

Bratcher, Mike, EMNRD

From: Bratcher, Mike, EMNRD
Sent: Wednesday, July 15, 2009 8:11 AM
To: 'Durrett, Charles'
Cc: Sosa, Jesse A
Subject: RE: ConocoPhillips Illinois Camp Well #1 Battery 2RP314 Findings Report

Dear Mr. Durrett and Mr. Sosa,

The remediation work plan proposal submitted for clean up at the ConocoPhillips Illinois Camp #1 Battery is approved as submitted with the following conditions:

- Notify NMOCD District 2 office 48 hours prior to commencement of remedial activities.
- Notify NMOCD District 2 office 48 hours prior to obtaining samples where analyses of samples obtained are to be submitted to NMOCD.
- Target date for completion of project will be August 15, 2009.

Please be advised that NMOCD approval of this proposal does not relieve ConocoPhillips, or, any future operator, of liability should these operations have failed to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve ConocoPhillips of responsibility for compliance with any other federal, state, local laws and/or regulations.

If I can be of assistance or if you have any questions or concerns, please contact me.

Sincerely,

Mike
Bratcher

District
2

NMOCD

575-748-1283 Ext.108

From: Durrett, Charles [mailto:Charles.Durrett@tetrattech.com]
Sent: Tuesday, July 07, 2009 3:15 PM
To: Bratcher, Mike, EMNRD
Cc: Sosa, Jesse A
Subject: ConocoPhillips Illinois Camp Well #1 Battery 2RP314 Findings Report

Illinois Camp Well #1 Findings Report
Eddy County, New Mexico
Unit D, Sec. 5, T18S, R28E
2RP 314

On behalf of ConocoPhillips, Tetra Tech submits the attached findings report for a subsurface investigation at ConocoPhillips' Illinois Camp Well #1 Battery. This work was done in support of ConocoPhillips efforts to delineate and remediate a recent 90 barrel mixed crude oil/produced water release into an unlined 35 x 55 foot bermed catchment basin (C141 attached). The Site is located approximately 11.5 miles east southeast of Artesia, New Mexico in Eddy County, New Mexico (32.778055° N, 104.202728° W). The State is the land administrator.

If you agree with the recommendations within the report, Tetra Tech, on-behalf of ConocoPhillips, requests NMOCD's approval for the recommended remediation action. If you have any questions concerning this request please, call Mr. Jesse Sosa (ConocoPhillips, 575-391-3126) or me.

Respectfully,

Charlie

Charles Durrett | Project Manager II
1910 N. Big Spring Midland, TX 79705
Main 432 686 8081 | Fax 432 682 3946
charles.durrett@tetrattech.com

Tetra Tech | Complex World, CLEAR SOLUTIONS™ www.tetrattech.com

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1910 N Big Spring
Midland, Texas 79705
(432) 686-8081

TETRA TECH, INC.

July 7, 2009

Mike Bratcher
New Mexico Oil Conservation Division
1301 W. Grand Avenue
Artesia, New Mexico 88210

RE: Illinois Camp Well #1 Findings Report
Eddy County, New Mexico
Unit D, Sec. 5, T18S, R28E
2RP 314

Dear Mr. Bratcher:

On behalf of ConocoPhillips, Tetra Tech submits this findings report for a subsurface investigation at ConocoPhillips' Illinois Camp Well #1 Battery (Site; Figure 1). This work was done in support of ConocoPhillips efforts to delineate and remediate a recent 90 barrel mixed crude oil/produced water release into an unlined 35 x 55 foot-bermed catchment basin (C141 attached; Figure 2). The Site is located approximately 11.5 miles east southeast of Artesia, New Mexico in Eddy County, New Mexico (32.778055° N, 104.202728° W). The State is the land administrator.

The Site is located immediately north of the western portion of the Delaware Basin. The area is underlain by Guadalupian age formations, which contains a thick sequence of sandstones, shales, siltstone, and evaporites¹. In the immediate vicinity of the Site, topography is nearly level to moderately undulating. The Kimbrough-Stegall Series loamy soil at the Site is mixed alluvium and/or eolian sand.²

Exposure Pathway Analyses

Depth to water in the vicinity of the Site is estimated at 80 feet below ground surface (fbgs). This interpretation is based six recently completed water wells (L 12199-12221 POD1) in an adjacent quarter section of the Site and were identified in the New Mexico Office of State Engineer's database.³ The nearest surface water body is a playa, located approximately 1,200 feet northeast of the Site.

Following the ranking criteria presented in "Guidelines for Remediation of Leaks, Spills, and Releases" promulgated on August 13, 1993 by the New Mexico Oil Conservation Division (NMOCD), this Site has the following score:

¹ Hiss, W.L.1980. Movement of Ground Water in Permian Guadalupian Aquifer Systems, Southeastern New Mexico and Western Texas. In New Mexico Geological Society 31st Field Conference publication entitled "Trans-Pecos Region Southeastern New Mexico and West Texas." Pp 289 – 294.

² U.S. Department of Agriculture, Natural Resources Conservation Services. Webb Soil Survey Database.

³ New Mexico Office of State Engineer. W A.T.E R.S. Database.

<u>Criteria</u>		<u>Ranking Score</u>
Depth to groundwater	<99 feet	10
Distance from water source	>1,000 feet	0
Distance from domestic water source	>200 feet	0
Distance from surface water body	>1,000 feet	0
Total Ranking Score		10

The remediation action level for a ranking score of 10-19 is 10 parts per million (ppm) for benzene, 50 ppm for total benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 1,000 ppm for total petroleum hydrocarbons (TPH).

In the event of oil/gas releases to the environment, the NMOCD uses the New Mexico Water Quality Control Commission's (NMWQCC) maximum contaminate level of 250 ppm for chloride (20.6.2.3103 NMAC, Subsection A) for delineation.

Scope of Work

The lateral extent of the mixed crude oil/produced water affected area was defined by the bermed catchment basin. To delineate the vertical extent of the affected area, Tetra Tech used a mobile air rotary drilling unit to bore two exploratory holes into the affected area. A split spoon was used to collect soil at three foot intervals. Soil samples collected from the borings were field tested using chloride field titration techniques⁴ to find the vertical clean boundary (< 250 (ppm) of the release area. A photo-ionization detector (PID) was used to screen for volatile organic hydrocarbons (VOC). VOC field analysis was used to determine the clean boundary of < 50 ppm VOC. Each boring was logged according to the Unified Soil Classification System so observations concerning soil types, lithologic changes, and the environmental condition of the encountered soils were noted.

Two soil samples from each soil boring (highest chloride and TPH_{DRO} measurement and basal sample) were submitted to a laboratory for confirmation analyses. The samples were placed into glass sample jars, sealed with Teflon-lined lids, and placed on ice for transportation to an analytical laboratory where they were analyzed for chloride (USEPA Method 300.0A), Diesel and gasoline range TPH (TPH_{DRO} and TPH_{GRO}, Method 8015) and benzene, and BTEX (Method 8021). These analyses were used to confirm clean boundaries have been identified.

Soil cuttings were left inside the catchment basin for handling during site remediation. Each boring was backfilled from bottom to top with bentonite.

⁴ Bower, C.A. and G.D. Sherman. 1965. Chloride. In: Methods of Soil Analysis. Am Soc of Agronomy, Madison, WI, Sec 62 – 3.5, pp 947 – 948.

Findings

The soils encountered during excavation activities at the Site consisted of mostly tan sandy, caliche soils at 0 – 12 fbs.

A summary of field screening data and laboratory soil analytical data are presented in Table 1 and Figure 3, and on the boring logs (Appendix A). A complete analytical report is presented in Appendix B.

Field screening data for chloride and volatile organics were used to define the horizontal and vertical extent of affected soil (Table 1, Figure 3 and Appendix A). Field chloride concentrations in the soils were reported at detectable concentrations in all samples collected. Field chlorides ranged from 993 to 73 ppm. VOC field screening measured concentrations ranging from 1,544 to 0 ppm.

Table 1
ConocoPhillips
Illinois Camp Well #1 Battery
Eddy County, New Mexico
 Soil Boring Results
 29-May-09

Constituents		Units	Sampling Locations						Action Level (ppm)	
			Soil Boring 1			Soil Boring 2				
			3 ft	24 ft	39 ft	3 ft	6 ft	24 ft		
Field Screen	VOC	(ppm)	0	1,500	1	1,438	1,544	50		
	Chloride	(ppm)	993	248	74	993	496	248		
Laboratory Analyses	TPH	GRO	(mg/Kg)		91	ND		2,000	ND	1,000
		DRO	(mg/Kg)		270	8.2		2,100	ND	
	Benzene		(mg/Kg)		ND	ND		1.3	ND	10
	Ethylbenzene		(mg/Kg)		0.98	ND		37.0	ND	
	Toluene		(mg/Kg)		0.20	ND		76.0	ND	
	Xylenes Total		(mg/Kg)		7.30	ND		18.0	ND	
	Total BTEX		(mg/Kg)		8.48	ND		132.3	ND	50
Chloride		(mg/Kg)	755		24.2	1020		310		

TPH = Total petroleum hydrocarbons
 VOC = Volatile organic compounds
 GRO = Gasoline range hydrocarbons
 DRO = Diesel range hydrocarbons
 ND = Not detected at or above laboratory level of detection

ppm = Parts per million
 mg/Kg = Milligrams per kilogram
 blank = No data

Laboratory analyses for chloride concentrations are presented in Table 1. Chloride concentrations ranged from 1,020 milligrams per kilogram (mg/kg) in soil boring SB-2 (3 feet) to 24.2 mg/kg at soil boring SB-1 (39 feet). TPH and BTEX laboratory analyses are present in Table 1. TPH and BTEX concentrations were detected in both soil borings. TPH_{GRO}, TPH_{DRO}

and BTEX concentrations were detected above NMOCD remedial action levels at 6 fbg and attenuated with depth. Benzene concentrations were only reported in the 6 fbg sample.

Conclusions

According to laboratory analyses of soils collected during this investigation, TPH and BTEX, were reported in the soil borings and were above NMOCD's remedial action level in the 6 fbg depth. Exposure pathway analysis indicated a ranking score of "10." Therefore, the site-specific remediation levels are 1,000 mg/kg for TPH, 50 mg/kg for BTEX and 10 mg/kg for benzene. Based on field screening results and supported by laboratory analyses presented in Table 1, the impacts to soil are above the NMOCD action level for TPH and BTEX and below action level for benzene.

Recommendations

Tetra Tech recommends the following actions be taken at Illinois Camp Well #1 Battery:

- Both storage tanks will be removed.
- Soil in the bermed catch basin will be excavated to a depth of approximately 8-10 feet and hauled to a State approved disposal location.
- Aliquot soil samples will be collected in a "W" pattern, composited into one sample for each sidewall and floor in the excavation, and field analyzed using PID determine that remediation levels have been achieved (< 1,000 ppm). Companion composite samples will also be submitted to a laboratory for TPH_{GRO}, TPH_{DRO}, BTEX and chloride confirmation analyses to confirm that these constituents have been removed to concentrations below remediation guidelines.
- Tetra Tech will supervise and direct all subcontractor activities, and following the construction activities, prepare a report describing and documenting what was done for closure activities at the Site, including a site map. This report on activities and results will be submitted for NMOCD's review and ultimate closure of this voluntary remediation.

If you agree with these recommendations, Tetra Tech, on-behalf of ConocoPhillips, requests NMOCD's approval on the recommended remediation action. If you have any questions concerning this request please call Mr. Jesse Sosa (ConocoPhillips, 575-391-3126) or me.

Sincerely,

Tetra Tech, Inc.

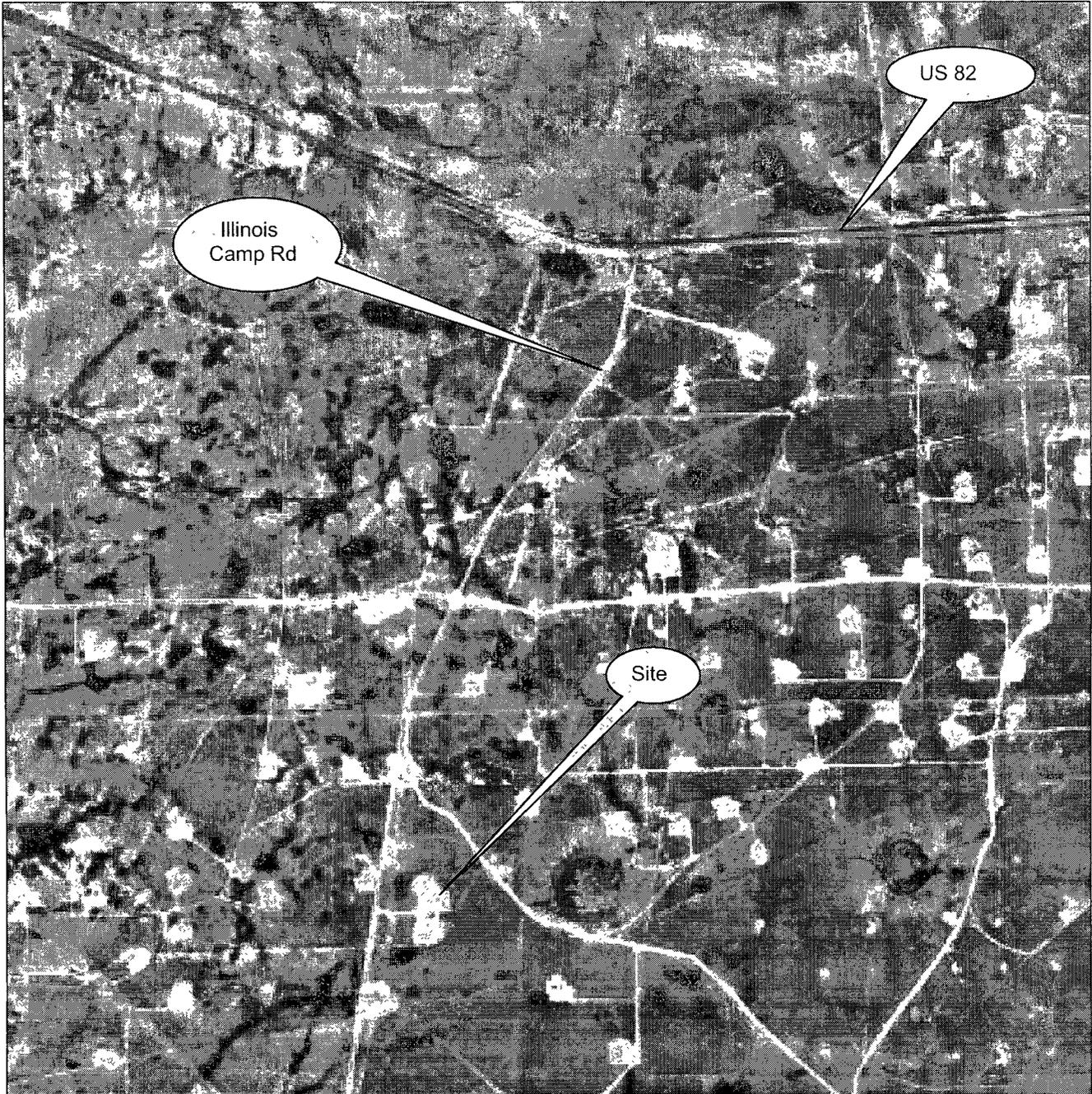
Charles Durrett

Digitally signed by Charles Durrett
DN: cn=Charles Durrett, o=TETRA TECH, ou=Midland,
TX, email=Charles.Durrett@TetraTech.com, c=US
Date: 2009.07.07 15:57:30 -0500

Charles Durrett
Project Manager

Cc: Mr. Jesse Sosa, ConocoPhillips





Source: Terraserver

<p>FIGURE 1</p>	<p>ILLINOIS CAMP WELL #1 BATTERY</p>
<p>ConocoPhillips</p>	<p>Tt TETRA TECH, INC.</p>
<p>Eddy County, Texas Unit D, Sec 5, T18S, R28E</p>	<p>PROJECT NO 1146400193 DRAWING BY: CWD DRAWING DATE 5/14/2009 COP PROJECT FILE</p>

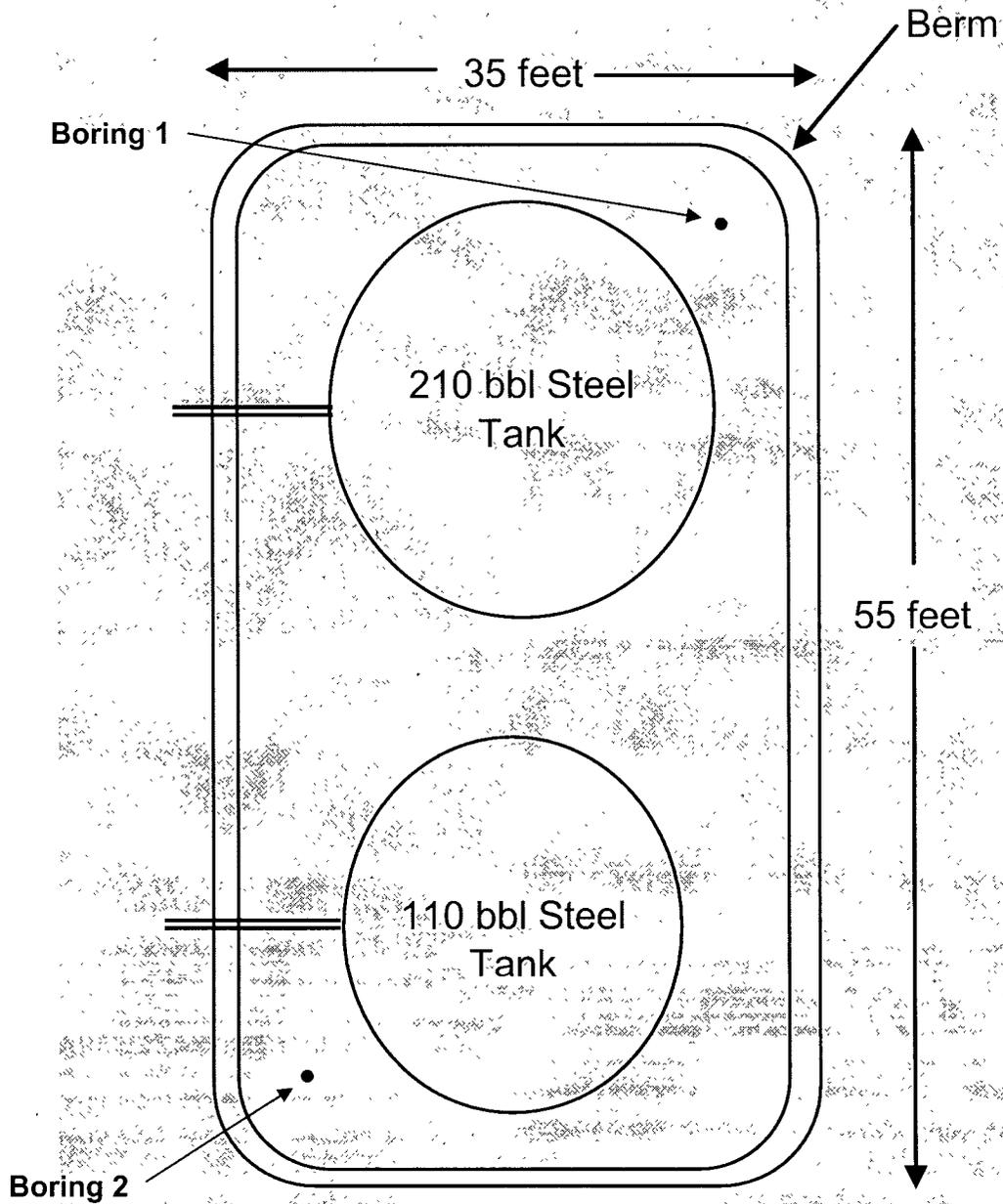
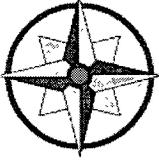


FIGURE 2	FACILITY
ConocoPhillips	 TETRA TECH, INC.
Illinois-Camp Well #1 Battery Eddy County, Texas Unit D, Sec 5, T18S, R28E	PROJECT NO. 1146400193 DRAWING BY: CWD DRAWING DATE 5/14/2009 COP PROJECT FILE

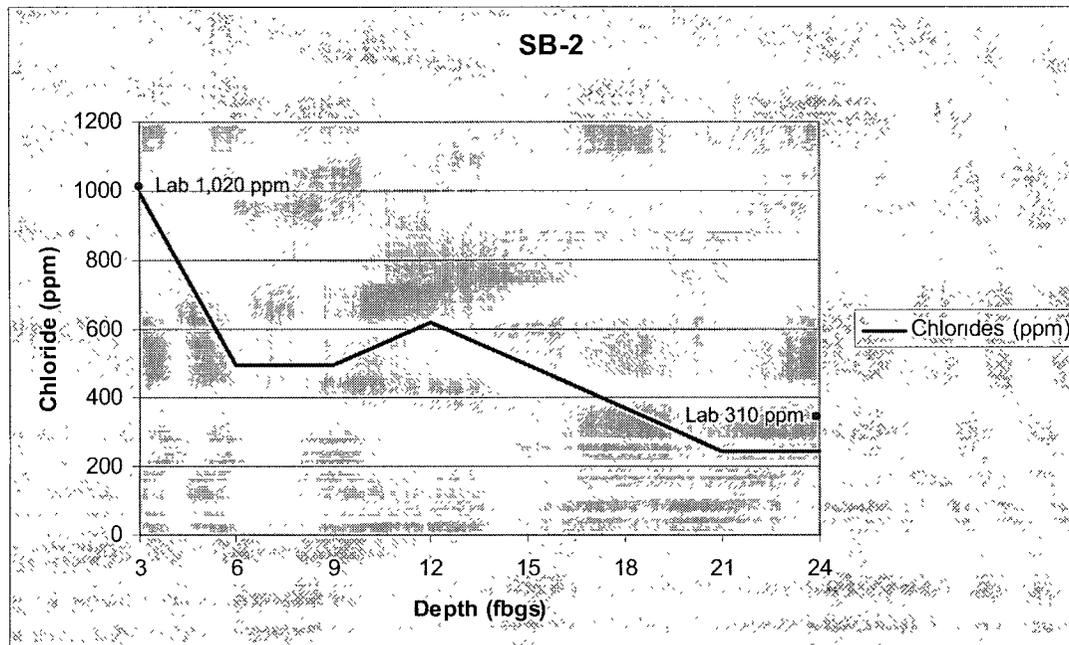
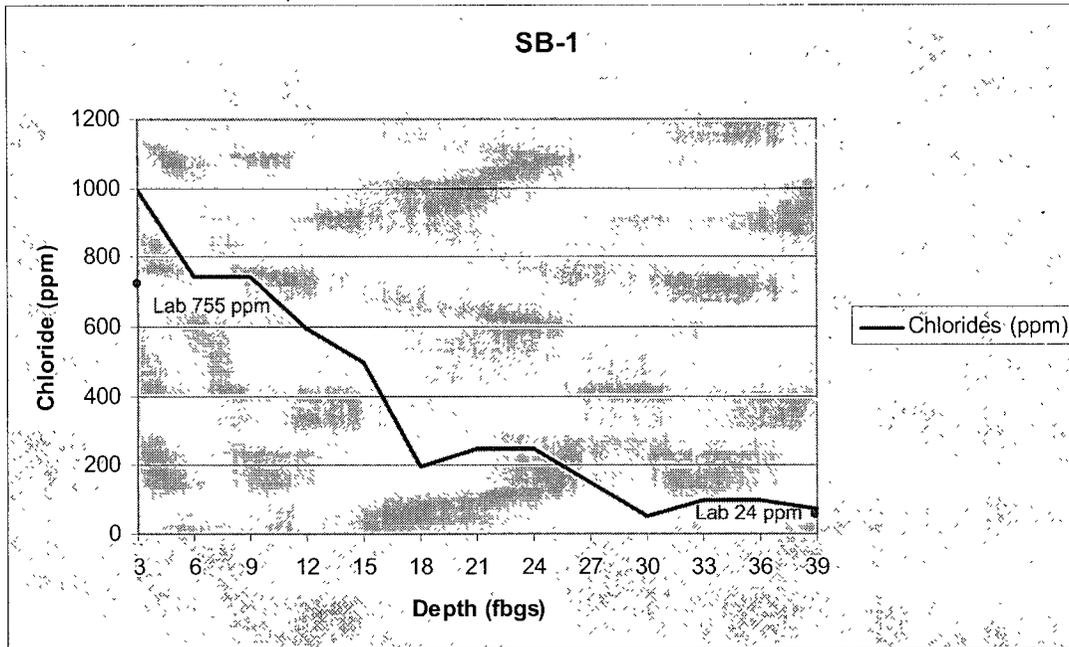


FIGURE 3	CHLORIDE TRENDS IN SOIL BORINGS (SB)
ConocoPhillips	Tt TETRA TECH, INC.
Illinois-Camp Well #1 Battery Eddy County, Texas Unit D, Sec 5, T18S, R28E	PROJECT NO 1146400193 DRAWING BY CWD DRAWING DATE 7/06/2009 COP PROJECT FILE

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

2RP 314

OPERATOR

Initial Report Final Report

Name of Company ConocoPhillips Company	Contact John W. Gates
Address 3300 North A St. Bldg 6, Midland, TX 79705-5406	Telephone No. 505.391.3158
Facility Name Illinois Camp Well No 1	Facility Type Oil and Gas

Surface Owner State Of New Mexico	Mineral Owner State Of New Mexico	Lease No 3001524485
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3001524485

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	5	18S	38E	1980	North	990	West	Eddy
D			28					

Latitude 32 46 684 Longitude 104 12 161

NATURE OF RELEASE

Type of Release Crude Oil & Produced Water	Volume of Release 90bbl (51oil, 39water)	Volume Recovered (0oil, 0water)
Source of Release 3X4" Swedge on east side of tank	Date and Hour of Occurrence 2/26/09 NA	Date and Hour of Discovery 2/26/09 1024
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Geoffrey Leking NMOCD	
By Whom? John Gates	Date and Hour 2/26/09 1430	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

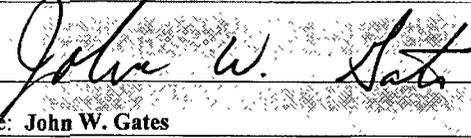
Describe Cause of Problem and Remedial Action Taken.*

3X4 inch swedge on east side of north tank failed due to internal/external corrosion. There were no fluids recovered. The tank was isolated, drained and removed from service.

Describe Area Affected and Cleanup Action Taken.*

15' X 36' area inside caliche dike with no cattle present. There were no fluids recovered. Spill site will be delineated and remediated in accordance with NMOCD guidelines

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: 	<u>OIL CONSERVATION DIVISION</u>	
Printed Name: John W. Gates	Approved by District Supervisor:	
Title: HSER Lead	Approval Date:	Expiration Date:
E-mail Address: John.W.Gates@conocophillips.com	Conditions of Approval:	Attached <input type="checkbox"/>
Date: 02/26/2009	Phone: 505.391.3158	

• Attach Additional Sheets If Necessary

APPENDIX A

Boring Logs



TETRA TECH, INC.

BORING LOG

Client Conoco Phillips
 Location Illinois Camp Well #1 Battery
 Boring/Well No. SB -1
 Surface Elevation _____
 Dates Drilled 5/29/2009
 Logged By Kindley
 Weather Sunny

Project No. 6400193
 Driller Lane Scarborough
 Drilling Co. Scarborough
 Boring Dia. 5 in.
 Fluids used Air
 Depth to Water Not Encountered

DEPTH (ft)	PID (ppm)	Cl (ppm)	SAMPLE DESCRIPTION
3	0	993	Tan sandy limestone with no odor or staining.
6	0	744	Tan sandy limestone with no odor or staining.
9	12	744	Tan sandy limestone with slight hydrocarbon odor
12	21	596	Tan sandy limestone with slight hydrocarbon odor
15	21	496	Tan sand with some limestone intermixed
18	21	199	Tan sand with some limestone intermixed
21	458	248	Tan sand with some limestone intermixed (strong hydrocarbon odor)
24	1500	248	Tan well sorted sand with strong hydrocarbon odor
27	645	149	Tan/red fine grain sand with hydrocarbon odor
30	904	50	Red fine grain sand with hydrocarbon odor
33	6.6	99	Tan fine grain sand
36	3.6	99	Red/brown fine grain sand
39	1	74	Red hard sandy clay

Total Depth is 39 feet

ft= feet below ground surface
 PID = Photo-ionization detector
 Cl = Chloride
 ppm = Parts per million



TETRA TECH, INC.

BORING LOG

Client Conoco Phillips
 Location Illinois Camp Well #1 Battery
 Boring/Well No. SB -1
 Surface Elevation _____
 Dates Drilled 5/29/2009
 Logged By Kindley
 Weather Sunny

Project No. 6400193
 Driller Lane Scarborough
 Drilling Co. Scarborough
 Boring Dia. 5 in.
 Fluids used Air
 Depth to Water Not Encountered

DEPTH (ft)	PID (ppm)	Cl (ppm)	SAMPLE DESCRIPTION
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27	645	149	Tan/red fine grain sand with hydrocarbon odor
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33	66	99	Tan fine grain sand
36	36	99	Red/brown fine grain sand
39	1	74	Red hard sandy clay

Total Depth is 39 feet

ft= feet below ground surface
 PID = Photo-ionization detector
 Cl = Chloride
 ppm = Parts per million

APPENDIX B
Laboratory Analyses



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

Case Narrative for:
Conoco Phillips

Certificate of Analysis Number:
09060049

<p>Report To:</p> <p>Tetra Tech Charlie Durrett 1910 N. Big Spring St</p> <p>Midland TX 79705- ph: (432) 682-4559 fax:</p>	<p>Project Name: Illinois Camp Well#1 Battery</p> <p>Site: Artisia, NM</p> <p>Site Address:</p> <p>PO Number:</p> <p>State: New Mexico</p> <p>State Cert. No.:</p> <p>Date Reported: 6/9/2009</p>
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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 Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Your sample ID "SB-1 24" (SPL ID 09060049-02) was randomly selected for use in SPL's quality control program for the Purgeable Aromatics analysis by SW846 Method 8021B (Batch ID R274588). The Matrix Spike (MS) and Matrix Spike Duplicate (MSD) recoveries were outside of the advisable quality control limits due to possible matrix interference for the following analytes

Ethylbenzene
 Toluene
 o-Xylene

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.

09060049 Page 1

6/23/2009

Erica Cardenas
 Project Manager

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

Date



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

Conoco Phillips

Certificate of Analysis Number:

09060049

Report To: Tetra Tech
 Charlie Durrett
 1910 N. Big Spring St

Midland

TX

79705-

ph: (432) 682-4559

fax: (432) 686-8085

Project Name: Illinois Camp Well#1 Battery

Site: Artisia, NM

Site Address:

PO Number:

State: New Mexico

State Cert. No.:

Date Reported: 6/9/2009

Fax To:

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SB-1 3'	09060049-01	Soil	5/29/2009	6/2/2009 9 30 00 AM	270417	<input type="checkbox"/>
SB-1 24'	09060049-02	Soil	5/29/2009	6/2/2009 9:30 00 AM	270417	<input type="checkbox"/>
SB-1 39'	09060049-03	Soil	5/29/2009	6/2/2009 9 30 00 AM	270417	<input type="checkbox"/>
SB-2 3'	09060049-04	Soil	5/29/2009	6/2/2009 9 30 00 AM	270417	<input type="checkbox"/>
SB-2 24'	09060049-05	Soil	5/29/2009	6/2/2009 9:30:00 AM	270417	<input type="checkbox"/>
SB-2 6'	09060049-06	Soil	5/29/2009	6/2/2009 9 30 00 AM	270417	<input type="checkbox"/>

Enca Cardenas

6/23/2009

Enca Cardenas
 Project Manager

Date

Kesavalu M. Bagawandoss Ph.D., J.D.
 Laboratory Director

Ted Yen
 Quality Assurance Officer



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

Client Sample ID: SB-1 3' Collected: 05/29/2009 0:00 SPL Sample ID: 09060049-01

Site: Artisia, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0 MOD	Units: mg/kg-dry	
Chloride	755		57	10	06/03/09 19 58	BDG	5050351
PERCENT MOISTURE				MCL	D2216	Units: wt%	
Percent Moisture	12.3		0	1	06/02/09 17 29	CFS	5047540

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: SB-1 24' Collected: 05/29/2009 0:00 SPL Sample ID: 09060049-02

Site: Artisia, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	SW8015B	Units: mg/kg-dry	
Diesel Range Organics (C10-C28)	270		27	5	06/04/09 11 49	NW	5050742
Surr n-Pentacosane	98.7		% 20-154	5	06/04/09 11 49	NW	5050742

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/03/2009 12:01	QMT	1.00

GASOLINE RANGE ORGANICS				MCL	SW8015B	Units: mg/kg-dry	
Gasoline Range Organics	91		54	500	06/03/09 19:29	WLV	5051619
Surr 1,4-Difluorobenzene	96.5		% 63-142	500	06/03/09 19:29	WLV	5051619
Surr 4-Bromofluorobenzene	114		% 50-159	500	06/03/09 19:29	WLV	5051619

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10:46	XML	1.00

PERCENT MOISTURE				MCL	D2216	Units: wt%	
Percent Moisture	7.7		0	1	06/02/09 17:29	CFS	5047538

PURGEABLE AROMATICS				MCL	SW8021B	Units: ug/kg-dry	
Benzene	ND		1.1	1	06/04/09 15:42	WLV	5051934
Toluene	200		27	25	06/04/09 16:41	WLV	5051935
Ethylbenzene	980		27	25	06/04/09 16:41	WLV	5051935
m,p-Xylene	5400		27	25	06/04/09 16:41	WLV	5051935
o-Xylene	1900		27	25	06/04/09 16:41	WLV	5051935
Xylenes, Total	7300		27	25	06/04/09 16:41	WLV	5051935
Surr 1,4-Difluorobenzene	94.4		% 70-130	25	06/04/09 16:41	WLV	5051935
Surr 1,4-Difluorobenzene	102		% 70-130	1	06/04/09 15:42	WLV	5051934
Surr 4-Bromofluorobenzene	131		% 63-145	25	06/04/09 16:41	WLV	5051935
Surr 4-Bromofluorobenzene	395 MI	*	% 63-145	1	06/04/09 15:42	WLV	5051934

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/04/2009 10:10	XML	1.00
SW5030B	06/03/2009 10:46	XML	1.00

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: SB-1 39' Collected: 05/29/2009 0:00 SPL Sample ID: 09060049-03

Site: Artisia, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS			MCL	SW8015B	Units: mg/kg-dry		
Diesel Range Organics (C10-C28)	8.2		5.4	1	06/04/09 11:09	NW	5050740
Surr. n-Pentacosane	88.9		% 20-154	1	06/04/09 11:09	NW	5050740

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/03/2009 12:01	QMT	1.00

GASOLINE RANGE ORGANICS			MCL	SW8015B	Units: mg/kg-dry		
Gasoline Range Organics	ND		0.11	1	06/03/09 20:25	WLV	5051621
Surr. 1,4-Difluorobenzene	97.0		% 63-142	1	06/03/09 20:25	WLV	5051621
Surr. 4-Bromofluorobenzene	103		% 50-159	1	06/03/09 20:25	WLV	5051621

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10:50	XML	1.00

ION CHROMATOGRAPHY			MCL	E300.0 MOD	Units: mg/kg-dry		
Chloride	24.2		5.38	1	06/03/09 17:45	BDG	5050346

PERCENT MOISTURE			MCL	D2216	Units: wt%		
Percent Moisture	7.02		0	1	06/02/09 17:29	CFS	5047537

PURGEABLE AROMATICS			MCL	SW8021B	Units: ug/kg-dry		
Benzene	ND		1.1	1	06/03/09 20:25	WLV	5051844
Toluene	ND		1.1	1	06/03/09 20:25	WLV	5051844
Ethylbenzene	ND		1.1	1	06/03/09 20:25	WLV	5051844
m,p-Xylene	ND		1.1	1	06/03/09 20:25	WLV	5051844
o-Xylene	ND		1.1	1	06/03/09 20:25	WLV	5051844
Xylenes, Total	ND		1.1	1	06/03/09 20:25	WLV	5051844
Surr. 1,4-Difluorobenzene	95.3		% 70-130	1	06/03/09 20:25	WLV	5051844
Surr. 4-Bromofluorobenzene	99.3		% 63-145	1	06/03/09 20:25	WLV	5051844

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10:50	XML	1.00

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: SB-2 3' Collected: 05/29/2009 0 00 SPL Sample ID: 09060049-04

Site: Artisia, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
ION CHROMATOGRAPHY				MCL	E300.0 MOD	Units: mg/kg-dry	
Chloride	1020		62	10	06/03/09 20 37	BDG	5050352
PERCENT MOISTURE				MCL	D2216	Units: wt%	
Percent Moisture	19.4		0	1	06/02/09 17 29	CFS	5047536

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: SB-2 24' Collected: 05/29/2009 0:00 SPL Sample ID: 09060049-05

Site: Artisia, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	SW8015B	Units: mg/kg-dry	
Diesel Range Organics (C10-C28)	ND		5.5	1	06/04/09 11:29	NW	5050741
Surr: n-Pentacosane	118		% 20-154	1	06/04/09 11:29	NW	5050741

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/03/2009 12:01	QMT	1.00

GASOLINE RANGE ORGANICS				MCL	SW8015B	Units: mg/kg-dry	
Gasoline Range Organics	ND		0.11	1	06/03/09 20:53	WLV	5051622
Surr: 1,4-Difluorobenzene	98.1		% 63-142	1	06/03/09 20:53	WLV	5051622
Surr: 4-Bromofluorobenzene	104		% 50-159	1	06/03/09 20:53	WLV	5051622

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10:52	XML	1.00

ION CHROMATOGRAPHY				MCL	E300.0 MOD	Units: mg/kg-dry	
Chloride	310		55.5	10	06/03/09 20:56	BDG	5050353

PERCENT MOISTURE				MCL	D2216	Units: wt%	
Percent Moisture	9.9		0	1	06/02/09 17:29	CFS	5047535

PURGEABLE AROMATICS				MCL	SW8021B	Units: ug/kg-dry	
Benzene	ND		1.1	1	06/03/09 20:53	WLV	5051845
Toluene	ND		1.1	1	06/03/09 20:53	WLV	5051845
Ethylbenzene	ND		1.1	1	06/03/09 20:53	WLV	5051845
m,p-Xylene	ND		1.1	1	06/03/09 20:53	WLV	5051845
o-Xylene	ND		1.1	1	06/03/09 20:53	WLV	5051845
Xylenes, Total	ND		1.1	1	06/03/09 20:53	WLV	5051845
Surr: 1,4-Difluorobenzene	96.5		% 70-130	1	06/03/09 20:53	WLV	5051845
Surr: 4-Bromofluorobenzene	102		% 63-145	1	06/03/09 20:53	WLV	5051845

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10:52	XML	1.00

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count



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

Client Sample ID: SB-2 6' Collected: 05/29/2009 0:00 SPL Sample ID: 09060049-06

Site: Artisia, NM

Analyses/Method	Result	QUAL	Rep.Limit	Dil. Factor	Date Analyzed	Analyst	Seq. #
DIESEL RANGE ORGANICS				MCL	SW8015B	Units: mg/kg-dry	
Diesel Range Organics (C10-C28)	2100		150	20	06/04/09 12 09	NW	5050743
Surr n-Pentacosane	D	*	% 20-154	20	06/04/09 12 09	NW	5050743

Prep Method	Prep Date	Prep Initials	Prep Factor
SW3550B	06/03/2009 12 01	QMT	1 00

GASOLINE RANGE ORGANICS				MCL	SW8015B	Units: mg/kg-dry	
Gasoline Range Organics	2000		73	500	06/03/09 19:57	WLV	5051620
Surr 1,4-Difluorobenzene	108		% 63-142	500	06/03/09 19 57	WLV	5051620
Surr 4-Bromofluorobenzene	257 MI	*	% 50-159	500	06/03/09 19 57	WLV	5051620

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10.48	XML	1 00

PERCENT MOISTURE				MCL	D2216	Units: wt%	
Percent Moisture	31 1		0	1	06/02/09 17:29	CFS	5047534

PURGEABLE AROMATICS				MCL	SW8021B	Units: ug/kg-dry	
Benzene	1300		360	250	06/04/09 14 04	WLV	5051933
Toluene	76000		360	250	06/04/09 14:04	WLV	5051933
Ethylbenzene	37000		360	250	06/04/09 14 04	WLV	5051933
m,p-Xylene	150000		360	250	06/04/09 14 04	WLV	5051933
o-Xylene	39000		360	250	06/04/09 14 04	WLV	5051933
Xylenes, Total	189000		363	250	06/04/09 14:04	WLV	5051933
Surr 1,4-Difluorobenzene	102		% 70-130	250	06/04/09 14:04	WLV	5051933
Surr 4-Bromofluorobenzene	195 MI	*	% 63-145	250	06/04/09 14.04	WLV	5051933

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/03/2009 10:48	XML	1 00

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)
 B/V - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution
 * - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference
 J - Estimated Value between MDL and PQL
 E - Estimated Value exceeds calibration curve
 TNTC - Too numerous to count

Quality Control Documentation



Quality Control Report

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

Conoco Phillips
 Illinois Camp Well#1 Battery

Analysis: Diesel Range Organics
Method: SW8015B

WorkOrder: 09060049
Lab Batch ID: 90755

Method Blank

Samples in Analytical Batch:

RunID: HP_V_090603A-5050726 Units: mg/kg
 Analysis Date: 06/03/2009 16 49 Analyst: NW
 Preparation Date: 06/03/2009 12 01 Prep By: QMT Method SW3550B

Lab Sample ID	Client Sample ID
09060049-02A	SB-1 24'
09060049-03A	SB-1 39'
09060049-05A	SB-2 24'
09060049-06A	SB-2 6'

Analyte	Result	Rep Limit
Diesel Range Organics (C10-C28)	ND	5.0
Surr: n-Pentacosane	98.7	20-154

Laboratory Control Sample (LCS)

RunID: HP_V_090603A-5050727 Units: mg/kg
 Analysis Date: 06/03/2009 17 09 Analyst: NW
 Preparation Date: 06/03/2009 12:01 Prep By: QMT Method SW3550B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	33.3	32.3	97.0	57	150
Surr: n-Pentacosane	1.66	1.72	104	20	154

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

Sample Spiked: 09060101-06
 RunID: HP_V_090603A-5050733 Units: mg/kg-dry
 Analysis Date: 06/03/2009 21 54 Analyst: NW
 Preparation Date: 06/03/2009 12:01 Prep By: QMT Method SW3550B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Diesel Range Organics (C10-C28)	5330	34.7	3990	N/C	34.7	2040	N/C	N/C	50	21	175
Surr: n-Pentacosane	ND	1.73	D	D	1.73	D	D	D	30	20	154

Qualifiers: 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
 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.



Quality Control Report

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

Conoco Phillips
Illinois Camp Well#1 Battery

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 09060049
Lab Batch ID: R274429

Method Blank

Samples in Analytical Batch:

RunID HP_O_090603A-5049287 Units ug/kg
Analysis Date: 06/03/2009 11:54 Analyst WLV Lab Sample ID 09060049-03A Client Sample ID SB-1 39'
Preparation Date 06/03/2009 11:54 Prep By: Method SW5030B 09060049-05A SB-2 24'

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, Surr 1,4-Difluorobenzene, Surr 4-Bromofluorobenzene.

Laboratory Control Sample (LCS)

RunID: HP_O_090603A-5049286 Units: ug/kg
Analysis Date: 06/03/2009 11:26 Analyst: WLV
Preparation Date: 06/03/2009 11:26 Prep By: Method SW5030B

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, Surr 1,4-Difluorobenzene, Surr 4-Bromofluorobenzene.

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

Sample Spiked: 09060101-01
RunID: HP_O_090603A-5049291 Units: ug/kg-dry
Analysis Date: 06/03/2009 14:03 Analyst: WLV
Preparation Date: 06/03/2009 11:18 Prep By: XML Method SW5030B

Qualifiers: 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
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



Quality Control Report

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

Conoco Phillips
 Illinois Camp Well#1 Battery

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 09060049
Lab Batch ID: R274429

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	20.3	18.5	90.4	20.3	19.6	95.9	5.84	31	41	133
Ethylbenzene	ND	20.3	14.6	71.8	20.3	15.7	77.3	7.38	39	31	129
Toluene	ND	20.3	17.4	85.8	20.3	18.7	92.3	7.32	25	34	130
m,p-Xylene	ND	40.6	28.4	69.9	40.6	30.3	74.6	6.45	26	35	123
o-Xylene	ND	20.3	14.0	69.0	20.3	14.8	72.8	5.37	35	33	124
Xylenes, Total	ND	60.9	42.4	69.6	60.9	45.1	74.0	6.10	35	33	124
Surr: 1,4-Difluorobenzene	ND	101	98.4	97.0	101	97.8	96.3	0.687	30	70	130
Surr: 4-Bromofluorobenzene	ND	101	102	101	101	101	99.8	0.826	30	63	145

Qualifiers: ND/U - Not Detected at the Reporting Limit
 B/V - Analyte detected in the associated Method Blank
 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

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

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



Quality Control Report

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

Conoco Phillips
Illinois Camp Well#1 Battery

Analysis: Gasoline Range Organics
Method: SW8015B

WorkOrder: 09060049
Lab Batch ID: R274576

Method Blank

Samples in Analytical Batch:

RunID: HP_O_090603C-5051611 Units: mg/kg
Analysis Date: 06/03/2009 11:54 Analyst: WLV
Preparation Date: 06/03/2009 11:54 Prep By: Method SW5030B

Lab Sample ID Client Sample ID
09060049-02A SB-1 24'
09060049-03A SB-1 39'
09060049-05A SB-2 24'
09060049-06A SB-2 6'

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Gasoline Range Organics, Surr 1,4-Difluorobenzene, and Surr 4-Bromofluorobenzene.

Laboratory Control Sample (LCS)

RunID: HP_O_090603C-5051615 Units: mg/kg
Analysis Date: 06/03/2009 17:36 Analyst: WLV
Preparation Date: 06/03/2009 17:36 Prep By: Method SW5030B

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Gasoline Range Organics, Surr 1,4-Difluorobenzene, and Surr 4-Bromofluorobenzene.

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

Sample Spiked: 09060101-01
RunID: HP_O_090603C-5051617 Units: mg/kg-dry
Analysis Date: 06/03/2009 18:32 Analyst: WLV
Preparation Date: 06/03/2009 11:18 Prep By: XML Method SW5030B

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Gasoline Range Organics, Surr 1,4-Difluorobenzene, and Surr 4-Bromofluorobenzene.

Qualifiers: 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
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



Quality Control Report

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

Conoco Phillips
Illinois Camp Well#1 Battery

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 09060049
Lab Batch ID: R274588

Method Blank

Samples in Analytical Batch:

RunID: HP_O_090604A-5051931 Units: ug/kg
Analysis Date: 06/04/2009 13 08 Analyst: WLW
Preparation Date: 06/04/2009 13 08 Prep By: Method SW5030B
Lab Sample ID: 09060049-02A Client Sample ID: SB-1 24'
09060049-06A Client Sample ID: SB-2 6'

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and two Surr entries.

Laboratory Control Sample (LCS)

RunID: HP_O_090604A-5051930 Units: ug/kg
Analysis Date: 06/04/2009 12 12 Analyst: WLW
Preparation Date: 06/04/2009 12 12 Prep By: Method SW5030B

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and two Surr entries.

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

Sample Spiked: 09060049-02
RunID: HP_O_090604A-5053596 Units: ug/kg-dry
Analysis Date: 06/05/2009 0.24 Analyst: WLW
Preparation Date: 06/04/2009 11 01 Prep By: XML Method SW5030B

Qualifiers: 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
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



Quality Control Report

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

Conoco Phillips
Illinois Camp Well#1 Battery

Analysis: Purgeable Aromatics
Method: SW8021B

WorkOrder: 09060049
Lab Batch ID: R274588

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Rows include Benzene, Ethylbenzene, Toluene, m,p-Xylene, o-Xylene, Xylenes, Total, and various surrogates.

Qualifiers: ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
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
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits
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



Quality Control Report

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

Conoco Phillips
Illinois Camp Well#1 Battery

Analysis: PERCENT MOISTURE
Method: D2216

WorkOrder: 09060049
Lab Batch ID: R274319

Samples in Analytical Batch:

Table with 2 columns: Lab Sample ID, Client Sample ID. Rows include 09060049-01A through 09060049-06A.

Sample Duplicate

Original Sample: 09060049-01
RunID: WET_090602G-5047540 Units: wt%
Analysis Date: 06/02/2009 17:29 Analyst: CFS

Table with 5 columns: Analyte, Sample Result, DUP Result, RPD, RPD Limit. Row for Percent Moisture shows values 12.3, 12.33, 0, 20.

Qualifiers: ND/U - Not Detected at the Reporting Limit
B/V - Analyte detected in the associated Method Blank
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
TNTC - Too numerous to count
MI - Matrix Interference
D - Recovery Unreportable due to Dilution
* - Recovery Outside Advisable QC Limits



Quality Control Report

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

Conoco Phillips
Illinois Camp Well#1 Battery

Analysis: Ion Chromatography
Method: E300.0 MOD

WorkOrder: 09060049
Lab Batch ID: R274501

Method Blank

Samples in Analytical Batch:

RunID: IC1_090603C-5050354 Units: mg/kg
Analysis Date: 06/03/2009 22 12 Analyst: BDG

Lab Sample ID Client Sample ID
09060049-01A SB-1 3'
09060049-03A SB-1 39'
09060049-04A SB-2 3'
09060049-05A SB-2 24'

Table with 3 columns: Analyte, Result, Rep Limit. Row: Chloride, ND, 5.0

Laboratory Control Sample (LCS)

RunID: IC1_090603C-5050355 Units: mg/kg
Analysis Date: 06/03/2009 22 31 Analyst: BDG

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Chloride, 100.0, 92.11, 92.11, 80, 120

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

Sample Spiked: 09060049-01
RunID: IC1_090603C-5050347 Units: mg/kg-dry
Analysis Date: 06/03/2009 18 42 Analyst: BDG

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Chloride, 755.0, 1140, 2101, 118.0, 1140, 2139, 121.4, 1783, 20, 75, 125

Qualifiers: 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
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

*Sample Receipt Checklist
And
Chain of Custody*



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

Sample Receipt Checklist

Workorder:	09060049	Received By:	RE
Date and Time Received:	6/2/2009 9:30:00 AM	Carrier name:	SPL
Temperature:	2.5°C	Chilled by:	Water Ice

1. Shipping container/cooler in good condition? Yes No Not Present
2. Custody seals intact on shipping container/cooler? Yes No Not Present
3. Custody seals intact on sample bottles? Yes No Not Present
4. Chain of custody present? Yes No
5. Chain of custody signed when relinquished and received? Yes No
6. Chain of custody agrees with sample labels? Yes No
7. Samples in proper container/bottle? Yes No
8. Sample containers intact? Yes No
9. Sufficient sample volume for indicated test? Yes No
10. All samples received within holding time? Yes No
11. Container/Temp Blank temperature in compliance? Yes No
12. Water - VOA vials have zero headspace? Yes No VOA Vials Not Present
13. Water - Preservation checked upon receipt (except VOA*)? Yes No Not Applicable

*VOA Preservation Checked After Sample Analysis

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:



SPL, Inc. 09060049

SPL Workorder No. 270417

Analysis Request & Chain of Custody Record

Gener. Phillip Business Unit Hobbs page 1 of 1

Client Name: ConocoPhillips/Tetra Tech					matrix O=oil S=soil SL=sludge X=other	bottle A=amber glass V=vial X=other	size 1=1 liter 4=4oz 8=8oz 16=16oz 40=4oz X=other	pres. 1=HCl 2=HNO3 3=H2SO4 X=other	Number of Containers	Requested Analysis															
Address: 1910 N. Big Spring Blvd. TX 79705										TPH (GRO-DRD) (805 modified)	CHLORIDE (300)	BTEX (8021B)													
Phone/Fax: 432-686-8081																									
Client Contact: C. Dursett Email: ches.dursett@tetratech.com																									
Project Name/No.: Subcontract Investigation - 6400139																									
Site Name: Illinois Camp Well #1 Battery																									
Site Location: Artesia, NM																									
Invoice To: Business Unit Hobbs Ph:																									
SAMPLE ID	DATE	TIME	comp	grab	W=water S=soil SL=sludge X=other	P=plastic G=glass V=vial X=other	1=1 liter 4=4oz 8=8oz 16=16oz 40=4oz X=other	1=HCl 2=HNO3 3=H2SO4 X=other	Number of Containers	TPH (GRO-DRD) (805 modified)	CHLORIDE (300)	BTEX (8021B)													
SB-1 3'	5/24/09			X	S	G	4	X	31		X														
SB-1 24'	5/24/09			X	S	G	4	X	1	X		X													
SB-1 39'	5/29/09			X	S	G	4	X	1	X	X	X													
SB-2 3'	5/24/09			X	S	G	4	X	1	X	X	X													
SB-2 24'	5/24/09			X	S	G	4	X	1	X	X	X													
SB-2 6'	05/29/09			X	S	G	4	X	1	X		X													

RUSH

Client/Consultant Remarks: Laboratory remarks: Intact? Y N
 Ice? Y N
 Temp: 2.5C

Requested TAT
 Contract 72hr
 24hr Standard
 48hr
 Other ASAP

Special Reporting Requirements Results: Fax Email PDF
 Standard QC Level 3 QC Level 4 QC TX TRRP LA RECAP

Special Detection Limits (specify): PM review (initial):

1. Relinquished by Sampler:	date	time	2. Received by:
<i>[Signature]</i>	4/1/09	1000	
3. Relinquished by:	date	time	4. Received by:
5. Relinquished by:	date	time	6. Received by Laboratory:
	6/100		<i>[Signature]</i>