grab or Comp | # Containers | # Aliquots | add propane butane | RSK 175 | Destination* AL, BL,RL, WL | Remarks (Priority, etc.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 327-090512-TB | trip blank | 9.5.12 | — | water | | none | G | 3 | | X | | | 17 |
| 327-090512-98-M4 | well | 9.5.12 | 1335 | water | | none | G | 3 | | X | | | 18 |
| 327-090512-98-M4-FB | field blank | | 1335 | | | | G | 3 | | X | | | 19 |
| ~~327-090512-131-M5~~ | ~~well~~ | | | | | | ~~G~~ | ~~3~~ | | ~~X~~ | | | ~~20~~ OLM 9.5.12 |
| ~~327-090512-131-M5-FB~~ | ~~field blank~~ | | | | | | ~~G~~ | ~~3~~ | | ~~X~~ | | | |
| 327-090512-88-M6 | well | | 1345 | | | | G | 3 | | X | | | 20 |
| 327-090512-88-M6-FB | field blank | | 1345 | | | | G | 3 | | X | | | 21 |

Split Samples Accepted? If yes, Accepted By:
Name:
Signature:
Sample #(s):

| Sample Number | Aliquot | Grab | Team | Witness Name/Signature | Title |
|---|---|---|---|---|---|
| | | | | | |

CHAIN OF CUSTODY

| Relinquished by: | Date | Time | Received By: |
|---|---|---|---|
| Laurie Peacock | 9.5.12 | 1600 | Odie McClure |

**Recommended Sample Disposition:**

**Final Sample Disposition:** **Date:**

*AL=Air Lab, BL=Bioassay Lab, RL-Radiation Lab, WL=Water Lab

GCAL
GULF COAST ANALYTICAL LABORATORIES, INC

# SAMPLE RECEIVING CHECKLIST

| SAMPLE DELIVERY GROUP | 212090535 |
|---|---|
| **Client**<br>4422 - La. Dept. of Environmental Quality | **Transport Method**<br>CUST |
| **Profile**<br>234528 - Bayou Corne | **Received By**<br>McCune, Odie |
| **Line Item(s)**<br>1 - WATER | **Receive Date(s)**<br>09/05/12 |

| CHECKLIST | | | |
|---|---|---|---|
| Were all samples received using proper thermal preservation? | ☑ Yes | ☐ No | ☐ NA |
| When used, were all custody seals intact? | ☐ Yes | ☐ No | ☑ NA |
| Were all samples received in proper containers? | ☑ Yes | ☐ No | ☐ NA |
| Were all samples received using proper chemical preservation? | ☑ Yes | ☐ No | ☐ NA |
| Was preservative added to any container at the lab? | ☐ Yes | ☑ No | ☐ NA |
| Were all containers received in good condition? | ☑ Yes | ☐ No | ☐ NA |
| Were all VOA vials received with no head space? | ☑ Yes | ☐ No | ☐ NA |
| Do all sample labels match the Chain of Custody? | ☑ Yes | ☐ No | ☐ NA |
| Did the Chain of Custody list the sampling technician? | ☑ Yes | ☐ No | ☐ NA |
| Was the COC maintained i.e. all signatures, dates and time of receipt included? | ☑ Yes | ☐ No | ☐ NA |

## COOLERS

| Airbill | Temp(oC) |
|---|---|
| | 9/5/12 16 |

## DISCREPANCIES

None

## LABORATORY PRESERVATIONS

None

## NOTES