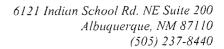
3R-098

QTR GW monitoring report Sampling event

DATE: October 2008





3RP-98

March 4, 2009

Mr. Glen von Gonten State of New Mexico Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, New Mexico 87505

RE: (1) ConocoPhillips Shepherd & Kelsey 1E 2008 Quarterly Report
Bloomfield, New Mexico
(2) ConocoPhillips Faye Burdette No. 1 2008 Quarterly Report
Aztec, New Mexico
(3) ConocoPhillips El Paso 1A 2008 Quarterly Report
Blanco, New Mexico

Dear Mr. von Gonten:

Enclosed please find a copy of the above-referenced documents as compiled by Tetra Tech, Inc., formerly Maxim Technologies, for these Farmington area sites.

Please do not hesitate to contact me at (505) 237-8440 if you have any questions or require additional information.

Sincerely,

Kelly E. Blanchard

Kelly E. Blanchard Project Manager/Geologist

Enclosures (3)

QUARTERLY GROUNDWATER MONITORING REPORT OCTOBER 2008 SAMPLING EVENT

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CONOCOPHILLIPS SHEPHERD & KELSEY IE BLOOMFIELD, NEW MEXICO

OCD # 3RP-98-0

Prepared for:

ConocoPhillips

420 South Keeler Avenue Bartlesville, OK 74004

Prepared by:

| Tł | |
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| | |

TETRA TECH, INC.

6121 Indian School Rd. NE Suite 200 Albuquerque, NM 87110 Tetra Tech Project No. 9690121.100

February 11, 2009

Quarterly Groundwater Monitoring Report Shepherd & Kelsey 1E, Bloomfield, New Mexico OCD #3RP-98-0

TABLE OF CONTENTS

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FIGURES

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- I. Site Location Map
- 2. Site Layout Map

TABLES

| Ι. | Site | History | Timeline |
|----|------|----------|---------------------|
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2. Groundwater Laboratory Analytical Results Summary (October 2008)

APPENDICES

- Appendix A. Groundwater Sampling Field Form
- Appendix B. Laboratory Analytical Report

QUARTERLY GROUNDWATER MONITORING REPORT CONOCOPHILLIPS SHEPHERD & KELSEY IE, BLOOMFIELD, NEW MEXICO

I.0 INTRODUCTION

This report presents the results of quarterly groundwater monitoring completed by Tetra Tech, Inc. (Tetra Tech) on October 23, 2008, at the ConocoPhillips, formerly Burlington Resources, Shepherd & Kelsey IE Site in Bloomfield, New Mexico. This event represents the first quarter of groundwater sampling conducted by Tetra Tech at the site.

The site is located near the intersection of Highway 64 and county road 5097 in Bloomfield, NM. The site can be reached by turning onto county road 5097 from Highway 64 and making an immediate left onto county road 5095. Follow 5095 until the road dead ends and then make a right onto the private drive which leads down to the site on the left. The site consists of a gas production well head and associated equipment and installations. The location and general features of the Shepherd & Kelsey IE site are shown on **Figures 1** and **2**, respectively.

I.I Site History

The history of the ConocoPhillips Shepherd & Kelsey IE Site is outlined in Table I.

2.0 METHODOLOGY AND RESULTS

The following subsections describe the groundwater monitoring methodology and sampling analytical results.

2.1 Groundwater Monitoring Methodology

Groundwater sampling

Monitor well MW-1 was sampled during this event to initiate quarterly groundwater monitoring at the site. Approximately 4 gallons of water, or greater than three well volumes, were purged from the monitoring well before sampling was performed. The purged water was disposed of in the waste water tank located on site (**Figure 2**). A 1.5-inch dedicated bailer was used to purge and collect groundwater samples. The samples were placed in laboratory prepared bottles, packed on ice, and shipped with chain of custody documentation to Southern Petroleum Laboratory located in Houston, Texas. The samples were analyzed for presence of volatile organic compounds (VOC) including but not limited to benzene, toluene, ethyl-benzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260B, semi-volatile organics compounds (SVOC) by EPA Method 8270C, total petroleum hydrocarbons (TPH) by EPA Method SW8015B, ion chromatography by EPA Method E300.0, metals including mercury by EPA Methods SW7470A, 6010B, 6020A, and nitrogen by EPA Method E353.2.

2.2 Groundwater Sampling Analytical Results

The October 2008 analysis of the collected groundwater samples indicates that all contaminants of concern are below the NMWQCC standards. Laboratory analytical data from the October 2008 sampling are summarized on **Table 2**. The field groundwater sampling form is presented in **Appendix A** and the laboratory analytical report is presented in **Appendix B**.

3.0 CONCLUSIONS

Tetra Tech recommends continued quarterly groundwater monitoring of MW-1 and the additional three monitoring wells MW-2, MW-3 and MW-4 that were installed in late January of 2009 in order to provide sufficient data for site closure. If results indicate all constituents of concern are below NMWQCC standards, groundwater monitoring will be discontinued and site closure will be requested.

FIGURES

I. Site Location Map

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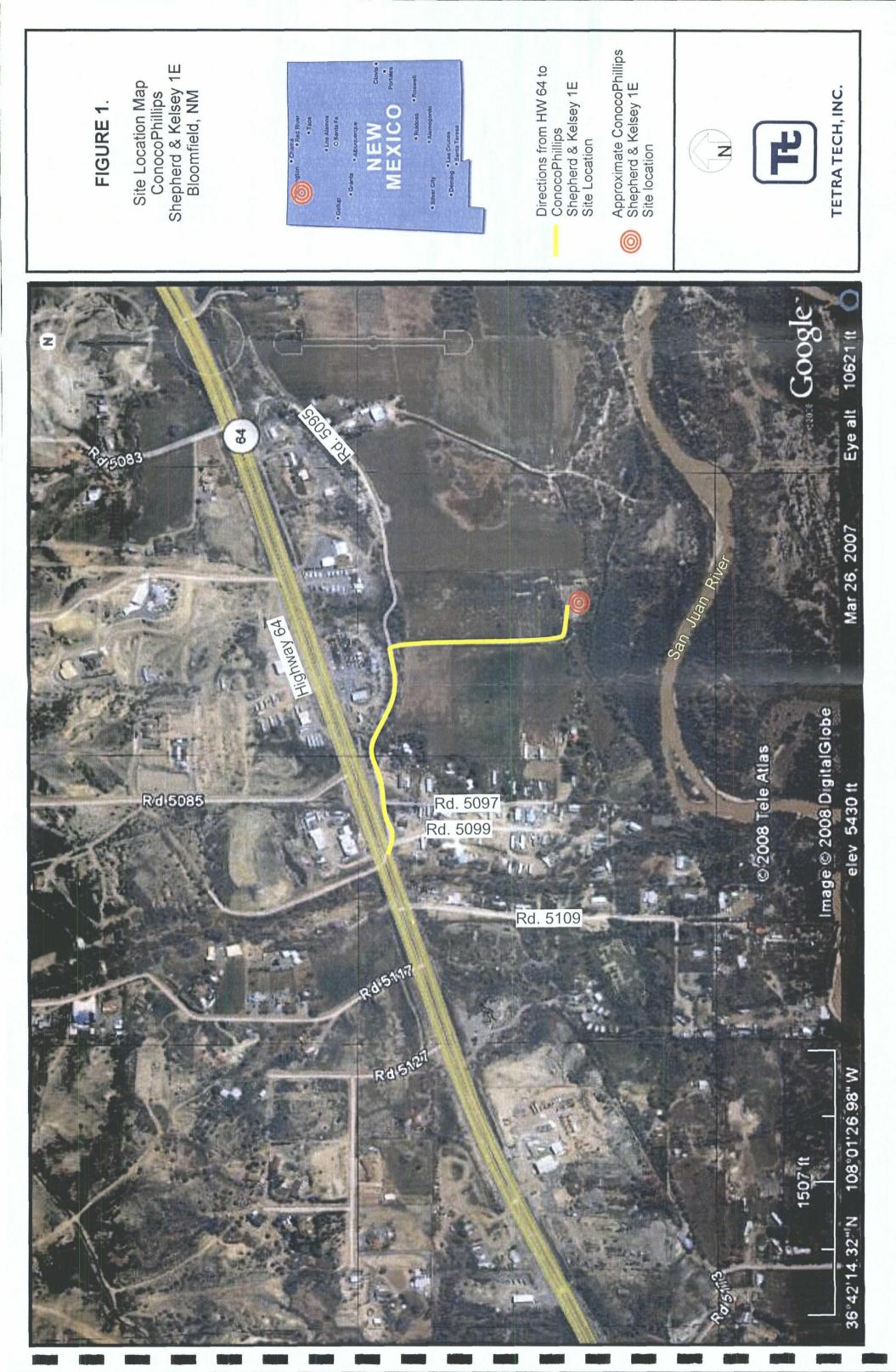
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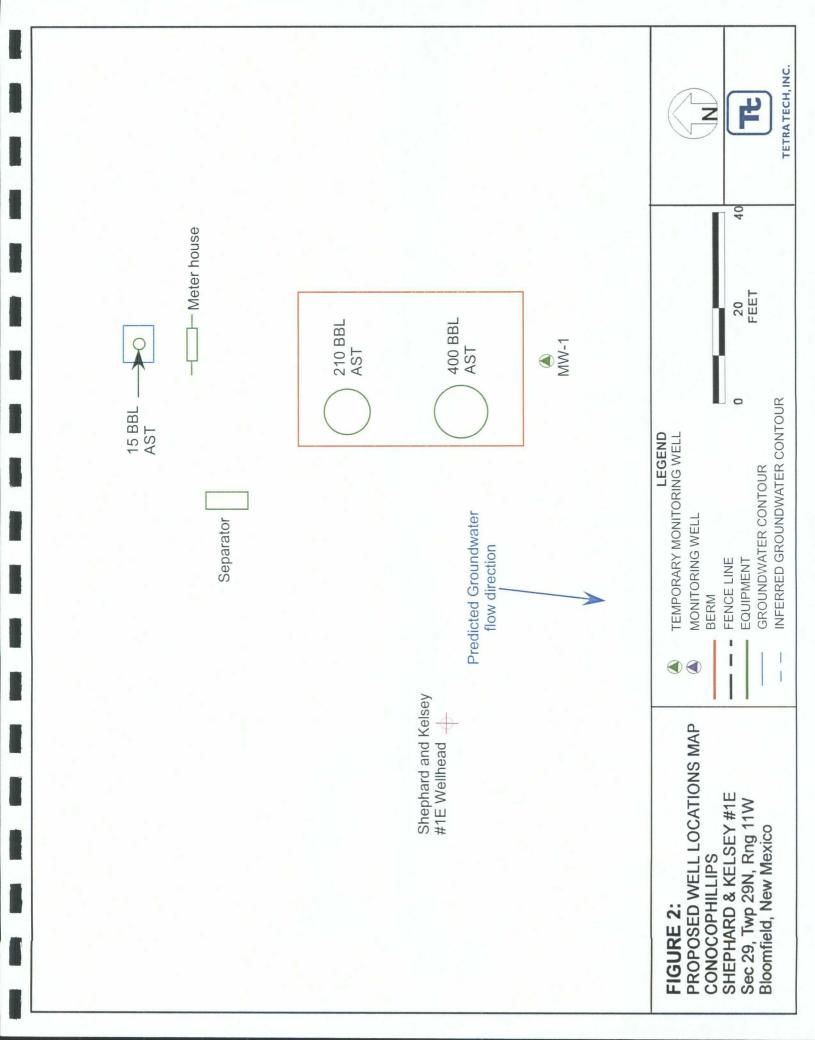
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2. Site Layout Map





TABLES

I. Site History Timeline

2. Laboratory Analytical Data Summary (October 2008)

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Table 1. Site History Timeline - ConocoPhillips Shepherd and Kelsey 1E

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| DATE | ACTIVITY |
|------------------|---|
| 5-Jun-07 | Contaminated soil discovered during routine maintenance of the Site. Soil excavation was performed at the Site, and three soil samples were obtained. Sample results showed total petroleum hydrocarbon (TPH) concentrations below the NMOCD regulations of 100 parts per million (ppm). Original source of contamination is unknown. |
| 12-Jun-07 | A separate area of TPH soil contamination discovered. |
| June 15-18, 2007 | A 50 foot by 20 foot by 4 foot excavation completed. Soil samples taken from the second excavation show TPH at 992 ppm, and water samples obtained show benzene and total xylenes above State of New Mexico drinking water standards. |
| 26-Sep-07 | Ground water monitoring well installed to a depth of ten (10) feet below ground surface (bgs) by Envirotech Inc. of Farmington, NM (Envirotech). Depth to groundwater recorded at four (4) feet bgs. Soil and groundwater samples obtained for TPH, benzene, and, toluene, ethylbenzene and total xylenes (BTEX) were below the respective NMOCD regulations of 100 ppm, 10 ppm and 50 ppm. |
| Nov-07 | Envirotech report recommends plugging and abandonment of the temporary ground water monitoring well and a no further action determination for the Site (Envirotech, 2007). |
| Apr-08 | Oil Concervation Division of NM Energy, Minerals, and Resources Dept. indicates additional investigation and sampling is necessary for closure consideration during a meeting with Glenn Von Gonten |
| 23-Oct-08 | 1st quarter sampling of MW-1 by Tetra Tech |
| Jan-09 | Installed additional monitoring wells MW-2, MW-3 and MW-4 |
| 30-Jan-09 | 2nd quarter sampling of MW-1 by Tetra Tech |

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Table 2.

Analytical Data Shepherd & Kelsey 1E October 23,2008

| Izene | Stnadards | Standards | 1-WW |
|---|------------------------------|-----------------------------------|---------|
| zene | | | |
| Benzene Toluene Ethylbenzene Vulosoo | e Organic Cor | Volatile Organic Compounds (ug/L) | |
| Toluene Ethylbenzene Vultanoo | 10 | 5 | <5 |
| Ethylbenzene | 750 | 1 | <5 |
| Vulgase | 750 | 700 | <5 |
| vyielles | 620 | 1 | <5 |
| Diesel Range Organics | 1 | 1 | 3.7 |
| Ō | General Chemistry (mg/L | stry (mg/L) | |
| Chloride | 250 | 250 | 22.8 |
| Nitrate | • | • | 2.8 |
| Sulfate | 600 | 250 / 400 | 438 |
| Inor | Inorganic Contaminants (mg/L | inants (mg/L) | |
| Calcium | E . | | 141 |
| Iron | 4- | 0.3 | 2.59 |
| Magnesium | | | 18.3 |
| Sodium | 1 | | 245 |
| Arsenic | 0.1 | 0.05 | <0.005 |
| Lead | 0.05 | 0.015 | 0.00509 |
| Barium | 1 | 2 | 0.0459 |
| Manganese | 0.2 | 0.05 | 0.417 |
| Mercury | 0.002 | 0.002 | <.0002 |

Notes

Concentrations marked **bold** exceed NMWQCC standards Only detected constituents are included on Table 2.

APPENDIX A

GROUNDWATER SAMPLING FIELD FORM

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|------------|----------------|-------------------------------|---------------------|-------------------------------------|---------------------------------|---|---|--|
| | Project Name | Shepherd and Kelsey # | 1E | | | Pa | age <u>1</u> | _ of |
| _ | Project No. | | | ···· | | | | |
| | Site Location | San Juan County, NM | | . <u></u> | | | | |
| a line and | Site/Well No. | MW-1 | Coded/ Replicate | | | Date | 10/23/ | 08 |
| 形式 | Weather | Windy, Sunny | Time San Began | 16:4 | | Completed | | |
| | | | EV | ACUATION D | ATA | | | |
| 非關 | Description of | Measuring Point (MP) | 10 | | | | | |
| | Height of MP A | bove/Below Land Surface | ce | | MP Elevation | | | |
| PALANCE A | Total Sounded | Depth of Well Below M | · <u>1</u> 2. | 00 | Water-Level Ele | evation | | |
| 19553 | Heid | Depth to Water Below | w MP 4, | 02 | Diameter of Ca Gallons Pumpe | | | 2" |
| | Wet | Water Column in | Well 7. | 98 | Prior to Samplin | | 4 | gallons |
| HAN I | | Gallons per | | | Sampling Pump | | ng | U |
| | | Gallons in | | N G C | (feet below land 2 9 | surface) | | |
| 79-10-1 | Purging Equipr | nent <u>bailer / purge</u> | | <u> </u> | 0 | | | |
| 大学 | Time | Temperature (C ^o) | pН | DATA/FIELD I Conductivity | TDS in g/L | ORP (m) | /) DO |] . |
| | 1645 1648 | 15.72 15.80 | 7.28 7.24 | 1.813 | 10179 | -28. | | |
| 建作 | 1649 | 15.72 | 7.25 | 1.790 | 1.164 | - 25.5 | 2.36 | |
| | Sampling Equi | pment | Disposable poly | vethvlene baile | <u>ا</u> ۲ | | | |
| | | tuents Sampled | | ontainer Descr | | | Preservati | Ve |
| | BTEX (V(| YS: SUDCE | | | 2 Ambers | HCL 1H | 110 | |
| | Total Y | Notals, Gen | , Znlasti | | plastic 320 | | | |
| | Chem | ? Anions, TPI | | | | | | |
| 御御 | Remarks | mur | cy, brown | <u>no odo</u> | v | | | <u> . . </u> |
| | Sampling Pers | onnel Christine Matl | néws, Ana More | eno | | | | |
| | | | | Well Casing V | | na na serie de la companya de la com | ing the second | |
| | | Gal./ft. 1 ¼" = (1 ½" = (| | 2" = 0.16 $2\frac{1}{2}" = 0.24$ | | 0.37 0.50 | 4" = 0. 6" = 1. | 8 |

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APPENDIX B

LABORATORY ANALYTICAL REPORT

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

Certificate of Analysis Number: 08101658 COP Shepherd Kelsey #1E Report To: Project Name: Site: Bloomfield, NM Tetra Tech, Inc. Kelly Blanchard Site Address: 6121 Indian School Road, N.E. Suite 200 PO Number: 4509668194 Albuquerque State: New Mexico NM 87110-State Cert. No.: ph: (505) 237-8440 fax: Date Reported: 11/21/2008

This Report Contains A Total Of 32 Pages

Excluding This Page, Chain Of Custody

And

Any Attachments



8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Case Narrative for: Conoco Phillips

Certificate of Analysis Number:

<u>08101658</u>

| Report To: | Project Name: | COP Shepherd Kelsey #1E |
|--|---|--------------------------|
| Tetra Tech, Inc. Kelly Blanchard | <u>Site:</u> Site Address: | Bloomfield, NM |
| 6121 Indian School Road, N.E. Suite 200 | | |
| Albuquerque NM | PO Number: State: | 4509668194 New Mexico |
| 87110- ph: (505) 237-8440 fax: | <u>State Cert. No.:</u> Date Reported: | 11/21/2008 |

All samples received outside the 48-hour hold time for Nitrate and Orthophosphate analysis. Per historical records SPL, Inc continued with analysis.

Per the Conoco Phillips TSM Revision 0, a copy of the internal chain of custody is to be included in final data package. However, due to LIMS limitations, this cannot be provided at this time.

Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID: 84925 for the Diesel Range Organics analysis by Method 8015B. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Due to limited sample volume, a Matrix Spike (MS) or Matrix Spike Duplicate (MSD) was not extracted with Batch ID:84949 for the Semivolatile Organics analysis by SW846 Method 8270C. A Laboratory Control Sample (LCS) and a Laboratory Control Sample Duplicate (LCSD) were extracted with the analytical batch and serve as the batch quality control (QC). The LCS and LCSD recovered acceptably and precision criteria were met.

Your sample ID "MW-1" (SPL ID:08101658-01) was randomly selected for use in SPL's quality control program for the Volatile Organics analysis by SW846 Method 8260. The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries were outside of the advisable quality control limits for 2-Chloroethyl vinyl ether (Batch ID: R256001) due to compound decomposition as a result of acid preservation. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Some of the percent recoveries and RPD's on the QC report for the MS/MSD may be different than the calculated recoveries and RPD's using the sample result and the MS/MSD results that appear on the report because, the actual raw result is used to perform the calculations for percent recovery and RPD.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

a Cardenas

08101658 Page 1 11/21/2008

Erica Cardenas Project Manager

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Test results meet all requirements of NELAC, unless specified in the narrative.

| | | DEL / | 7 | | | HOUSTON LABORAT 8880 INTERCHANGE I HOUSTON, TX 770 | ORIVE | |
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| 中語 | | | C | onoco F | Philline | (713) 660-0901 | | |
| 事業 | | <i>.</i> | | | lysis Number: | | | |
| 圓 | | | | <u>08101</u> | <u>658</u> | | | |
| | <u>Report To:</u> | Tetra Tech, Inc. Kelly Blanchard | | | Project Nam Site: | e: COP Shepherd Kel Bloomfield, NM | sey #1E | |
| | | 6121 Indian School Road, N Suite 200 Albuquerque | l.E. | | Site Address | <u>5.</u> | | |
| | | NM 87110- | | | <u>PO Number:</u> <u>State:</u> | 4509668194 New Mexico | | |
| | <u>Fax To:</u> | ph: (505) 237-8440 f | ax: (505) 881-3283 | | <u>State Cert. N</u> Date Reporte | | | |
| | | | | | T | I | | |
| | MW-1 | Client Sample ID | Lab Sample ID 08101658-01 | Matrix Water | Date Collected 10/23/2008 5:00:00 PM | Date Received 10/28/2008 9:30:00 AM | | |

E-a Cordinas

Erica Cardenas Project Manager

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Richard R. Reed Laboratory Director

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HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

| Client Sample ID:MW | -1 | | Collect | ed: 1 | 10/23/2008 | 17:00 | SPL San | nple I | D : 0810 | 1658-01 |
|--------------------------|-------------------|---------------|----------|--------------|------------|-----------|----------|--------|-----------------|---------|
| | | | Site: | Blo | omfield, N | M | | | | |
| Analyses/Method | Result | QUAL | Rep.L | imit | Di | I. Factor | Date Ana | lyzed | Analyst | Seq. |
| DIESEL RANGE ORG | ANICS | | | | MCL | SV | V8015B | Un | its: mg/L | |
| Diesel Range Organics (| C10-C28) 3.7 | | | 1 | | 10 | 11/02/08 | 23:09 | NW | 475038 |
| Surr: n-Pentacosane | 110 | | % 20- | 150 | | 10 | 11/02/08 | 23:09 | NW | 475038 |
| Prep Method | Prep Date | Prep Initials | Prep Fac | tor | | | | | | |
| SW3510C | 10/30/2008 10:38 | JDM | 1.00 | | | | | | | |
| ION CHROMATOGRA | РНҮ | | | | MCL | | E300.0 | Un | its: mg/L | |
| Chloride | 22.8 | | | 2 | | 4 | 11/10/08 | 22:26 | TW | 476603 |
| Fluoride | ND | | | 2 | | 4 | 11/10/08 | 22:26 | TW | 476603 |
| Ortho-phosphate (As P) | ND | | | 5 | | 10 | 11/20/08 | 3 8:10 | TW | 478077 |
| Sulfate | 438 | | | 50 | | 100 | 11/11/08 | 16:22 | TW | 476645 |
| MERCURY, TOTAL | | | | | MCL | SV | V7470A | Un | its: mg/L | |
| Mercury | ND | | 0.0 | 002 | | 1 | 11/06/08 | 14:30 | F_S | 475569 |
| Prep Method | Prep Date | Prep Initials | Prep Fac | tor | | | | | | |
| SW7470A | 11/06/2008 13:18 | F_S | 1.00 | | | | | | | |
| METALS BY METHOD | 6010B, TOTAL | | | | MCL | SV | V6010B | Un | its: mg/L | |
| Calcium | 141 | | | 0.1 | | 1 | 11/04/08 | | s_c | 475207 |
| Iron | 2.59 | | (| 0.02 | | 1 | 11/04/08 | 23:48 | s_c | 475207 |
| Magnesium | 18.3 | | | 0.1 | | 1 | 11/04/08 | 23:48 | S_C | 475207 |
| Manganese | 0.417 | | 0. | 005 | | 1 | 11/04/08 | 23:48 | s_c | 475207 |
| Sodium | 245 | | | 0.5 | | 1 | 11/04/08 | 23:48 | S_C | 475207 |
| Prep Method | Prep Date | Prep Initials | Prep Fac | tor | | | | | | |
| SW3010A | ,10/31/2008 15:00 | BDG | 1.00 | | | | | | | |
| METALS BY METHOD | 6020A, TOTAL | | | | MCL | SV | V6020A | Un | its: mg/L | |
| Arsenic | ND | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Barium | 0.0459 | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Cadmium | ND | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Chromium | ND | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Lead | 0.00509 | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Selenium | ND | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Silver | ND | | 0. | 005 | | 1 | 11/06/08 | 14:07 | AL_H | 475559 |
| Prep Method | Prep Date | Prep Initials | Prep Fac | tor | | | | | | |
| SW3010A | 10/31/2008 15:00 | BDG | 1.00 | | | | | | | |
| NITRATE NITROGEN | (AS N), TOTAL | | | | MCL | | E353.2 | Un | its: mg/L | |
| Nitrogen, Nitrate (As N) | 2.8 | | | 0.5 | | 1 | 11/03/08 | | | 475760 |

Qualifiers:

ND/U - Not Detected at the Reporting Limit

 $\ensuremath{\mathsf{B/\!V}}\xspace$ - Analyte detected in the associated Method Blank

* - Surrogate Recovery Outside Advisable QC Limits

J - Estimated Value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

08101658 Page 3 11/21/2008 4:15:56 PM



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:MW-1

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Collected: 10/23/2008 17:00

SPL Sample ID: 08101658-01

| Analyses/Method | Result QUAL | Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
|-----------------------------|----------------|-----------|-------------|----------------|------------|---------|
| SEMIVOLATILE ORGANICS B | Y METHOD 8270C | | MCL SV | V8270C Ur | nits: ug/L | |
| 1,2,4-Trichlorobenzene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 1,2-Dichlorobenzene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 1,2-Diphenylhydrazine | ND | 10 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 1,3-Dichlorobenzene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 1,4-Dichlorobenzene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,4,5-Trichlorophenol | ND | 10 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,4,6-Trichlorophenol | ND | . 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,4-Dichlorophenol | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,4-Dimethylphenol | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,4-Dinitrophenol | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,4-Dinitrotoluene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2,6-Dinitrotoluene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2-Chloronaphthalene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2-Chlorophenol | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2-Methylnaphthalene | ND | 5 | . 1 | 11/06/08 16:58 | GY | 4755962 |
| 2-Nitroaniline | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2-Nitrophenol | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 3.3'-Dichlorobenzidine | ND | 10 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 3-Nitroaniline | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4,6-Dinitro-2-methylphenol | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4-Bromophenyl phenyl ether | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4-Chloro-3-methylphenol | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4-Chloroaniline | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4-Chlorophenyl phenyl ether | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4-Nitroaniline | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 4-Nitrophenol | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Acenaphthene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Acenaphthylene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Aniline | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Anthracene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Benz(a)anthracene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Benzo(a)pyrene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Benzo(b)fluoranthene | ND | 5 | . 1 | 11/06/08 16:58 | GY | 4755962 |
| Benzo(g,h,i)perylene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Benzo(k)fluoranthene | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Benzoic acid | ND | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Benzyl alcohol | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Bis(2-chloroethoxy)methane | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Bis(2-chloroethyl)ether | ND | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |

Qualifiers:

ND/U - Not Detected at the Reporting Limit

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

* - Surrogate Recovery Outside Advisable QC Limits

B/V - Analyte detected in the associated Method Blank

- J Estimated Value between MDL and PQL
- E Estimated Value exceeds calibration curve

TNTC - Too numerous to count



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

Client Sample ID:MW-1

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Collected: 10/23/2008 17:00

SPL Sample ID:

le ID: 08101658-01

| A (/A) () | | | | field, NM | Data Analysis d | A | |
|-----------------------------|--------|---------------------------------------|-------|-------------|-----------------|---------|---------|
| Analyses/Method | Result | QUAL Rep. | | Dil. Factor | Date Analyzed | Analyst | Seq. # |
| Bis(2-chloroisopropyl)ether | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Bis(2-ethylhexyl)phthalate | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Butyl benzyl phthalate | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Carbazole | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Chrysene | ND | · · · · · · · · · · · · · · · · · · · | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Dibenz(a,h)anthracene | ND | | 5 | | 11/06/08 16:58 | GY | 4755962 |
| Dibenzofuran | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Diethyl phthalate | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Dimethyl phthalate | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Di-n-butyl phthalate | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Di-n-octyl phthalate | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Fluoranthene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Fluorene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Hexachlorobenzene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Hexachlorobutadiene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Hexachlorocyclopentadiene | ND | | 5 | . 1 | 11/06/08 16:58 | GY | 4755962 |
| Hexachloroethane | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Indeno(1,2,3-cd)pyrene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Isophorone | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Naphthalene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Nitrobenzene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| N-Nitrosodi-n-propylamine | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| N-Nitrosodiphenylamine | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Pentachlorophenol | ND | | 25 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Phenanthrene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Phenol | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Pyrene | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Pyridine | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 2-Methylphenol | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| 3 & 4-Methylphenol | ND | | 5 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Surr: 2,4,6-Tribromophenol | 66.7 | % 10 |)-123 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Surr: 2-Fluorobiphenyl | 72.0 | % 23 | 3-116 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Surr: 2-Fluorophenol | 37.3 | · · · · · · · · · · · · · · · · · · · | 5-110 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Surr: Nitrobenzene-d5 | 70.0 | · · · · · · · · · · · · · · · · · · · | -114 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Surr: Phenol-d5 | 28.0 | |)-110 | 1 | 11/06/08 16:58 | GY | 4755962 |
| Surr: Terphenyl-d14 | 72.0 | | 2-141 | 1 | 11/06/08 16:58 | GY | 4755962 |

| Prep Method | Prep Date | Prep Initials | Prep Factor |
|-------------|------------------|---------------|-------------|
| SW3510C | 10/30/2008 16:53 | LLL | 1.00 |

Qualifiers:

- ND/U Not Detected at the Reporting Limit
- B/V Analyte detected in the associated Method Blank
- * Surrogate Recovery Outside Advisable QC Limits
- J Estimated Value between MDL and PQL
- E Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)

D - Surrogate Recovery Unreportable due to Dilution MI - Matrix Interference



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HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

| Client Sample ID:MW-1 | | Collected: 10 | /23/2008 17:00 | SPL Sample II |) : 0810 | 1658-01 |
|-----------------------------|-------------|---------------|----------------|----------------|-----------------|---------|
| · · | | Site: Bloo | mfield, NM | | | |
| Analyses/Method | Result QUAL | . Rep.Limit | Dil. Factor | Date Analyzed | Analyst | Seq. # |
| VOLATILE ORGANICS BY MET | THOD 8260B | | MCL SV | V8260B Uni | its: ug/L | |
| 1,1,1,2-Tetrachloroethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,1,1-Trichloroethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,1,2,2-Tetrachloroethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,1,2-Trichloroethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,1-Dichloroethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,1-Dichloroethene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,1-Dichloropropene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2,3-Trichlorobenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2,3-Trichloropropane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2,4-Trichlorobenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2,4-Trimethylbenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2-Dibromo-3-chloropropane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2-Dibromoethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2-Dichlorobenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2-Dichloroethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2-Dichloropropane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,3,5-Trimethylbenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,3-Dichlorobenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,3-Dichloropropane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,4-Dichlorobenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 2,2-Dichloropropane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 2-Butanone | ND | 20 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 2-Chloroethyl vinyl ether | ND | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 2-Chlorotoluene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 2-Hexanone | ND | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 4-Chlorotoluene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 4-Isopropyltoluene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 4-Methyl-2-pentanone | ND | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Acetone | ND | 100 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Acrylonitrile | ND | 50 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Benzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Bromobenzene | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Bromochloromethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Bromodichloromethane | ND | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 0 | ND | | | 14/04/00 10 10 | | 1750074 |

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Qualifiers:

Bromoform

Bromomethane

Carbon disulfide

Chlorobenzene

Carbon tetrachloride

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

ND

ND

ND

ND

ND

- * Surrogate Recovery Outside Advisable QC Limits
- J Estimated Value between MDL and PQL
- E Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL)

11/04/08 16:40

11/04/08 16:40

11/04/08 16:40

11/04/08 16:40

11/04/08 16:40

LT

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D - Surrogate Recovery Unreportable due to Dilution

MI - Matrix Interference

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8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

08101658-01

(713) 660-0901

Client Sample ID:MW-1

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Collected: 10/23/2008 17:00

SPL Sample ID:

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|---|---|---|---|---|----|---|---|---|--|
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| | | | | | | | | | |

| | | | | | 3/2008 17.00 | SPL Sample I | D : 00 | 101030-01 |
|-----------------------------|--------|------|-----|-----------|--------------|----------------|---------------|-----------|
| | | | Sit | te: Bloom | field, NM | | | |
| Analyses/Method | Result | QUAL | R | ep.Limit | Dil. Factor | Date Analyzed | Analys | t Seq. # |
| Chloroethane | ND | | | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Chloroform | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Chloromethane | ND | | | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Dibromochloromethane | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Dibromomethane | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Dichlorodifluoromethane | ND | | | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Ethylbenzene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Hexachlorobutadiene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Isopropylbenzene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Methyl tert-butyl ether | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Methylene chloride | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Naphthalene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| n-Butylbenzene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| n-Propylbenzene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| sec-Butylbenzene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Styrene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| tert-Butylbenzene | ND | | | 5 | 1 | 11/04/08 16:40 | LT . | 4752371 |
| Tetrachloroethene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Toluene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Trichloroethene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Trichlorofluoromethane | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Vinyl acetate | ND | | | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Vinyl chloride | ND | | | 10 | 1 | 11/04/08 16:40 | LT | 4752371 |
| cis-1,2-Dichloroethene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| cis-1,3-Dichloropropene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| m,p-Xylene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| o-Xylene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| trans-1,2-Dichloroethene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| trans-1,3-Dichloropropene | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| 1,2-Dichloroethene (total) | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Xylenes,Total | ND | | | 5 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Surr: 1,2-Dichloroethane-d4 | 104 | | % | 62-130 | 1 | 11/04/08 16:40 | LT | 4752371 |
| Surr: 4-Bromofluorobenzene | 94.0 | | % | 70-130 | 1 | 11/04/08 16:40 | LT | 4752371 |
| | | | | | | | | |

%

74-122

Surr: Toluene-d8

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank * - Surrogate Recovery Outside Advisable QC Limits

104

J - Estimated Value between MDL and PQL

E - Estimated Value exceeds calibration curve

TNTC - Too numerous to count

>MCL - Result Over Maximum Contamination Limit(MCL) D - Surrogate Recovery Unreportable due to Dilution MI - Matrix Interference

11/04/08 16:40

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| | Analysis: Method: | Diesel Range Organics SW8015B | | | | WorkOrder: Lab Batch ID: | 08101658 84925 |
|---------|-------------------------------------|----------------------------------|----------|--------------------|-----------------------|-----------------------------|-------------------|
| | <u> </u> | Method | Blank | | Samples in Analytical | Batch: | |
| 动管 | RunID: HP_Z_081 | 102B-4750378 | Units: | mg/L | Lab Sample ID | Client Sam | ple ID |
| ٩Ň | Analysis Date: | 11/02/2008 15:11 | Analyst: | NW | 08101658-01C | MW-1 | |
| A TO BE | Analysis Date: Preparation Date: | 10/30/2008 10:38 | Prep By: | JDM Method SW3510C | | | |

| Analyte | Result | Rep Limit |
|---------------------------------|--------|-----------|
| Diesel Range Organics (C10-C28) | ND | 0.10 |
| Surr: n-Pentacosane | 85.6 | 20-150 |

| | | Duplicate (LCS/LCSD) | |
|--|--|----------------------|--|
| | | | |
| | | | |

| RunID: |
|-------------------|
| Analysis Date: |
| Preparation Date: |

 HP_Z_081102B-4750379
 Units:
 mg/L

 11/02/2008 15:33
 Analyst:
 NW

 10/30/2008 10:38
 Prep By:
 JDM M

(5:33 Analyst: NW(0:38 Prep By: JDM Method SW3510C

| 100 mm 200 | Analyte | LCS Spike Added | LCS Result | LCS Percent Recovery | LCSD Spike Added | LCSD Result | LCSD Percent Recovery | RPD | RPD Limit | Lower Limit | Upper Limit |
|------------|---------------------------------|-----------------------|---------------|----------------------------|------------------------|----------------|-----------------------------|-----|--------------|----------------|----------------|
| | Diesel Range Organics (C10-C28) | 2.00 | 2.09 | 104 | 2.00 | 2.03 | 102 | 2.7 | 20 | 21 | 130 |
| | Surr: n-Pentacosane | 0.0500 | 0.0469 | 93.8 | 0.0500 | 0.0440 | 88.0 | 6.4 | 30 | 20 | 150 |

Qualifiers:

1.13 E.M.

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

08101658 Page 9 11/21/2008 4:15:59 PM



8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

| A | Matelal | Mathed CO | 100 T-1-1 | | COP She | | 130 9 #1 | - | | 14/ | kOrder: | 004 | 01658 | | |
|----------------------|-----------------|--------------------|--------------------------------|----------------|--------------|----------|-----------------|--------------|----------------|-------------|---------------|--------------|----------|----------|---------|
| Analysis: Method: | SW6010B | Method 60 | 10B, Totai | | | | | | | | Batch IE | | | | |
| | | Meth | od Blank | | | | San | nples | in Analyt | ical Batc | h: | | | | |
| RunID: TJA_0 | 81104A-475205 | 7 | Units: | mg/L | | | Lab | Sam | ple ID | | <u>Client</u> | Sample ID | | | |
| Analysis Date: | 11/04/200 | 8 22:40 | Analyst: | S_C | | | 081 | 01658 | 3-01E | | MW-1 | | | | |
| Preparation Date | : 10/31/200 | 8 15:00 | Prep By: | BDG I | Method SW | 3010A | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | Analyte | | Result | Rep Limit | | | | | | | | | | |
| Ca | lcium | <u> </u> | | | | | | | | | | | | | |
| | gnesium | | | ND | 0.1 | | | | | | | | | | |
| | nganese dium | | | | 1 | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | La | aboratory C | ontrol S | ample (| LCS) | | | | | | | <u></u> |
| | | RunID: | | TJA_081 | 104A-475205 | 8 Uni | ts: | mg/L | | | | | | | |
| | | Analysis | s Date: | 11/04/20 | 08 22:44 | | | s_c | | | | | | | |
| | | Prepara | ation Date: | 10/31/20 | 008 15:00 | Pre | | | Method | SW3010A | A Contraction | | | | |
| | | | | | | | | | | | | | | | |
| | | | Analyt | e | | Spike | Result | | ercent | Lower | Upper | | | | |
| | | | | | | Added | | | ecovery | Limit | Limit | | | | |
| | | Calcium | | | | 1.000 | 1.05 | | 105.2 | 80 | 12 | - | | | |
| | | Iron | | | | 1.000 | 1.00 | | 100.5 | 80 | | | | | |
| | | Magnesiur | | | | 1.000 | 1.00 | | 100.5 | 80 | 12 | | | | |
| | | Manganes Sodium | e | | | 1.000 | 1.01 1.07 | _ | 101.6 107.9 | 80 80 | 12 12 | _ | | | |
| | | Socialiti | | | | 1.000 | | 5 | 107.9 | | 12 | | | | |
| <u></u> | | | Matrix | Spike (N | MS) / Matrix | Spike D | uplicate | e (MS | <u>D)</u> | | <u></u> | <u> </u> | | | |
| | | Samn | le Spiked: | 08101 | | | | | | | | | | | |
| | | Runic | | | 31104A-47520 | 060 U | nits: | mg/ | ۲L | | | | | | |
| | | | sis Date: | | 2008 22:53 | | nalyst: | s_c | | | | | | | |
| | | Prepa | ration Date: | 10/31/2 | 2008 15:00 | | rep By: | | G Method | SW3010 | A | | | | |
| | | | | | | | | | | | | | | | |
| | Analyte | | Sample | MS | MS | MS % | • | ISD | MSD | | D % | RPD | RPD | Low | Hig |
| | | | Result | Spike Added | Result | Recov | | pike dded | Result | Rec | overy | | Limit | Limit | Lim |
| Calaium | | · | 4000 | | 400 | 1 | | | | | | | | | |
| Calcium ron | | | 1026 0.5156 | 1 | 100 1.48 | | N/C 3.44 | 1 1 | | 055 502 | N/C 98.59 | N/C 1.440 | 20 20 | 75 75 | 1: |
| Magnesium | • ········ | | 1406 | 1 | 137 | | N/C | 1 | | 442 | 98.59 N/C | 1.440 N/C | 20 | 75 | 12 |
| Manganese | | | 18.28 | 1 | 18.8 | | N/C | 1 | |).79 | N/C | N/C | 20 | 75 | |
| Qualifiers: | ND/II - N | ot Detected : | at the Reporti | na Limit | | MI - | Matrix I | nterfe | rence | | | | | | |
| Quannel 3. | | | in the assoc | - | thod Blank | | | | eportable | due to Dili | ition | | | | |
| | | | | | | | | , | | | | | | | |
| | J - Estima | ated value be | tween MDL a | Ind PQL | | * - R | ecoverv | Outs | ide Advisa | able OC L | imits | | | | |
| | | | etween MDL a xceeds calibra | | ve | * - R | ecovery | Outs | ide Advisa | able QC L | imits | | | | |

TNTC - Too numerous to count

4

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

COP Shepherd Keisey #1E

| A | Analysis: Method: | Metals by Meth SW6010B | hod 6010B, Total | | | | | | WorkOrder Lab Batch | - | 08101658 85019 | 1 | | |
|-----------|----------------------|---------------------------|---|----------------------|--|------------------------------|-----------------------|------------------------|------------------------|-----|-------------------|--------------|---------------|--|
| 100 | | | Matrix | Spike (N | <u> 1S) / Matrix S</u> | pike Dupli | cate (M | SD) | | | | | | |
| Strate of | | | Sample Spiked: RunID: Analysis Date: Preparation Date: | 11/04/2 | 725-02 1104A-475206 2008 22:53 2008 15:00 | 0 Units: Analy: Prep 8 | st: S_ | g/L _C DG Method | SW3010A | | | | | |
| | , | Analyte | Sample Result | MS Spike Added | MS Result | MS % Recovery | MSD Spike Added | | MSD % Recovery | RPD | RPD Limit | Low Limit | High Limit | |

4547

N/C

1

4751

N/C

N/C

20

75

125

Qualifiers:

ا جعيدة

د ليديدون

Sodium

3

ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

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1

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Chromium

Selenium

Lead

Silver

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| | Analysis: Method: | | Metals by Method 60 SW6020A | 20A, Total | | | | WorkOrder: Lab Batch ID: | 08101658 85019d-l | |
|----------------|----------------------------------|---------|--------------------------------|------------|--------|----------------|--------------------|-----------------------------|----------------------|--|
| 対対に | | | Meth | od Blank | | | Samples in Analyti | | | |
| 1. A | RunID: ICPM | /IS_081 | 1104A-4750503 | Units: | mg/L | | Lab Sample ID | Client San | nple ID | |
| 198 | Analysis Date: | | 11/04/2008 13:42 | Analyst: | AL_H | | 08101658-01E | MW-1 | | |
| | Analysis Date: Preparation Da | ate: | 10/31/2008 15:00 | Prep By: | BDG N | 1ethod SW3010A | | | | |
| | - | | p+17 | | | <u></u> | | | | |
| and the second | | | Analyte | | Result | Rep Limit | | | | |
| | I A | Arsenic | | | ND | 0.005 | | | | |
| 19 | E | Barium | ····· | | ND | 0.005 | | | | |
| | C | Cadmiu | im | | ND | 0.005 | | | | |

| Laboratory | Control | Sample | (ICS) |
|---------------------|---------|--------|-------|
| <u>Lan</u> or atory | 0011101 | oumpre | 75001 |

| RunID: |
|-------------------|
| Analysis Date: |
| Preparation Date: |

ICPMS_081104A-4750511 11/04/2008 14:41 10/31/2008 15:00

ND

ND

ND ND 0.005

0.005 0.005

0.005

mg/L Units: Analyst: AL_H Prep By: BDG Method SW3010A

| Analyte | Spike Added | Result | Percent Recovery | Lower Limit | Upper Limit |
|----------|----------------|---------|---------------------|----------------|----------------|
| Arsenic | 0.1000 | 0.1014 | 101.4 | 80 | 120 |
| Barium | 0.1000 | 0.09790 | 97.90 | 80 | 120 |
| Cadmium | 0.1000 | 0.09410 | 94.10 | 80 | 120 |
| Chromium | 0.1000 | 0.09262 | 92.62 | 80 | 120 |
| Lead | 0.1000 | 0.09830 | 98.30 | 80 | 120 |
| Selenium | 0.1000 | 0.1038 | 103.8 | 80 | 120 |
| Silver | 0.1000 | 0.09411 | 94.11 | 80 | 120 |

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Post Digestion Spike (PDS) / Post Digestion Spike Duplicate (PDSD)

| | Sample Spiked: | 08101725-02 | | |
|----|--------------------------|-----------------------|----------|------|
| 湖谷 | RunID: | ICPMS_081104A-4750512 | Units: | mg/L |
| | RunID: Analysis Date: | 11/04/2008 14:46 | Analyst: | AL_H |

| 予加 | | Analyte Sam Res | • | PDS Spike Added | PDS Result | PDS % Recovery | PDSD Spike Added | PDSD Result | PDSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|----|--------------------|----------------------------|--------|-----------------------|---------------|-------------------|------------------------|----------------|--------------------|---------|--------------|--------------|---------------|
| | Arsenic Cadmium | 0.0 | 00857 | 0.1 | 0.08618 | 77.61 | 0.1 | 0.0854 | 76.83 | 0.9092 | 20 | 75 | 125 |
| ŧ. | Cadmium | | ND | 0.1 | 0.06186 | 61.86 * | 0.1 | 0.06181 | 61.81 * | 0.08086 | 20 | 75 | 125 |
| | Qualifiers: | ND/U - Not Detected at the | Report | ing Limit | | MI - Ma | trix Interfe | rence | | | | | |

ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

B/V - Analyte detected in the associated Method Blank

D - Recovery Unreportable due to Dilution * - Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

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| | Qua | ality Control Re | port | | | | | 8880 INTER HOUST | N LABORAT RCHANGE ON, TX 770) 660-0901 | DRIVE | | · |
|----------------------|-------------------------|---|----------------|--|-------------|----------------|---------|----------------------------|--|----------------|-------|-------|
| Conoco Phillips | | | | | | | | | | | | |
| | | | | COP Shept | nerd Kelsey | #1E | | | | | | |
| Analysis: Method: | Metals by Me SW6020A | thod 6020A, Total | | | | | | WorkOrder: Lab Batch II | | 01658 19d-l | | |
| Silver | | ND | 0.1 | 0.06299 | 62.99 * | 0.1 | 0.06274 | 62.74 * | 0.3977 | 20 | 75 | 12 |
| | Analyte | Sample Spiked: RunID: Analysis Date: Preparation Date: Sample | 11/04/2 | 081104A-4750 2008 13:56 2008 15:00 MS | Analys | _ | | W3010A MSD % | RPD | RPD | Low | High |
| | | Result | Spike Added | Result | Recovery | Spike Added | Result | Recovery | | Limit | Limit | Limit |
| Arsenic | | 0.008570 | 0.1 | 0.08153 | 72.96 * | 0.1 | 0.08008 | 71.51 * | 1.794 | 20 | 75 | 12 |
| Barium | | 0.03462 | 0.1 | 0.1285 | 93.88 | 0.1 | 0.1218 | 87.18 | 5.354 | 20 | 75 | 12 |
| Cadmium | | ND | 0.1 | 0.06051 | 60.51 * | 0.1 | 0.05932 | 59.32 * | 1.986 | 20 | | |
| Chromium | | ND | 0.1 | 0.07857 | 78.57 | 0.1 | 0.07566 | 75.66 | 3.774 | 20 | 75 | |
| ead | | ND | 0.1 | 0.1001 | 100.1 | 0.1 | 0.1008 | 100.8 | 0.6969 | 20 | | |
| Selenium | | 0.02830 | 0.1 | 0.1066 | 78.30 | 0.1 | 0.1125 | 84.20 | 5.386 | 20 | | |
| Silver | | ND | 0.1 | 0.06497 | 64.97 * | 0.1 | 0.06439 | 64.39 * | 0.8967 | 20 | 75 | 12 |

Qualifiers:

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s: ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

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1

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| Analysis: Mercury, Total Method: SW7470A Method Blank Samples in Analytical RunID: HGLC_081106A-4755670 Units: mg/L Lab Sample ID Analysis Date: 11/06/2008 13:32 Analyst: F_S 08101658-01E Preparation Date: 11/06/2008 13:18 Prep By: F_S Method SW7470A Mercury ND 0.0002 Laboratory Control Sample (LCS) 1000000000000000000000000000000000000 | WorkOrder: Lab Batch ID: I Batch: <u>Client Sa</u> MW-1 | 08101658 85178 ample ID | |
|--|---|-------------------------------|------|
| RunID: HGLC_081106A-4755670 Units: mg/L Lab Sample ID Analysis Date: 11/06/2008 13:32 Analyst: F_S 08101658-01E Preparation Date: 11/06/2008 13:18 Prep By: F_S Method SW7470A Analyte Result Rep Limit Mercury ND 0.0002 | <u>Client Sa</u> | ample ID | |
| Analysis Date: 11/06/2008 13:32 Analyst: F_S 08101658-01E Preparation Date: 11/06/2008 13:18 Prep By: F_S Method SW7470A Analyte Result Rep Limit Mercury ND 0.0002 | | ample ID | |
| Analysis Date: 11/06/2008 13:32 Analyst: F_S 08101658-01E Preparation Date: 11/06/2008 13:18 Prep By: F_S Method SW7470A Analyte Result Rep Limit Mercury ND 0.0002 | | | |
| Mercury ND 0.0002 | | | |
| Laboratory Control Sample (LCS) | | | |
| | - <u></u> , <u>-</u> | | |
| RunID: HGLC_081106A-4755671 Units: mg/L | | | |
| Analysis Date: 11/06/2008 13:35 Analyst: F_S Preparation Date: 11/06/2008 13:18 Prep By: F_S Method SW | 7470A | | |
| | wer Upper imit Limit 80 120 | | |
| Matrix Spike (MS) / Matrix Spike Duplicate (MSD) | | | |
| Sample Spiked: 08101734-09 RunID: HGLC_081106A-4755673 Units: mg/L | | | |
| Analysis Date:11/06/2008 13:39Analyst:F_SPreparation Date:11/06/2008 13:18Prep By:F_SMethod | W7470A | | |
| Analyte Sample MS MS MS% MSD MSD Result Spike Result Result Result Result Added | MSD % N Recovery | RPD RPD Low Limit Limi | |
| Mercury ND 0.002 0.001885 94.26 0.002 0.001843 | 92.14 | 2.266 20 7 | 5 12 |

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

- D Recovery Unreportable due to Dilution
- * Recovery Outside Advisable QC Limits
- E Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

| | | | CONOCO Ph P Shepherd Ko | • | | |
|---------------------|--|--------------------|----------------------------|-------------------|-----------------------------|-------------------|
| nalysis: lethod: | Semivolatile Organio SW8270C | | onepheru Ki | | WorkOrder: Lab Batch ID: | 08101658 84949 |
| | | od Blank | | Samples in Analyt | | |
| | Meti | | | Samples in Analyt | ical balcii. | |
| RunID: H_08 | 1106B-4755273 | Units: ug/L | | Lab Sample ID | Client Sar | nple ID |
| Analysis Date: | 11/06/2008 10:56 | Analyst: GY | | 08101658-01D | MW-1 | <u> </u> |
| • | | - | 1 01/05400 | 00101030-010 | 1414.4 - 1 | |
| Preparation Dat | e: 10/30/2008 16:53 | Prep By: LLL Metho | d SW3510C | | | |
| | | | | | | |
| | Analita | Result Rec | Limit | | | |
| ŀ | Analyte | | | | | |
| | 2,4-Trichlorobenzene | ND ND | 5.0 | | | |
| | 2-Dichlorobenzene 2-Diphenylhydrazine | ND ND | 10 | | | |
| | 3-Dichlorobenzene | ND | 5.0 | | | |
| | 4-Dichlorobenzene | ND ND | 5.0 | | | |
| | 4,5-Trichlorophenol | ND | 10 | | | |
| | 4.6-Trichlorophenol | ND | 5.0 | | | |
| | 4-Dichlorophenol | ND | 5.0 | | | |
| | 4-Dimethylphenol | ND | 5.0 | | | |
| 2. | 4-Dinitrophenol | ND | 25 | | | |
| 2, | 4-Dinitrotoluene | ND | 5.0 | | | |
| | 6-Dinitrotoluene | ND | 5.0 | | | |
| | Chloronaphthalene | ND | 5.0 | | | |
| | Chlorophenol | ND | 5.0 | | | |
| | Methylnaphthalene | ND | 5.0 | | | |
| | Nitroaniline | ND | 25 | | | |
| | Nitrophenol | ND | 5.0 | | | |
| | 3'-Dichlorobenzidine | ND ND | 10 | | | |
| | Nitroaniline | ND ND | 25 | | | |
| | 6-Dinitro-2-methylphenol Bromophenyl phenyl ether | ND ND | <u>25</u> 5.0 | | | |
| | Chloro-3-methylphenol | ND | 5.0 | | | |
| | Chloroaniline | ND | 5.0 | | | |
| | Chlorophenyl phenyl ether | ND | 5.0 | | | |
| | Nitroaniline | ND | 25 | | | |
| | Nitrophenol | ND | 25 | | | |
| | cenaphthene | ND | 5.0 | | | |
| A | cenaphthylene | ND | 5.0 | | | |
| | niline | ND | 5.0 | | | |
| | nthracene | ND | 5.0 | | | |
| | enz(a)anthracene | ND | 5.0 | | | |
| | enzo(a)pyrene | ND | 5.0 | | | |
| | enzo(b)fluoranthene | ND ND | 5.0 | | | |
| | enzo(g,h,i)perylene | ND ND | 5.0 | | | |
| | enzo(k)fluoranthene | ND ND | 5.0 25 | | | |
| | enzyl alcohol | ND | 5.0 | | | |
| | s(2-chloroethoxy)methane | ND ND | 5.0 | | | |
| | s(2-chioroethyl)ether | ND | 5.0 | | | |
| | s(2-chloroisopropyl)ether | ND | 5.0 | | | |
| | s(2-ethylhexyl)phthalate | ND | 5.0 | | | |
| | utyl benzyl phthalate | ND | 5.0 | | | |
| | arbazole | ND | 5.0 | | | |
| | nrysene | ND | 5.0 | | | |
| | benz(a,h)anthracene | ND | 5.0 | | | |
| اما | benzofuran | ND | 5.0 | | | |

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

D - Recovery Unreportable due to Dilution * - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

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QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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Quality Control Report

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| Analysis: Semivola Method: SW82700 | | e Organics by Metho | d 8270C | WorkOrder: Lab Batch ID: | 08101658 84949 | |
|---------------------------------------|-------------------|---------------------|---------|-----------------------------|-------------------|--|
| | | Method Blank | | | | |
| BuniD | H 0811068-4755273 | Linite: | uo/l | | | |

| RunID: H_0811 | 06B-4755273 | Units: | ug/L | |
|-------------------|------------------|----------|------|----------------|
| Analysis Date: | 11/06/2008 10:56 | Analyst: | GY | |
| Preparation Date: | 10/30/2008 16:53 | Prep By: | LLL | Method SW3510C |

| Analyte | Result | Rep Limit |
|----------------------------|--------|-----------|
| Diethyl phthalate | ND | 5.0 |
| Dimethyl phthalate | ND | 5.0 |
| Di-n-butyl phthalate | ND | 5.0 |
| Di-n-octyl phthalate | ND | 5.0 |
| Fluoranthene | ND | 5.0 |
| Fluorene | ND | 5.0 |
| Hexachlorobenzene | ND | 5.0 |
| Hexachlorobutadiene | ND | 5.0 |
| Hexachlorocyclopentadiene | ND | 5.0 |
| Hexachloroethane | ND | 5.0 |
| Indeno(1,2,3-cd)pyrene | ND | 5.0 |
| Isophorane | ND | 5.0 |
| Naphthalene | ND | 5.0 |
| Nitrobenzene | ND | 5.0 |
| N-Nitrosodi-n-propylamine | ND | 5.0 |
| N-Nitrosodiphenylamine | ND | 5.0 |
| Pentachlorophenol | ND | 25 |
| Phenanthrene | ND | 5.0 |
| Phenol | ND | 5.0 |
| Pyrene | ND | 5.0 |
| Pyridine | ND | 5.0 |
| 2-Methylphenol | ND | 5.0 |
| 3 & 4-Methylphenol | ND | 5.0 |
| Surr: 2,4,6-Tribromophenol | 76.0 | 10-123 |
| Surr: 2-Fluorobiphenyl | 82.0 | 23-116 |
| Surr: 2-Fluorophenol | 78.7 | 16-110 |
| Surr: Nitrobenzene-d5 | 76.0 | 21-114 |
| Surr: Phenol-d5 | 85.3 | 10-110 |
| Surr: Terphenyl-d14 | 80.0 | 22-141 |

Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

| RunID: | |
|-------------------|--|
| Analysis Date: | |
| Preparation Date: | |

H_081106B-4755274 11/06/2008 11:26 10/30/2008 16:53

274 Units:26 Analyst:53 Prep By:

ug/L st: GY 3y: LLL Method SW3510C

| Analyte | LCS Spike Added | LCS Result | LCS Percent Recovery | LCSD Spike Added | LCSD Result | LCSD Percent Recovery | RPD | RPD Limit | Lower Limit | Upper Limit |
|------------------------|-----------------------|---------------|----------------------------|------------------------|----------------|-----------------------------|-----|--------------|----------------|----------------|
| 1,2,4-Trichlorobenzene | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 39 | 21 | 120 |
| 1,2-Dichlorobenzene | 25.0 | 20.0 | 80.0 | 25.0 | 20.0 | 80.0 | 0.0 | 50 | 20 | 150 |

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

Qualifiers:

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| | | COP Shepherd Kelsey #1E | | | | | | | | | |
|----------------------|---------------------------|-------------------------|---------------|----------------------------|------------------------|----------------|-----------------------------|----------------------------|--------------|------------------|----------------|
| Analysis: Method: | Semivolatile O SW8270C | rganics by Me | thod 8270 | с | | | | NorkOrder: .ab Batch ID | | 0810165 84949 | 58 |
| | Lat | poratory Conti | rol Sample | /Laboratory | Control Sa | mple Duplica | te (LCS/LCS | <u>D)</u> | | | |
| | RunID: | | _081106B-4 | 755274 | | ug/L | | | | | |
| | Analysi | s Date: 1 | 1/06/2008 | 11:26 | Analyst: | GY | | | | | |
| | Prepara | ation Date: 1 | 0/30/2008 | 16:53 | Prep By: | LLL Method | SW3510C | | | | |
| | Analyte | LCS Spike Added | LCS Result | LCS Percent Recovery | LCSD Spike Added | LCSD Result | LCSD Percent Recovery | RPD | RPD Limit | Lower Limit | Upper Limit |
| 1,2-Diphenylhyd | Irazine | 25.0 | 18.0 | 72.0 | 25.0 | 19.0 | 76.0 | 5.4 | 50 | 10 | 25 |
| 1,3-Dichloroben | zene | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 50 | 20 | 150 |
| 1,4-Dichloroben | zene | 25.0 | 20.0 | 80.0 | 25.0 | 20.0 | 80.0 | 0.0 | 45 | 20 | 150 |
| 2,4,5-Trichlorop | henol | 25.0 | 20.0 | 80.0 | 25.0 | 23.0 | 92.0 | 14.0 | 50 | 30 | 15 |
| 2,4,6-Trichlorop | henol | 25.0 | 20.0 | 80.0 | 25.0 | 22.0 | 88.0 | 9.5 | 50 | 30 | 15 |
| 2,4-Dichlorophe | nol | 25.0 | 20.0 | 80.0 | 25.0 | 21.0 | 84.0 | 4.9 | 50 | 30 | 15 |
| 2,4-Dimethylphe | enol | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 32 | 14 |
| 2,4-Dinitropheno | ol l | 25.0 | 14.0 | 56.0 | 25.0 | 15.0 | 60.0 | 6.9 | 50 | 10 | 16 |
| 2,4-Dinitrotoluer | ne | 25.0 | 22.0 | 88.0 | 25.0 | 24.0 | 96.0 | 8.7 | 50 | 30 | 15 |
| 2,6-Dinitrotoluer | 1e | 25.0 | 20.0 | 80.0 | 25.0 | 23.0 | 92.0 | 14.0 | 50 | 30 | 15 |
| 2-Chloronaphtha | alene | 25.0 | 22.0 | 88.0 | 25.0 | 24.0 | 96.0 | 8.7 | 50 | 30 | 15 |
| 2-Chlorophenol | | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 40 | 23 | 134 |
| 2-Methylnaphtha | alene | 25.0 | 22.0 | 88.0 | 25.0 | 23.0 | 92.0 | 4.4 | 50 | 20 | 17(|
| 2-Nitroaniline | | 25.0 | 22.0 | 88.0 | 25.0 | 24.0 | 96.0 | 8.7 | 50 | 20 | 16 |
| 2-Nitrophenol | | 25.0 | . 19.0 | 76.0 | 25.0 | 22.0 | 88.0 | 14.6 | 50 | 29 | 18: |
| 3,3'-Dichlorober | nzidine | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 50 | 30 | 20 |
| 3-Nitroaniline | | 25.0 | 19.0 | 76.0 | 25.0 | 22.0 | 88.0 | 14.6 | 50 | 20 | 16 |
| 4,6-Dinitro-2-me | ethylphenol | 25.0 | 17.0 | - 68.0 | 25.0 | 18.0 | 72.0 | 5.7 | 50 | . 10 | 16 |
| 4-Bromophenyl | phenyl ether | 25.0 | 22.0 | 88.0 | 25.0 | 22.0 | 88.0 | 0.0 | 50 | 30 | 15 |
| 4-Chloro-3-meth | ylphenol | 25.0 | 20.0 | 80.0 | 25.0 | 22.0 | 88.0 | 9.5 | 42 | 25 | 16 |
| 4-Chloroaniline | - <u></u> | 25.0 | 21.0 | 84.0 | 25.0 | 23.0 | 92.0 | 9.1 | 50 | 20 | 16 |
| 4-Chlorophenyl | phenyl ether | 25.0 | 23.0 | 92.0 | 25.0 | 24.0 | 96.0 | 4.3 | 50 | 25 | 15 |
| 4-Nitroaniline | | 25.0 | 20.0 | 80.0 | 25.0 | 24.0 | 96.0 | 18.2 | 50 | 20 | 16 |
| 4-Nitrophenol | | 25.0 | 18.0 | 72.0 | 25.0 | 20.0 | 80.0 | 10.5 | 50 | 10 | 13 |
| Acenaphthene | | 25.0 | 21.0 | 84.0 | 25.0 | | 88.0 | 4.7 | · 31 | 30 | 15 |
| Acenaphthylene | · | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 33 | 25 |
| Aniline | | 50.0 | 41.0 | 82.0 | 50.0 | 44.0 | 88.0 | 7.1 | 50 | 10 | 13 |
| Anthracene | | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 27 | 13 |
| Benz(a)anthrace | | 25.0 | 22.0 | 88.0 | 25.0 | 22.0 | 88.0 | 0.0 | 50 | 33 | 14 |
| Benzo(a)pyrene | | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 50 | 17 | 16 |
| Benzo(b)fluoran | thene | 25.0 | 20.0 | 80.0 | 25.0 | 22.0 | 88.0 | 9.5 | 50 | 24 | 15 |
| Benzo(g,h,i)pery | | 25.0 | 22.0 | 88.0 | 25.0 | 23.0 | 92.0 | 4.4 | 50 | 30 | 16 |
| Benzo(k)fluorant | thene | 25.0 | 23.0 | 92.0 | 25.0 | 22.0 | 88.0 | 4.4 | 50 | 11 | 162 |

Qualifiers:

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ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

D - Recovery Unreportable due to Dilution* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

imated value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| | | | | COP She | epherd Kels | ey #1E | | | | | |
|----------------------|---------------------------|-----------------------|------------------------|----------------------------|------------------------|------------------|-----------------------------|----------------------------|--------------|------------------|----------------|
| Analysis: Method: | Semivolatile O SW8270C | rganics by Met | thod 8270 | с | | | | WorkOrder: Lab Batch ID | | 0810165 84949 | 58 |
| | Lai | poratory Contr | oi Sample | e/Laboratory | Control Sa | mple Duplica | te (LCS/LC | <u>SD)</u> | | | |
| | RunID: | - | _081106B-4 | | | ug/L | | | | | |
| | Analysi Prepara | | 1/06/2008)/30/2008 | | | GY LLL Method | SW3510C | | | | |
| | Analyte | LCS Spike Added | LCS Result | LCS Percent Recovery | LCSD Spike Added | LCSD Result | LCSD Percent Recovery | RPD | RPD Limit | Lower Limit | Upper Limit |
| Benzoic acid | | 25.0 | 40.0 | 160 | 25.0 | 40.0 | 160 | 0.0 | 50 | 10 | 400 |
| Benzyl alcohol | | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 50 | 30 | 160 |
| Bis(2-chloroetho | xy)methane | 25.0 | 33.0 | 132 | 25.0 | 36.0 | 144 | 8.7 | 50 | 33 | 184 |
| Bis(2-chloroethy | I)ether | 25.0 | 22.0 | 88.0 | 25.0 | 22.0 | 88.0 | 0.0 | 50 | 12 | 158 |
| Bis(2-chloroisop | ropyl)ether | 25.0 | 23.0 | 92.0 | 25.0 | 24.0 | 96.0 | 4.3 | 50 | 20 | 160 |
| Bis(2-ethylhexyl) | phthalate | 25.0 | 22.0 | 88.0 | 25.0 | 22.0 | 88.0 | 0.0 | 50 | 10 | 158 |
| Butyl benzyl phth | nalate | 25.0 | 22.0 | 88.0 | 25.0 | 23.0 | 92.0 | 4.4 | 50 | 30 | 160 |
| Carbazole | | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 30 | 150 |
| Chrysene | | 25.0 | 22.0 | 88.0 | 25.0 | 22.0 | 88.0 | 0.0 | 50 | 17 | 168 |
| Dibenz(a,h)anthi | racene | 25.0 | 22.0 | 88.0 | 25.0 | 22.0 | 88.0 | 0.0 | 50 | 30 | 160 |
| Dibenzofuran | | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 30 | 150 |
| Diethyl phthalate | • | 25.0 | 21.0 | 84.0 | 25.0 | 23.0 | 92.0 | 9.1 | 50 | 30 | 160 |
| Dimethyl phthala | ite | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 30 | 160 |
| Di-n-butyl phthal | ate | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 30 | 160 |
| Di-n-octyl phthal | ate | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 20 | 150 |
| Fluoranthene | | 25.0 | 21.0 | 84.0 | 25.0 | 22.0 | 88.0 | 4.7 | 50 | 26 | 137 |
| Fluorene | | 25.0 | 21.0 | 84.0 | 25.0 | 23.0 | 92.0 | 9.1 | 50 | 30 | 150 |
| Hexachlorobenze | ene | 25.0 | 20.0 | 80.0 | 25.0 | 21.0 | 84.0 | 4.9 | 50 | 20 | 150 |
| Hexachlorobutad | liene | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 50 | . 20 | 140 |
| Hexachiorocyclo | pentadiene | 25.0 | 17.0 | 68.0 | 25.0 | 18.0 | 72.0 | 5.7 | 50 | 10 | 150 |
| Hexachloroethan | e | 25.0 | 19.0 | 76.0 | 25.0 | 20.0 | 80.0 | 5.1 | 50 | 14 | 120 |
| Indeno(1,2,3-cd) | pyrene | 25.0 | 23.0 | 92.0 | 25.0 | 24.0 | 96.0 | 4.3 | 50 | 30 | 160 |
| Isophorone | | 25.0 | 22.0 | 88.0 | 25.0 | 24.0 | 96.0 | 8.7 | 50 | 21 | 196 |
| Naphthalene | | 25.0 | 20.0 | 80.0 | 25.0 | 21.0 | 84.0 | 4.9 | 50 | 21 | 133 |
| Nitrobenzene | | 25.0 | 20.0 | 80.0 | 25.0 | | | | 50 | 20 | 160 |
| N-Nitrosodi-n-pro | opylamine | 25.0 | 22.0 | 88.0 | 25.0 | | 92.0 | 4.4 | 38 | - 30 | 160 |
| N-Nitrosodiphen | ylamine | 50.0 | 51.0 | 102 | 50.0 | | 104 | | 50 | 30 | 150 |
| Pentachlorophen | ol | 25.0 | 14.0 | 56.0 | 25.0 | | 60.0 | | 50 | 14 | 176 |
| Phenanthrene | | 25.0 | 20.0 | 80.0 | 25.0 | · / | 84.0 | | 50 | 10 | 140 |
| Phenol | | 25.0 | 21.0 | 84.0 | 25.0 | | 92.0 | | 42 | 40 | 132 |
| Pyrene | | 25.0 | 22.0 | 88.0 | 25.0 | | 88.0 | 0.0 | 38 | 30 | 150 |
| Pyridine | | 50.0 | 35.0 | 70.0 | 50.0 | | 68.0 | 2.9 | 50 | 10 | 150 |
| 2-Methylphenol | | 25.0 | 21.0 | 84.0 | 25.0 | 23.0 | 92.0 | 9.1 | 50 | 30 | 160 |

Qualifiers:

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ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

B/V - Analyte detected in the associated Method Blank

PQL * - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

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HOUSTON LABORATORY

8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| | • | | | | | | | | WorkOrder: Lab Batch ID: | | 08101658 84949 | | |
|------------------|------------------------|-------------|--------------|---------------|----------------|-------------------|----------------|-----------------|-----------------------------|--------------|-------------------|----------------|--|
| | | Labora | tory Contr | ol Sample | e/Laboratory | <u>Control Sa</u> | mple Duplica | te (LCS/LCS | <u>SD)</u> | | | | |
| - | | RunID: | н | _081106B-4 | 1755274 | Units: | ug/L | | | | | | |
| | | Analysis Da | ite: 1 | 1/06/2008 | 11:26 | Analyst: | GY | | | | | | |
| 1000 | | Preparation | Date: 1 | 0/30/2008 | 16:53 | Prep By: | LLL Method | SW3510C | | | | | |
| Г | | ····· | | | | | | 1.000 | 000 | DDD | 1 | | |
| | Analyte | | LCS Spike | LCS Result | LCS Percent | LCSD Spike | LCSD Result | LCSD Percent | RPD | RPD Limit | Lower Limit | Upper Limit | |
| | | | Added | , tooun | Recovery | Added | , toodit | Recovery | | 2 | 2 | | |
| | 3 & 4-Methylphenol | | 25.0 | 19.0 | 76.0 | 25.0 | 21.0 | 84.0 | 10.0 | 50 | 10 | 160 | |
| 1 | Surr: 2,4,6-Tribromopl | henol | 75.0 | 64.0 | 85.3 | 75.0 | 70.0 | 93.3 | 9.0 | 30 | 10 | 123 | |
| | Surr: 2-Fluorobiphenyl | | 50.0 | 42.0 | 84.0 | 50.0 | 41.0 | 82.0 | 2.4 | 30 | 23 | 116 | |
| | Surr: 2-Fluorophenol | | 75.0 | 62.0 | 82.7 | 75.0 | 65.0 | 86.7 | 4.7 | 30 | 16 | 110 | |
| a [| Surr: Nitrobenzene-d5 | | 50.0 | 40.0 | 80.0 | 50.0 | 42.0 | 84.0 | 4.9 | 30 | 21 | 114 | |
| full addressed a | Surr: Phenol-d5 | | 75.0 | 65.0 | 86.7 | 75.0 | 69.0 | 92.0 | 6.0 | 30 | 10 | 110 | |
| | Surr: Terphenyl-d14 | | 50.0 | 42.0 | 84.0 | 50.0 | 42.0 | 84.0 | 0.0 | 30 | 22 | 141 | |

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

MI - Matrix Interference

D - Recovery Unreportable due to Dilution * - Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips COP Shepherd Kelsey #1E

| Analysis: | Volatile Organics by | Method 8260B | | WorkOrder: | 08101658 | | |
|---|--|--------------|---------------------------------------|--------------------|------------------|---------|--|
| Method: | SW8260B | | | | Lab Batch ID: | R256001 | |
| | Meth | od Blank | | Samples in Analyti | cal Batch: | | |
| RunID: N_081 | 104A-4752370 | Units: ug/L | | Lab Sample ID | Client Sample ID | | |
| Analysis Date: | 11/04/2008 16:12 | Analyst: LT | | 08101658-01A | MW-1 | | |
| Preparation Date | | | /lethod | | | | |
| Toparation Date | | 1 iop Dy | ilounou il | | | | |
| | | | | | | | |
| | Analyte | | Rep Limit | | | | |
| | 1,1,2-Tetrachloroethane | ND | | | | | |
| | 1,1-Trichloroethane | ND | | | | | |
| | 1,2,2-Tetrachloroethane | ND | | | | | |
| | 1,2-Trichloroethane | ND | | | | | |
| | 1-Dichloroethane | ND | | | | | |
| | I-Dichloroethene | ND ND | | | | | |
| | 1-Dichloropropene | ND | | | | | |
| | 2,3-Trichlorobenzene 2,3-Trichloropropane | ND ND | | | | | |
| | 2,3-Trichlorobenzene | | | | | | |
| | 2,4-Trimethylbenzene | ND ND | | | | | |
| | 2-Dibromo-3-chloropropane | ND | | | | | |
| | 2-Dibromoethane | ND | | | | | |
| and the second se | 2-Dichlorobenzene | ND | | | | | |
| | 2-Dichloroethane | ND | | | | | |
| | 2-Dichloropropane | ND | | | | | |
| | 3,5-Trimethylbenzene | ND | | | | | |
| | B-Dichlorobenzene | ND | | | | | |
| | 3-Dichloropropane | ND | | | | | |
| | I-Dichlorobenzene | ND | | | | | |
| | 2-Dichloropropane | ND | | | | | |
| | Butanone | ND | | | | | |
| 2-0 | Chloroethyl vinyl ether | ND | | | | | |
| 2-0 | Chlorotoluene | ND | 5.0 | | | | |
| 2-+ | Hexanone | ND | 10 | | | | |
| 4-0 | Chlorotoluene | ND | | | | | |
| | sopropyltoluene | ND | | | | | |
| | Methyl-2-pentanone | ND | | | | | |
| | etone | ND | | | | | |
| | rylonitrile | ND | | | | | |
| | nzene | ND | | | | | |
| | omobenzene | ND | | | | | |
| | omochloromethane | ND ND | | | | | |
| | omodichloromethane | ND ND | | | | | |
| | omoform | ND ND | | | | | |
| | omomethane | | | | | | |
| <u> </u> | rbon tetrachloride | ND | | | | | |
| | llorobenzene | | | | | | |
| | loroethane | | | | | | |
| | lloroform | | · · · · · · · · · · · · · · · · · · · | | | | |
| | loromethane | ND ND | | | | | |
| | promochloromethane | ND | | | | | |
| | promomethane | ND | | | | | |
| | chlorodifluoromethane | ND | | | | | |
| | nylbenzene | ND | | | | | |

Qualifiers:

-Weight

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ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

MI - Matrix Interference

D - Recovery Unreportable due to Dilution * - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

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Analysis Date: Preparation Date:

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

| | | COP Shepherd Kelse | ₂y #1E | |
|----------|-------------------------------|--------------------|---------------|----------|
| Analysis | : Volatile Organics by Method | 260B | WorkOrder: | 08101658 |
| Method: | SW8260B | | Lab Batch ID: | R256001 |
| · | Method Blank | | | |
| RunID: | N_081104A-4752370 Units | ug/L | | |

| Analyte | Result | Rep Limit |
|-----------------------------|--------|-----------|
| Hexachlorobutadiene | ND | 5.0 |
| Isopropylbenzene | ND | 5.0 |
| Methyl tert-butyl ether | ND | 5.0 |
| Methylene chloride | ND | 5.0 |
| Naphthalene | ND | 5.0 |
| n-Butylbenzene | ND | 5.0 |
| n-Propylbenzene | ND | 5.0 |
| sec-Butylbenzene | ND | 5.0 |
| Styrene | ND | 5.0 |
| tert-Butylbenzene | ND | 5.0 |
| Tetrachloroethene | - ND | 5.0 |
| Toluene | ND | 5.0 |
| Trichloroethene | ND | 5.0 |
| Trichlorofluoromethane | ND | 5.0 |
| Vinyl acetate | ND | 1(|
| Vinyl chloride | ND | 1(|
| cis-1,2-Dichloroethene | ND | 5.0 |
| cis-1,3-Dichloropropene | ND | 5.0 |
| m,p-Xylene | ND | 5.0 |
| o-Xylene | ND | 5.0 |
| trans-1,2-Dichloroethene | ND | 5.0 |
| trans-1,3-Dichloropropene | ND | 5.0 |
| 1,2-Dichloroethene (total) | ND | 5.0 |
| Xylenes,Total | ND | 5.0 |
| Surr: 1,2-Dichloroethane-d4 | 106.0 | 62-130 |
| Surr: 4-Bromofluorobenzene | 96.0 | 70-130 |
| Surr: Toluene-d8 | 106.0 | 74-122 |

Analyst:

Prep By:

LT

Method

Laboratory Control Sample (LCS)

| RunID: | N_081104A-4752369 | Units: | ug/L | |
|-------------------|-------------------|----------|------|--------|
| Analysis Date: | 11/04/2008 15:32 | Analyst: | LT | |
| Preparation Date: | 11/04/2008 15:32 | Prep By: | | Method |

| Analyte | Spike Added | Result | Percent Recovery | Lower Limit | Upper Limit |
|---------------------------|----------------|--------|---------------------|----------------|----------------|
| 1,1,1,2-Tetrachloroethane | 20.0 | 19.0 | 95.0 | 71 | 136 |
| 1,1,1-Trichloroethane | 20.0 | 20.0 | 100 | 66 | 132 |
| 1,1,2,2-Tetrachloroethane | 20.0 | 19.0 | 95.0 | 55 | 139 |
| 1,1,2-Trichloroethane | 20.0 | 20.0 | 100 | 70 | 130 |
| 1,1-Dichloroethane | 20.0 | 20.0 | 100 | 67 | 131 |

ND/U - Not Detected at the Reporting Limit Qualifiers:

B/V - Analyte detected in the associated Method Blank

MI - Matrix Interference

J - Estimated value between MDL and PQL

D - Recovery Unreportable due to Dilution

E - Estimated Value exceeds calibration curve

* - Recovery Outside Advisable QC Limits

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY

8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

COR Shophard Kalcov #15

| | COP | Shepherd K | elsey #1E | | | | |
|----------------------|--|----------------|--|---------------------|----------------|---------------------|---------------------|
| Analysis: Method: | Volatile Organics by Method 8260B SW8260B | | | | | Order: Batch ID: | 08101658 R256001 |
| | Laborat | ory Control S | ample (L | CS) | | | |
| | RunID:N_081104A-475Analysis Date:11/04/2008 155Preparation Date:11/04/2008 155 | :32 An | its: uo alyst: L ⁻ ep By: | g/L F Method | | | |
| | Analyte | Spike Added | Result | Percent Recovery | Lower Limit | Upper Limit | |
| | 1,1-Dichloroethene | 20.0 | 19.0 | 95.0 | 71 | 146 | |
| | 1,1-Dichloropropene | 20.0 | 19.0 | 95.0 | 59 | 138 | |
| | 1,2,3-Trichlorobenzene | 20.0 | 17.0 | 85.0 | 37 | 155 | |
| | 1,2,3-Trichloropropane | 20.0 | 21.0 | 105 | 70 | 145 | |
| | 1,2,4-Trichlorobenzene | 20.0 | 17.0 | 85.0 | 39 | 133 | |
| | 1,2,4-Trimethylbenzene | 20.0 | 18.0 | 90.0 | 53 | 147 | |
| | 1,2-Dibromo-3-chloropropane | 20.0 | 18.0 | 90.0 | 43 | 137 | |
| | 1.2-Dibromoethane | 20.0 | 19.0 | 95.0 | 63 | 126 | |
| | 1,2-Dichlorobenzene | 20.0 | 18.0 | 90.0 | 70 | 130 | |
| | 1,2-Dichloroethane | 20.0 | 19.0 | 95.0 | 64 | 150 | |
| | 1,2-Dichloropropane | 20.0 | 19.0 | 95.0 | 76 | 124 | |
| | 1,3,5-Trimethylbenzene | 20.0 | 17.0 | 85.0 | 57 | 146 | |
| | 1,3-Dichlorobenzene | 20.0 | 19.0 | 95.0 | 72 | 134 | |
| | 1,3-Dichloropropane | 20.0 | 19.0 | 95.0 | 78 | 130 | |
| | 1,4-Dichlorobenzene | 20.0 | 18.0 | 90.0 | 70 | 130 | |
| | 2,2-Dichloropropane | 20.0 | 21.0 | 105 | 45 | 156 | |
| | 2-Butanone | 120 | 83.0 | 69.2 | 20 | 235 | |
| | 2-Chloroethyl vinyl ether | 20.0 | 23.0 | 115 | 13 | 179 | |
| | 2-Chlorotoluene | 20.0 | 18.0 | 90.0 | 64 | 122 | |
| | 2-Hexanone | 20.0 | 17.0 | 85.0 | 34 | 182 | |
| | 4-Chlorotoluene | 20.0 | 18.0 | 90.0 | 64 | 142 | |
| | 4-Isopropyltoluene | 20.0 | 17.0 | 85.0 | 60 | 134 | |
| | 4-Methyl-2-pentanone | 20.0 | 17.0 | 85.0 | 11 | 145 | |
| | Acetone | 200 | 100 | 50.0 | 13 | 386 | |
| | Acrylonitrile | 100 | 100 | 100 | 43 | 194 | |
| | Benzene | 20.0 | 20.0 | 100 | 76 | 126 | |
| | Bromobenzene | 20.0 | 19.0 | 95.0 | 70 | 130 | |
| | Bromochloromethane | 20.0 | 18.0 | 90.0 | 63 | 131 | |
| | Bromodichloromethane | 20.0 | 20.0 | 100 | 77 | 138 | |
| | Bromoform | 20.0 | 17.0 | 85.0 | 55 | 129 | |
| | Bromomethane | 20.0 | 20.0 | 100 | 58 | 148 | |
| | Carbon disulfide | 20.0 | 18.0 | 90.0 | 46 | 146 | |
| | Carbon tetrachloride | 20.0 | 19.0 | 95.0 | 66 | 137 | |
| | Chlorobenzene | 20.0 | 18.0 | 90.0 | 67 | 136 | |
| Qualifiers: | ND/U - Not Detected at the Reporting Limit | | Matrix Inte | | | | |

B/V - Analyte detected in the associated Method Blank

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

| nalysis: ethod: | Volatile Org SW8260B | anics by Method 82 | 60B | | | | | Order: Batch ID: | 08101658 R256001 |
|--------------------|-------------------------|-------------------------------------|-------------------|--------------|--------------|--------------|----------|---------------------|---------------------|
| | · · · · · | | Laboratory | Control S | ample /I (| (21 | | | |
| | | | Laboratory | Control | | 291 | | | |
| | | RunID: | N_081104A-4752369 | 9 Un | its: ug | J/L | | | |
| | | Analysis Date: | 11/04/2008 15:32 | An | alyst: L1 | | | | |
| | | Preparation Date: | 11/04/2008 15:32 | Pro | ер Ву: | Method | | | |
| | _ | | | | | | | | |
| | | Analy | /te | Spike | Result | Percent | Lower | Upper | |
| | - | | | Added | | Recovery | Limit | Limit | |
| | | Chloroethane | | 20.0 | 19.0 | 95.0 | 50 | 137 | |
| | - | Chloroform | | 20.0 | 19.0 | 95.0 | 70 | 135 | |
| | - | Chloromethane | | 20.0 | 23.0 | 115 | 51 | 140 | |
| | - | Dibromochloromethan | e | 20.0 | 18.0 | 90.0 | 69 | 127 | |
| | L | Dibromomethane | | 20.0 | 20.0 | 100 | 74 | 130 | |
| | - | Dichlorodifluorometha | ne | 20.0 20.0 | 22.0 18.0 | 110 90.0 | 32 67 | 161 122 | |
| | | Ethylbenzene Hexachlorobutadiene | | 20.0 | 18.0 | 75.0 | 43 | 122 | |
| | Ļ | Isopropylbenzene | | 20.0 | 15.0 | 75.0 | 43 60 | 135 | |
| | | Methyl tert-butyl ether | | 40.0 | 35.0 | 87.5 | 48 | 160 | |
| | | Methylene chloride | | 20.0 | 20.0 | 100 | 52 | 143 | |
| | - | Naphthalene | | 20.0 | 17.0 | 85.0 | 24 | 150 | |
| | - | n-Butylbenzene | | 20.0 | 16.0 | 80.0 | 50 | 140 | |
| | - F | n-Propylbenzene | | 20.0 | 16.0 | 80.0 | 62 | 137 | |
| | | sec-Butylbenzene | | 20.0 | 15.0 | 75.0 | 66 | 126 | |
| | | Styrene | | 20.0 | 18.0 | 90.0 | 60 | 139 | |
| | Ī | tert-Butylbenzene | | 20.0 | 17.0 | 85.0 | 67 | 140 | |
| | - | Tetrachloroethene | | 20.0 | 22.0 | 110 | 26 | 200 | |
| | [| Toluene | | 20.0 | 20.0 | 100 | 70 | 131 | |
| | [| Trichloroethene | | 20.0 | 19.0 | 95.0 | 64 | 137 | |
| | - | Trichlorofluoromethan | e | 20.0 | 21.0 | 105 | 46 | 167 | |
| | - | Vinyl acetate | | 20.0 | 20.0 | 100 | 10 | 193 | |
| | H | Vinyl chloride | | 20.0 | 20.0 | 100 | 31 | 147 | |
| | H | cis-1,2-Dichloroethene | ······ | 20.0 | 19.0 | 95.0 | 70 | 142 | |
| | | cis-1,3-Dichloroproper | 1e | 20.0 | 17.0 | 85.0 | 61 | 134 | |
| | - | m,p-Xylene | | 40.0 | 37.0 | 92.5 | 72 | 150 | |
| | H | o-Xylene | 200 | 20.0 | 19.0 | 95.0 | 78 | 141 | |
| | - | trans-1,2-Dichloroethe | | 20.0 | 19.0 17.0 | 95.0 85.0 | 67 56 | 141 136 | |
| | F | 1,2-Dichloroethene (to | | 20.0 40 | 38 | 85.0 95 | 56 73 | 136 | |
| | F | Xylenes,Total | | 40 60 | 56 | 95 | 73 | 139 | |
| | ľ | Surr: 1,2-Dichloroet | hane-d4 | 50.0 | 48 | 95.0 | 62 | 130 | |
| | ŀ | Surr: 4-Bromofluoro | | 50.0 | 51 | 102 | 70 | 130 | |
| | F | Surr: Toluene-d8 | | 50.0 | 52 | 102 | 70 | 122 | |

J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

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QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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HOUSTON LABORATORY

8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Analysis: Method:

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Volatile Organics by Method 8260B SW8260B

WorkOrder: Lab Batch ID:

08101658

R256001

| • | | | |
|---|--|--|--|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Sample Spiked: RunID: Analysis Date:

08101658-01 N_081104A-4752372 11/04/2008 17:07

Units: ug/L Analyst: ĻΤ

| Be an and the | Analyte | Sample Result | MS Spike Added | MS Result | MS % Recovery | MSD Spike Added | MSD Result | MSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|---------------|-------------------------------|--------------------|----------------------|--------------|------------------|-----------------------|---------------|-------------------|------|--------------|--------------|---------------|
| | 1,1,1,2-Tetrachloroethane | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| é, | 1,1,1-Trichloroethane | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| State State | 1,1,2,2-Tetrachloroethane | ND | 20 | 20.0 | 100 | 20 | 20.0 | 100 | 0 | 20 | 35 | 175 |
| | 1,1,2-Trichloroethane | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| Į. | 1,1-Dichloroethane | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| ALS A VERY | 1,1-Dichloroethene | ND | 20 | 18.0 | 90.0 | 20 | 17.0 | 85.0 | 5.71 | 22 | 61 | 145 |
| £¶. | 1,1-Dichloropropene | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 20 | 35 | 175 |
| _ | 1,2,3-Trichlorobenzene | ND | 20 | 15.0 | 75.0 | 20 | 15.0 | 75.0 | 0 | 20 | 27 | 187 |
| | 1,2,3-Trichloropropane | ND | 20 | 21.0 | 105 | 20 | 19.0 | 95.0 | 10.0 | 20 | 35 | 175 |
| 鑢 | 1,2,4-Trichlorobenzene | ND | 20 | 14.0 | 70.0 | 20 | 14.0 | 70.0 | 0 | 20 | 34 | 150 |
| | 1,2,4-Trimethylbenzene | . ND | 20 | 16.0 | 80.0 | 20 | 16.0 | 80.0 | 0 | 20 | 35 | 175 |
| рр s R | 1,2-Dibromo-3-chloropropane | ND | 20 | 20.0 | 100 | 20 | 18.0 | 90.0 | 10.5 | 20 | 15 | 175 |
| 「ないない」 | 1,2-Dibromoethane | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| | 1,2-Dichlorobenzene | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| 10 10 | 1,2-Dichloroethane | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| | 1,2-Dichloropropane | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 20 | 35 | 175 |
| 評 | 1,3,5-Trimethylbenzene | ND | 20 | 16.0 | 80.0 | 20 | 16.0 | 80.0 | 0 | 20 | 35 | 175 |
| | 1,3-Dichlorobenzene | ND | 20 | 18.0 | 90.0 | 20 | 17.0 | 85.0 | 5.71 | 20 | 35 | 175 |
| 都派 | 1,3-Dichloropropane | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| Щ, | 1,4-Dichlorobenzene | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| | 2,2-Dichloropropane | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| хîр Хір | 2-Butanone | ND | 20 | 31.0 | 155 | 20 | 27.0 | 135 | 13.8 | 20 | 10 | 230 |
| | 2-Chloroethyl vinyl ether | ND | 20 | 0 | 0* | 20 | 0 | 0 * | 0 | 20 | 10 | 250 |
| 1 (1.1. | 2-Chlorotoluene | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 31 | 175 |
| 9E- | 2-Hexanone | ND | 20 | 24.0 | 120 | 20 | 24.0 | 120 | 0 | 20 | 10 | 250 |
| | 4-Chlorotoluene | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 31 | 175 |
| 織 | 4-Isopropyltoluene | ND | 20 | 15.0 | 75.0 | 20 | 15.0 | 75.0 | 0 | 20 | 35 | 175 |
| | 4-Methyl-2-pentanone | ND | 20 | 19.0 | 95.0 | 20 | 18.0 | 90.0 | 5.41 | 20 | 10 | 175 |
| 語を読 | Acetone | ND | 100 | 140 | 140 | 100 | 140 | 140 | 0 | 20 | 10 | 400 |
| | Acrylonitrile | ND | 200 | . 190 | 95.0 | 200 | 180 | 90.0 | 5.41 | 20 | 15 | 250 |
| | Qualifiers: ND/U - Not Detect | cted at the Report | ng Limit | | MI - Mati | ix Interfer | ence | | | | | |

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL

B/V - Analyte detected in the associated Method Blank

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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Analysis Date:

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Conoco Phillips

COP Shepherd Kelsey #1E

Analyst:

LT

| 9%; | | | | | | | | |
|-----|-----------|--------------------------------|---------------------------|-------------|----------|---------------|----------|--|
| | Analysis: | Volatile Organics by Method 82 | 260B | | | WorkOrder: | 08101658 | |
| | Method: | SW8260B | | | | Lab Batch ID: | R256001 | |
| | | Matr | ix Spike (MS) / Matrix Sp | ike Duplica | te (MSD) | | | |
| | | Sample Spiked: | 08101658-01 | | | | | |
| | | RuniD: | N_081104A-4752372 | Units: | ug/L | | | |

11/04/2008 17:07

| _ | | | | | | | | | | | | |
|---------|-------------------------|------------------|----------------------|--------------|-------------------------------|-----------------------|---------------|-------------------|------|--------------|--------------|---------------|
| | Analyte | Sample Result | MS Spike Added | MS Result | MS % [.] Recovery | MSD Spike Added | MSD Result | MSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
| 調査 | Benzene | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 22 | 76 | 127 |
| | Bromobenzene | ND | 20 | 18.0 | 90.0 | 20 | 19.0 | 95.0 | 5.41 | 20 | 35 | 175 |
| | Bromochloromethane | ND | 20 | 18.0 | 90.0 | 20 | 19.0 | 95.0 | 5.41 | 20 | 35 | 175 |
| 100 | Bromodichloromethane | ND | 20 | 19.0 | 95.0 | · 20 | 18.0 | 90.0 | 5.41 | 20 | 35 | 175 |
| 線に | Bromoform | ND | 20 | 17.0 | 85.0 | 20 | 18.0 | 90.0 | 5.71 | 20 | 35 | 175 |
| Ma. | Bromomethane | ND | 20 | 17.0 | 85.0 | 20 | 16.0 | 80.0 | 6.06 | 20 | 35 | 175 |
| 65 | Carbon disulfide | ND | 20 | 19.0 | 95.0 | 20 | 18.0 | 90.0 | 5.41 | 20 | 30 | 225 |
| 1 | Carbon tetrachloride | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 20 | 35 | 175 |
| 5 | Chlorobenzene | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 21 | 70 | 130 |
| | Chloroethane | ND | 20 | 19.0 | 95.0 | 20 | 18.0 | 90.0 | 5.41 | 20 | 35 | 175 |
| 轥 | Chloroform | ND | 20 | 19.0 | 95.0 | 20 | 18.0 | 90.0 | 5.41 | 20 | 35 | 175 |
| 瘽 | Chloromethane | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| | Dibromochloromethane | ND | 20 | 18.0 | 90.0 | 20 | 19.0 | . 95.0 | 5.41 | 20 | 35 | 175 |
| 僌 | Dibromomethane | ND | 20 | 19.0 | 95.0 | 20 | 20.0 | 100 | 5.13 | _ 20 | 35 | 175 |
| 轚 | Dichlorodifluoromethane | ND | 20 | 14.0 | 70.0 | 20 | 12.0 | 60.0 | 15.4 | 20 | 35 | 175 |
| | Ethylbenzene | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| 215 | Hexachlorobutadiene | ND | 20 | 14.0 | 70.0 | 20 | 14.0 | 70.0 | 0 | 20 | 43 | 144 |
| | Isopropylbenzene | ND | 20 | 18.0 | 90.0 | 20 | 18.0 | 90.0 | 0 | 20 | 35 | 175 |
| | Methyl tert-butyl ether | ND | 20 | 18.0 | 90.0 | 20 | 17.0 | 85.0 | 5.71 | 20 | 35 | 175 |
| | Methylene chloride | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 35 | 175 |
| 1) 1 | Naphthalene | ND | 20 | 16.0 | 80.0 | 20 | 15.0 | 75.0 | 6.45 | 20 | 20 | 210 |
| | n-Butylbenzene | ND | 20 | 14.0 | 70.0 | 20 | 14.0 | 70.0 | 0 | 20 | 35 | 175 |
| | n-Propylbenzene | ND | 20 | 16.0 | 80.0 | 20 | 16.0 | 80.0 | 0 | 20 | 35 | 175 |
| 影 | sec-Butylbenzene | ND | 20 | 14.0 | 70.0 | | 14.0 | 70.0 | 0 | 20 | 35 | |
| | Styrene | ND | 20 | 19.0 | 95.0 | | 19.0 | 95.0 | 0 | 20 | 35 | 175 |
| 101 | tert-Butylbenzene | ND | 20 | 16.0 | 80.0 | 20 | 15.0 | 75.0 | 6.45 | 20 | 35 | |
| J.V. | Tetrachloroethene | ND | 20 | 17.0 | 85.0 | 20 | 17.0 | 85.0 | 0 | 20 | | |
| | Toluene | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 24 | | |
| li) | Trichloroethene | ND | 20 | 19.0 | 95.0 | | 19.0 | 95.0 | 0 | 21 | .60 | |
| | Trichlorofluoromethane | ND | 20 | 19.0 | 95.0 | 20 | 18.0 | 90.0 | 5.41 | 20 | 17 | 250 |
| | Vinyl acetate | ND | 20 | 20.0 | 100 | 20 | 19.0 | 95.0 | 5.13 | 20 | 10 | |
| 指 | Vinyl chloride | ND | 20 | 16.0 | 80.0 | 20 | 16.0 | 80.0 | 0 | 20 | 35 | 175 |

Qualifiers:

ND/U - Not Detected at the Reporting Limit

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

B/V - Analyte detected in the associated Method Blank J - Estimated value between MDL and PQL

* - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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Analysis Date:

HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

LT

Analyst:

COP Shepherd Kelsey #1E

| | Analysis: Method: | Volatile Organics by Method 826 SW8260B | 60B | | | WorkOrder: Lab Batch ID: | 08101658 R256001 | |
|----|----------------------|--|--------------------------|-------------|----------|-----------------------------|---------------------|--|
| | | Matrix | c Spike (MS) / Matrix Sp | ike Duplica | te (MSD) | | | |
| | | Sample Spiked: | 08101658-01 | | | | | |
| 17 | | RunID: | N_081104A-4752372 | Units: | ug/L | | | |

11/04/2008 17:07

| | Analyte | Sample Result | MS Spike Added | MS Result | MS % Recovery | MSD Spike Added | MSD Result | MSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
|----|-----------------------------|------------------|----------------------|--------------|------------------|-----------------------|---------------|-------------------|------|--------------|--------------|---------------|
| | cis-1,2-Dichloroethene | ND | 20 | 20.0 | 100 | 20 | 18.0 | 90.0 | 10.5 | 20 | 35 | 175 |
| | cis-1,3-Dichloropropene | ND | 20 | 17.0 | 85.0 | 20 | 18.0 | 90.0 | 5.71 | 20 | 35 | 175 |
| | m,p-Xylene | ND | 40 | 36.0 | 90.0 | 40 | 36.0 | 90.0 | 0 | 20 | 35 | 175 |
| | o-Xylene | ND | 20 | 19.0 | 95.0 | 20 | 19.0 | 95.0 | 0 | 20 | 35 | 175 |
| | trans-1,2-Dichloroethene | ND | 20 | 19.0 | 95.0 | 20 | 18.0 | 90.0 | 5.41 | 20 | 35 | 175 |
| | trans-1,3-Dichloropropene | ND | 20 | 17.0 | 85.0 | 20 | 17.0 | 85.0 | 0 | 20 | 35 | 175 |
| ¢٩ | 1,2-Dichloroethene (total) | ND | 40 | 39 | 98 | 40 | 36 | 90 | 8.0 | 20 | 35 | 175 |
| | Xylenes,Total | ND | 60 | 55 | 92 | 60 | 55 | 92 | 0 | 20 | 35 | 175 |
| 98 | Surr: 1,2-Dichloroethane-d4 | ND | 50 | 50 | 100 | 50 | 48.0 | 96.0 | 4.08 | 30 | 62 | 130 |
| | Surr: 4-Bromofluorobenzene | ND | 50 | 51 | 102 | 50 | 53.0 | 106 | 3.85 | 30 | 70 | 130 |
| | Surr: Toluene-d8 | ND | 50 | 54 | 108 | 50 | 53.0 | 106 | 1.87 | 30 | 74 | 122 |

Qualifiers:

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ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

J - Estimated value between MDL and PQL E - Estimated Value exceeds calibration curve

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| | | ity Control Re | nort | | | | | | 380 INTEI HOUST | N LABORA RCHANGE FON, TX 77 3) 660-0901 | DRIVE | | |
|--|---|--|--------------------------------------|----------------------------------|----------------|---------------------|-------------------------------|----------------|---------------------|--|--------------|--------------|-----------------------|
| 響 | Quai | | port | Cor | noco Ph | illine | | | (1 · · · | , | | | |
| 和風味 | | | | | loco Fil | - | | | | | | | |
| | Analysis: Nitrate Nitroger | n (as N), Total | | | | | | | orkOrder: | | 01658 | | |
| | Method: E353.2 | | | | | | | | b Batch I | D: R2 | 56285A | \ | |
| States and a state of the state | | Method Blank | | | | Samp | les in Analy | tical Ba | | | | | |
| | RunID: WET_081103ZD-4757587 Analysis Date: 11/03/2008 15:1 | Units: 7 Analyst: | mg/L TW | | | | ample ID 658-01F | | <u>Clien</u> MW- | i <u>t Sample II</u> 1 | <u>0</u> | | |
| | Analyt Nitrogen,Nitrate (As N) | 9 | Result ND | Rep Lim 0.5 | → | | | | | | | | |
| | | | La | boratory | Control | Sample (L | CS) | | | | | | |
| 100 C | R | unID: | _ | 1103ZD-47 | | | ıg/L | | | | | | |
| | А | nalysis Date: | 11/03/20 | 08 15:17 | Ar | alyst: T | W . | | | | | | |
| | | Analy | e | | Spike Added | Result | Percent Recovery | Lower Limit | Upper Limit | | | | |
| | Nitro | ogen,Nitrate (As N) | | | 5.000 | 5.372 | 107.4 | 9 | 10 1 | 10 | | | |
| | | Matrix | Spike (N | IS) / Mati | rix Spike I | Duplicate (| (MSD) | | | | | | |
| | | Sample Spiked: RunID: Analysis Date: | | 526-01 81103ZD-4 2008 15:1 | | | mg/L TW | | | | | | |
| 84- | | | | | | | | | | | | | |
| | Analyte | Sample Result | MS Spike Added | MS Result | MS Reco | | ke Resu | | SD % ecovery | RPD | RPD Limit | Low Limit | High Limit |
| | Nitrogen,Nitrate (As N) | ND | 5 | 4.4 | 471 89 | 43 * | 5 4 | .920 | 98.39 | 9.548 | 20 | 90 | 110 |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| S. S | Qualifiers: ND/U - Not Det | ected at the Report | ing limit | | K A I | - Matrix Int | orforonco | | | | | | |
| | B/V - Analyte de J - Estimated va E - Estimated V | etected in the associate the second s | ciated Met and PQL ration curv | /e | < D - * - I | Recovery Recovery C | Unreportable Dutside Advis | sable QC | Limits | | | | |
| | N/C - Not Calcu TNTC - Too nur QC results presented on the QC Sur | | | - | | · | | e added. (| Control lin | nits do not a | 08 | | Page 27 4:16:02 PM |

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Conoco Phillips

| Analysis: Method: | lon Chrom E300.0 | | | | | | | WorkOrder: Lab Batch I | | 01658 56813A | ۱ | |
|----------------------|----------------------|----------------|-----------|--------------|--------------|----------------|---------------|---------------------------|----------------|-----------------|-------|------|
| | | Method Blank | | | S | amples | in Analytical | Batch: | | | | |
| RunID: IC1 | 1_081110B-4766166 | Units: | mg/L | | L | ab Sam | ple ID | <u>Clien</u> | t Sample ID | <u>)</u> | | |
| nalysis Date | e: 11/10/2008 | 21:54 Analyst: | ΤW | | 0 | 8101658 | 8-01F | MW- | 1 | | | |
| | | nalyte | | Rep Limit | | | | | | | | |
| | Chloride Fluoride | | ND ND | 0.50 0.50 | | | | | | | | |
| | | | | horstony C | ontrol Samp | | | | | | | |
| | | | | - | | | | | | | | |
| | | | 11/10/200 | 0B-4766017 | Units: | mg/L TW | | | | | | |
| | | Analysis Date: | 11/10/200 | 0 10.31 | Analyst: | IVV | | | | | | |
| | | Analyt | e | | pike Res | 1 | | wer Uppe mit Limit | | | | |
| | | Chloride | | | | .409 | 94.09 | | 15 | | | |
| | | Fluoride | | | | 0.03 | 100.3 | | 15 | | | |
| | | L | | | | | | | | | | |
| | | Matrix | Spike (M | S) / Matrix | Spike Duplic | cate (MS | <u>D)</u> | | | | | |
| | | Sample Spiked: | 081016 | 58-01 | | | | | | | | |
| | | RunID: | | 110B-476603 | | Ŷ | | | | | | |
| | | Analysis Date: | 11/10/2 | 008 22:43 | Analys | st: TW | | | | | | |
| | Analyte | Sample | MS | MS | MS % | MSD | MSD | MSD % | RPD | RPD | Low | High |
| | 7 | eampre | Spike | Result | Recovery | Spike Added | Result | Recovery | | Limit | Limit | Limi |
| | , indigite | Result | Added | | | Auueu | | | | | | 1 |
| Chloride | | | | 61.19 | | 40 40 | 62.16 | | 1.575 1.872 | | | |

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

D - Recovery Unreportable due to Dilution

* - Recovery Outside Advisable QC Limits

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N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

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| | | | | | · | | | | | 8880 INTEF | I LABORA RCHANGE ON, TX 770 | DRIVE | | • |
|----------------|----------------------|-----------------------------|----------------------------|--|----------------------|-----------------------------|--------------------------|-----------------------|--|----------------------------|-----------------------------------|-----------------|--------------|---------------|
| | | Q | uality C | ontrol Re | port | | | | | |) 660-0901 | | | |
| | | | | | | | o Phillip nerd Kelsey | | | | | | | |
| | Analysis: Method: | Ion Chrom E300.0 | atography | · | | | | | | WorkOrder: Lab Batch II | | 01658 56827A | | |
| | | | Meth | od Blank | | | | Samples | in Analytical | | | | | |
| 38F | RunID: IC1_08111 | 1A-4766450 | | Units: | mg/L | | | .ab Sam | | | t Sample II | 2 | | |
| に調査 | Analysis Date: | 11/11/2008 | 15:49 | Analyst: | ΤW | | C | 8101658 | -01F | MW-1 | | | | |
| 新聞 | Sulfate | | nalyte | | Result NC | Rep Limit | | | | | | | | |
| | <u> </u> | | | · · · · · · · · · · · · · · · · · · · | Lá | boratory Co | ntrol Samp | le (LCS) | | | | | | |
| | | | RunID: | | IC1_0811 | 11A-4766451 | Units: | mg/L | | | | | | |
| 2 | | | Analysi | s Date: | 11/11/20 | 008 16:06 | Analyst: | ΤW | | | | | | |
| I. LEVIL | | | Sulfate | Analyt | e | | pike Res dded 10.00 9 | | ercent Lov covery Lir 94.96 | mit Limit | | | | |
| | | | | Matrix | Spike (N | AS) / Matrix S | Spike Dupli | cate (MS | | | | | | |
| 1 <u>88</u> | | | Samr | le Spiked: | 08101 | | | | | | | | | |
| and the second | | | Runi | | IC1_08 | 1111A-476645: 2008 16:39 | 3 Units: Analys | mg/l st: TW | L | | | | | |
| No. | | | | | | | | | | | | | | |
| 2 | Ana | alyte | | Sample Result | MS Spike Added | MS Result | MS % Recovery | MSD Spike Added | MSD Result | MSD % Recovery | RPD | RPD Limit | Low Limit | High Limit |
| | Sulfate | | | 437.9 | 1000 | 1350 | 91.23 | 1000 | 1344 | 90.62 | 0,4506 | 20 | 80 | 120 |
| 「「「「「「」」」 | | | | | | | | | | | | | | |
| | Qualifiers: | | Detected | at the Desert | na Limit | | BAL BAck | iv Interfer | | | | | | |
| | | B/V - Analy J - Estimate | te detected ed value be | at the Reporti d in the assoc etween MDL a | iated Met ind PQL | hod Blank | | very Unre | ence portable due t de Advisable (| | | | | |

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

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QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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| | lon Chro E300.0 | | | | | | | | | | | | |
|--------------------------|-----------------------------|------------------|------------------------------------|--------------------------------------|-------------------------------|---------------------------|-------------------------------------|----------------------------------|---------------------------|-------------------|------------------|--------------|--------------|
| Method: RunID: IC1_08 | | | | | | oco Philli pherd Kelse | | | | | | | |
| | | matograph | у | | COP She | | :y #12 | | WorkOrder Lab Batch I | | 101658 57651A | | |
| | | Met | hod Blank | | | | Sample | s in Analytica | I Batch: | | | | |
| Analysis Date: | 81119A-4780752 11/19/200 | | Units: Anałyst: | mg/L TW | | | <u>Lab Sar</u> 0810165 | | <u>Clier</u> MW- | nt Sample II 1 | 2 | | |
| Or | tho-phosphate (| Analyte As P) | | Result ND | Rep Limit | | | | | | | | |
| <u> </u> | <u> </u> | | | La | boratory C | Control Sam | ple (LCS | <u>.</u> | | | | | . <u> </u> |
| | | RunID Analys | : is Date: | IC1_0811 11/19/20 | 19A-4780753 08 19:01 | 3 Units: Analys | mg/ st: TW | L | | | | | |
| | | | Analyt | e | | Spike R Added | | | ower Uppe .imit Limit | | | | |
| | | | 1 4 (A D | | | | | | | | | | |
| | | Ortho-ph | osphate (As P |) | | 10.00 | 9.167 | 91.67 | 85 1 | 15 | | | |
| | | Ortho-ph | | | 1S) / Matrix | 10.00 | | | 85 1 | 15 | | | |
| | <u>.</u> | Sam | <u>Matrix</u> ple Spiked: | Spike (M 081015 1C1_081 | | <u>Spike Dup</u> | licate (M | <u>SD)</u> g/L | 85 1 | 15 | | | |
| | Analyte | Sam | <u>Matrix</u> ple Spiked: D: | Spike (M 081015 1C1_081 | 59 7-01 1119A-47807 | 67 Unit | licate (M s: m yst: T\ MSD | SD) g/L N MSD Result | 85 1 MSD % Recovery | 15 RPD | RPD Limit | Low Limit | High Limi |

Qualifiers:

a la la la

B/V - Analyte detected in the associated Method Blank

MI - Matrix Interference

D - Recovery Unreportable due to Dilution

J - Estimated value between MDL and PQL * - Recovery Outside Advisable QC Limits

E - Estimated Value exceeds calibration curve

N/C - Not Calculated - Sample concentration is greater than 4 times the amount of spike added. Control limits do not apply.

TNTC - Too numerous to count

QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054 (713) 660-0901

Sample Receipt Checklist

| Date and Time Received: | 10/28/2008 9:30:00 AM | | Received By: Carrier name: | RE Fedex-Priority | |
|---|--|---------------------|-------------------------------|----------------------|---|
| Temperature: | 3.0°C | | Chilled by: | Water Ice | |
| 1. Shipping container/co | oler in good condition? | Yes 🔽 | No 🗌 | Not Present | |
| 2. Custody seals intact o | n shippping container/cooler? | Yes 🔽 | No 🗔 | Not Present | |
| 3. Custody seals intact o | n sample bottles? | Yes | No | Not Present | |
| 4. Chain of custody pres | ent? | Yes 🔽 | No 🗌 | | |
| 5. Chain of custody sign | ed when relinquished and received? | Yes 🗹 | No 🗌 | | |
| 6. Chain of custody agre | es with sample labels? | Yes 🔽 | No 🗌 | | |
| 7. Samples in proper cor | ntainer/bottle? | Yes 🗹 | Νο | | |
| 8. Sample containers inta | act? | Yes 🔽 | No | | |
| 9. Sufficient sample volu | me for indicated test? | Yes 🗹 | No 🗌 | | |
| 0. All samples received w 2.Recieved Nitrate and | vithin holding time? I Ortho out of hold collected on 10/23/08. | Yes | No 🗹 | | |
| 1. Container/Temp Blank | temperature in compliance? | Yes 🗹 | Νο | | |
| 2. Water - VOA vials have | e zero headspace? | Yes | Νο 🗌 🛛 νολ | A Vials Not Present | |
| 3. Water - Preservation c | hecked upon receipt (except VOA*)? | Yes 🗌 | No 🗌 | Not Applicable | |
| *VOA Preservation Ch | ecked After Sample Analysis | | | | |
| SPL Representativ | re: Elder, Allen | Contact Date | & Time: 10/29/2008 3: | 00:00 PM | 7 |
| Client Name Contacte | d: Kelley Blanchard | | | | |
| Non Conformance 1.L Issues: | ogged in analysis per containers received.2.0 | Continue with analy | sis. | | |

| | Reingusted by: | Binding 25 | | anduissed by Som siet | 10 Y - Six | | à. | umpround Time Requirements | | | | | A | | | | | Mul-1 | Somple ID | م کیکردیکی ملک کر کر ایک ایک ر | Bomphar Bri Contra Children | O. Number: | Projact Name: Shephard Kelsey | ty: Alouquerque | Address: 6121 endion School | | T Kelly Shanch | lient Tetro Tech/ Conoco | | |
|---|--|-------------|---------|-----------------------|---------------------|------------------|-------------|--|--------------|--|----------|----------------|-----|--------|---|-------------|------|---------|-----------|-----------------------------------|-----------------------------|------------|-------------------------------|-----------------|-----------------------------|---------------------------------|----------------|--------------------------|-----------|---------------------------------------|
| | و المحمد الم | | A COLO | | Preservoirse l'ypes | and the Twinster | | Peoularients Remains Anional C. B. PO& SOS | | | | | A A | | | | | 11 52 0 | Ude 15rm | Collected | 5) | | 1907 ¥15 | ā | Road, NE | <u> </u> | ing fech | co Philites | | A A A A A A A A A A A A A A A A A A A |
| | | *** | | • | | | | Nicagas Cl | | | - | | | | | | | 00 | (Comp) | (duya) | | | | Zie Code | 8 | itkelty.blong | | | Chain | |
| | 000 | Dota | 0.27.08 | Date | T NOR | 1 3/60ml Vials | | NOS \$04 B | | | | | イン | K V | | X X X | XIX | XX | 550 | | Kiw Diri | | | 0006127110 | | emai:kely.blanchbid@teitateon.c | | | C. | |
| | Time | Time | TZ3 | 5141 | રુક ક | the 2 11 Games | - | | | . . | | | | | 5 | | | | Snit | Notix is | YP+ | | , , , , , | | | | | 145 | Custody A | |
| | Received | ineceived i | | | 3. HC | | | | | | •••••••• | | 5 | 5 | | 5 | 3 | 53 | <u>.</u> | | elize nten | | :** *** 18 | ***** | | | | St! Worksider ? | Record | |
| | \$V 371- ho | ţ, | | 5 | Ŀ. | DENC 4. 11 AF | | | | ······································ | | د | | - | | | × | | | (D- B (5- G | ко ко | | | | | | | Nucritaen | | |
| , | | : | | | Q4 | li Antoar Close | Ismpermuter | 1123012 | ar ,4yr - au | | | | | | | | | | 824 | 15-D NG-Y | | | c' | - - - | | Requested | | 01,801 | | |
| | | | | | | 5. Suz Pizzlic | niure: | : 4 0 2 2 | ····· | | | | | XX | | | | 「「「」」 | Tel | Setel | VGC Inite(| | ··· · •· | | 10 | Requested Analysis | | | | |
| | | | | | | | 1 | *** | •••• | | | | X | | | | | | | 10 M 01 | cila-6i | | | | | | | ••• | | |

S. S. S. W.S.