

Analytical Report 501860

RECEIVED

By OCD; Dr. Oberding at 7:46 am, Mar 06, 2015

for Conoco Phillips-Midland

Project Manager: Dave Williamson

Wilder Federal 29-5H

26-FEB-15

Collected By: Client



12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):

Texas (T104704215-14-18), Arizona (AZ0765), Florida (E871002), Louisiana (03054)
New Jersey (TX007), North Carolina(681), Oklahoma (9218), Pennsylvania (68-03610)

Xenco-Atlanta (EPA Lab Code: GA00046):

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26-FEB-15

Project Manager: **Dave Williamson**
Conoco Phillips-Midland
3300 North A Street
Midland, TX 79705

Reference: XENCO Report No(s): **501860**
Wilder Federal 29-5H
Project Address:

Dave Williamson:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 501860. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 501860 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks

Project Manager

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Sample Cross Reference 501860



Conoco Phillips-Midland, Midland, TX

Wilder Federal 29-5H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
#1	S	02-01-15 12:00		501860-001
#2	S	02-01-15 12:00		501860-002



CASE NARRATIVE



Client Name: Conoco Phillips-Midland
Project Name: Wilder Federal 29-5H

Project ID:
Work Order Number(s): 501860

Report Date: 26-FEB-15
Date Received: 02/05/2015

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 501860

Conoco Phillips-Midland, Midland, TX

Project Name: Wilder Federal 29-5H



Project Id:

Contact: Dave Williamson

Date Received in Lab: Thu Feb-05-15 01:05 pm

Report Date: 26-FEB-15

Project Location:

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	501860-001	501860-002				
	<i>Field Id:</i>	#1	#2				
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	Feb-01-15 12:00	Feb-01-15 12:00				
Inorganic Anions by EPA 300/300.1	<i>Extracted:</i>	Feb-09-15 14:00	Feb-09-15 14:00				
	<i>Analyzed:</i>	Feb-09-15 23:42	Feb-10-15 00:05				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Chloride		83.0 10.7	253 21.7				
Percent Moisture	<i>Extracted:</i>						
	<i>Analyzed:</i>	Feb-05-15 17:00	Feb-05-15 17:00				
	<i>Units/RL:</i>	% RL	% RL				
Percent Moisture		6.55 1.00	7.78 1.00				
TPH By SW8015 Mod	<i>Extracted:</i>	Feb-06-15 07:00	Feb-06-15 07:00				
	<i>Analyzed:</i>	Feb-06-15 11:05	Feb-06-15 11:26				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
C6-C12 Gasoline Range Hydrocarbons		21.2 16.1	17.9 16.2				
C12-C28 Diesel Range Hydrocarbons		21.0 16.1	31.0 16.2				
C28-C35 Oil Range Hydrocarbons		ND 16.1	ND 16.2				
Total TPH		42.2 16.1	48.9 16.2				

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Kelsey Brooks
Project Manager

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **SQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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	(602) 437-0330	



Form 2 - Surrogate Recoveries

Project Name: Wilder Federal 29-5H

Work Orders : 501860, 501860

Project ID:

Lab Batch #: 961237

Sample: 501860-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/06/15 11:05

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	55.8	50.0	112	70-135	

Lab Batch #: 961237

Sample: 501860-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/06/15 11:26

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	97.3	99.7	98	70-135	
o-Terphenyl	48.9	49.9	98	70-135	

Lab Batch #: 961237

Sample: 668120-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/06/15 08:58

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	116	100	116	70-135	
o-Terphenyl	60.1	50.0	120	70-130	

Lab Batch #: 961237

Sample: 668120-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/06/15 08:38

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	127	100	127	70-135	
o-Terphenyl	60.1	50.0	120	70-130	

Lab Batch #: 961237

Sample: 668120-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 02/06/15 08:18

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	121	100	121	70-135	
o-Terphenyl	61.6	50.0	123	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



Form 2 - Surrogate Recoveries

Project Name: Wilder Federal 29-5H

Work Orders : 501860, 501860

Project ID:

Lab Batch #: 961237

Sample: 501868-002 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/06/15 10:03

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	117	99.8	117	70-135	
o-Terphenyl	61.0	49.9	122	70-130	

Lab Batch #: 961237

Sample: 501868-002 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 02/06/15 10:23

SURROGATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.8	125	70-135	
o-Terphenyl	63.4	49.9	127	70-130	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.



BS / BSD Recoveries



Project Name: Wilder Federal 29-5H

Work Order #: 501860, 501860

Project ID:

Analyst: JUM

Date Prepared: 02/09/2015

Date Analyzed: 02/09/2015

Lab Batch ID: 961449

Sample: 688242-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Inorganic Anions by EPA 300/300.1	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<2.00	40.0	42.7	107	40.0	41.4	104	3	90-110	20	

Analyst: ARM

Date Prepared: 02/06/2015

Date Analyzed: 02/06/2015

Lab Batch ID: 961237

Sample: 668120-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	<15.0	1000	925	93	1000	985	99	6	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<15.0	1000	1070	107	1000	1120	112	5	70-135	35	

Relative Percent Difference RPD = 200*(C-F)/(C+F)

Blank Spike Recovery [D] = 100*(C)/[B]

Blank Spike Duplicate Recovery [G] = 100*(F)/[E]

All results are based on MDL and Validated for QC Purposes



Form 3 - MS Recoveries

Project Name: Wilder Federal 29-5H



Work Order #: 501860

Lab Batch #: 961449

Date Analyzed: 02/09/2015

QC- Sample ID: 501717-001 S

Reporting Units: mg/kg

Date Prepared: 02/09/2015

Batch #: 1

Project ID:

Analyst: JUM

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	1110	2000	2470	68	80-120	X

Lab Batch #: 961449

Date Analyzed: 02/09/2015

QC- Sample ID: 501719-003 S

Reporting Units: mg/kg

Date Prepared: 02/09/2015

Batch #: 1

Analyst: JUM

Matrix: Soil

MATRIX / MATRIX SPIKE RECOVERY STUDY						
Inorganic Anions by EPA 300	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Analytes						
Chloride	337	800	1060	90	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
 Relative Percent Difference [E] = 200*(C-A)/(C+B)
 All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit



Form 3 - MS / MSD Recoveries



Project Name: Wilder Federal 29-5H

Work Order #: 501860
Lab Batch ID: 961237
Date Analyzed: 02/06/2015
Reporting Units: mg/kg

Project ID:
QC- Sample ID: 501868-002 S Batch #: 1 Matrix: Soil
Date Prepared: 02/06/2015 Analyst: ARM

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH By SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
C6-C12 Gasoline Range Hydrocarbons	18.3	1080	998	91	1080	1030	94	3	70-135	35	
C12-C28 Diesel Range Hydrocarbons	<16.2	1080	1120	104	1080	1190	110	6	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*(C-F)/(C+F)

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Sample Duplicate Recovery

Project Name: Wilder Federal 29-5H

Work Order #: 501860

Lab Batch #: 961239

Project ID:

Date Analyzed: 02/05/2015 17:00

Date Prepared: 02/05/2015

Analyst: WRU

QC- Sample ID: 501854-001 D

Batch #: 1

Matrix: Soil

Reporting Units: %

SAMPLE / SAMPLE DUPLICATE RECOVERY

Percent Moisture	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Analyte					
Percent Moisture	6.94	6.80	2	20	

Spike Relative Difference RPD $200 * |(B-A)/(B+A)|$
 All Results are based on MDL and validated for QC purposes.
 BRL - Below Reporting Limit



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: Conoco Phillips-Midland

Date/ Time Received: 02/05/2015 01:05:00 PM

Work Order #: 501860

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	No
#5 Custody Seals intact on sample bottles?	No
#6 *Custody Seals Signed and dated?	No
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	No
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	N/A
#21 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	N/A
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	N/A

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: *Kelsey Brooks*
 Kelsey Brooks

Date: 02/05/2015

Checklist reviewed by: _____

Date: _____



SUMMIT
 ENVIRONMENTAL TECHNOLOGIES, INC
 Analytical Laboratories

Summit Environmental Technologies, Inc.
 3310 Win St.
 Cuyahoga Falls, Ohio 44223
 TEL: (330) 253-8211 FAX: (330) 253-4489
 Website: <http://www.settek.com>

WO#: **15020564**
 Date Reported: **2/16/2015**
 Company: Xenco Laboratories
 Address: 12600 West I-20 East
 Odessa TX 79765
 Received: 2/6/2015
 Project#: 1026194

Client ID#	Lab ID#	Collected Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
501860-001	001	2/1/2015 Sodium Adsorption Ratio	1.41		Solid	In-House	1		2/12/2015	VVK

Client ID#	Lab ID#	Collected Analyte	Result	Units	Matrix	Method	DF	RL	Run	Analyst
501860-002	002	2/1/2015 Sodium Adsorption Ratio	2.12		Non-Potable Water	In-House	1		2/12/2015	VVK