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1625 N French Dr., Hobbs, NM 88240 State District II French Dr., Hobbs, NM 88240 Frenzy Mines	e of New Mexico		Form C-141			
JSBUELT     Energy Wither       1301 W. Grand Avenue, Artesia, NM 88210     District IU       1000 Rio Brazos Road, Aztec, NM 87410     Oil Cor       District IV     1220 Se	ad, Aztec, NM 87410 ad, Aztec, NM 87410 Energy Minerals and Natural Resources Oil Conservation Division 1220 South St. Francis Dr.					
.220 S. St. Francis Dr., Santa Fe, NM 87505 Sant	ta Fe, NM 87505		side of form			
Release Notificat	tion and Corrective Act	ion	2RP-154			
Name of Company ConocoPhillips Pine Line Company	OPERATOR Contact Kirby Shinn	Initia	Report 🛛 Final Report			
Address 4001 East 42 <sup>nd</sup> Street – Odessa, TX 79762 Facility Name Loco Hills Truck Unloading Facility	Telephone No. 575-391-8262 Facility Type Sour Crude Oil	njection Site				
Surface Owner U.S. Department of interior, Mineral Own Bureau of Land Management	ner	Lease N	D. NM 101867			
LOCAT	ION OF RELEASE					
Unit Letter Section Township Range Fect from the N D 29 17S 30E 130 fect N	lorth/South Line Feet from the E lorthwest 160 feet W	ast/West Linc /est	County Eddy			
Latitude_N 32 48.491	Longitude W103 59.598					
NATU	RE OF RELEASE	Volumo Re	covered 0			
Source of Release Pump site, suction pulsation dampner	Date and Hour of Occurrence 2/17/08 4:50 to 05:17 pm	Date and H 02/27/08 0	our of Discovery 5:17pm			
Was Immediate Notice Given?	ired Ponca City Control Center; NM	If YES, To Whom? d Ponca City Control Center; NMOCD Santa Fe Office, NMOCD District 2				
by Whom? Kirby Shipp contacted the control center, and Thomas La ontacted the NMOCD	ki Date and Hour NMOCD Was contacted on 2/27/08 at approximately 8:35 pm and 8.40 pm, respectively.					
Was a Watercourse Reached?						
f a Watercourse was Impacted, Describe Fully.*	NA .					
L Yes X No f a Watercourse was Impacted, Describe Fully.* NA Describe Cause of Problem and Remedial Action Taken.* A bolt sheared off of a clamp holding an end cap on a suction pulsatio o pull crude from the storage tank and LACT unit out to the line whic	NA on dampner for a PD pump resulting in ch feeds Buckeye Station The release	a fantail spray of lasted approxima	Crude oil. The pump is used tely 1.25 hours			
L Yes X No If a Watercourse was Impacted, Describe Fully.* NA Describe Cause of Problem and Remedial Action Taken.* A bolt sheared off of a clamp holding an end cap on a suction pulsatio o pull crude from the storage tank and LACT unit out to the line which Describe Area Affected and Cleanup Action Taken * See attached request for closure report.	NA on dampner for a PD pump resulting in ch feeds Buckeye Station The release	a fantail spray of lasted approxima	Crude oil. The pump is used tely 1.25 hours			
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If a Watercourse was Impacted, Describe Fully.* NA Describe Cause of Problem and Remedial Action Taken.* A bolt sheared off of a clamp holding an end cap on a suction pulsatio o pull crude from the storage tank and LACT unit out to the line whic Describe Area Affected and Cleanup Action Taken * See attached request for closure report.  Increby certify that the information given above is true and complete egulations all operators are required to report and/or file certain releas ublic health or the environment. The acceptance of a C-141 report hould their operations have failed to adequately investigate and remed r the environment. In addition, NMOCD acceptance of a C-141 report gignature:  rinted Name: Charles Durrett itle: Sr. Project Manager -mail Address: charles.durrett@tctratech.com	NA on dampner for a PD pump resulting in the feeds Buckeye Station The release to the best of my knowledge and under se notifications and perform corrective y the NMOCD marked as "Final Repordiate contamination that pose a threat to rit does not relieve the operator of respondiate contamination that pose a threat to <u>OIL CONSEI</u> Approved by District Supervisor Approval Date: <b>Q-5-08</b> Conditions of Approval:	a fantail spray of lasted approxima stand that pursua actions for relea: t" does not reliev o ground water, s onsibility for con <b>RVATION D</b> <b>Expiration Da</b>	The pump is used   tely 1.25 hours   Int to NMOCD rules and tes which may endanger the the operator of liability turface water, human health turface water, human health turface with any other IVISION Solution Solution Attached			

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



TETRA TECH, INC.

August 27, 2008

Ms. Sherry Bonham NM Oil Conservation Division 1301 W. Grand Ave. Artesia, NM 882310

Mr. Paul Evans US Bureau of Land Management 620 E. Greene St. Carlsbad, NM 88220

RE: Loco Hills Truck Loading Station Request for Closure Eddy County, New Mexico Sec. 29, T17S, R30E 2RP-154

Dear Ms. Bonham and Mr. Evans:

On behalf of ConocoPhillips Pipe Line Company (CPPL), Tetra Tech, Inc. (Tetra Tech) requests closure of remediation activities at CPPL's Loco Hills Truck Loading Station (Site; Figure 1, Photo Log). Work performed at the Site was in support of CPPL's efforts to delineate and remediate a recent 97 barrel crude oil release (C141 attached). The Site is located approximately 1 mile southwest of Loco Hills in Eddy County, New Mexico (32° 48.49098N, 103° 59.598W). The Bureau of Land Management 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 evaporites<sup>1</sup>. In the immediate vicinity of the Site, topography is nearly level to moderately undulating. The Kermit-Berino soil complex at the Site is loamy fine sand overlying fractured indurated caliche.<sup>2</sup>

#### **Exposure Pathway Analysis**

Depth to water in the vicinity of the Site is estimated at over 100 feet below ground surface (fbgs). This interpretation is based potentiometric surface contours (330 fbgs) described by Hiss<sup>1</sup> for aquifer systems in northern Eddy County. The New Mexico Office of State Engineer's database and the United States Geological Survey's database<sup>3,4</sup> did not yield any depth to groundwater information in this area. The U.S. Geological Survey, 1955 topographic map, 1:24,000 scale, entitled "Red Lake SE New Mexico" identifies a windmill approximately 4.6 miles

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

<sup>&</sup>lt;sup>2</sup> U.S. Department of Agriculture, Natural Resources Conservation Services. Webb Soil Survey Database.

<sup>&</sup>lt;sup>3</sup> New Mexico Office of State Engineer. W.A.T.E.R.S. Database.

<sup>&</sup>lt;sup>4</sup> United States Geological Survey. Groundwater Levels for the Nation Database.

northwest of the Site. No information is available on the depth of water at this location. The nearest surface water body is a playa, located approximately 800 feet west 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 (OCD), this Site has the following score:

<u>Criteria</u>		Ranking <u>Score</u>
Depth to groundwater	>100 feet	0
Distance from water source	>1000 feet	0
Distance from domestic water source	>200 feet	0
Distance from surface water body	<1,000 feet	<u>10</u>
Total Ranking Score		10

The remediation action level for a ranking score of <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).

#### Scope of Work

Approximately 2,400 cubic yards of oily soil was excavated in the affected area (Figure 2) and placed on 20-mil plastic. Soil samples were collected from the base of the excavation and three side walls (north, west and south). The east side extended into the pump area and this area was excavated by hand. 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 diesel and gasoline range TPH (TPHDRO and TPHGRO, Method 8015B), and BTEX (Method 8021).

For disposal purposes, aliquot samples were collected from two oily soil piles and composited into 6 samples. These 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 TPH<sub>DRO</sub> and TPH<sub>GRO</sub> (Method 8015B), and BTEX TCLP analysis (Method 1311/ 8260B). Since concentrations of TPH and BTEX were higher in the smaller oily soil pile the sample from this pile was also analyzed for hazardous characteristics corrosivity (Method SW9045D), reactivity (Methods SW 7.3.3.2 and 7.3.4.2), and metals (mercury, and arsenic barium, cadmium, chromium, lead, selenium and silver; Methods SW 7471A and 6020A, respectively), TCLP analysis for the metals was also performed (Method 1311/ SW 7470A and /SW 6010B). All samples from both oily piles were combined and analyzed for ignitability (Method ASTM D92-01).

#### Findings

Excavations advanced during the investigation at the Site encountered reddish sandy dune soil. Summaries of subsurface soil conditions are presented in Table 1. A complete analytical report is presented in the Appendix.



Loco Hills Truck Loading Station Request for Closure

Confirmation sample laboratory analyses indicate the soils remaining in the excavation are below OCD remediation standards (Table 1).

# Table 1ConocoPhillips Pipe Line CompanyLoco Hills Truck Loading StationExcavation Confirmation Analyses5/29/2008

			Total Pe	Total Petroleum Hydrocarbons		Volatile Organic Compounds				
Location	Moisture Ch (%) (m	Chloride (mg/Kg)	GRO (mg/Kg)	DRO (mg/Kg)	<b>Total</b> (mg/Kg)	Benzene (mg/Kg)	Ethyl- benzene (mg/Kg)	<b>Toluene</b> (mg/Kg)	Xylenes Total (mg/Kg)	Total BTEX (mg/Kg)
SW-N	2 43	ND	ND	ND	ND	ND	ND	ND	ND	ND
SW-S	3.75	ND	ND	ND	ND	ND	0.042	0.029	0.090	0 161
SW-W	4.63	11.2	ND	6.10	6 10	ND	ND	ND	ND	ND
Bottom (D-15)	10.2	30.9	ND	ND	ND	ND	ND	ND	ND	ND

ft = Feet

mg/Kg = Milligrams per kilogram

ND = Not detected at or above laboratory detection level

GRO = Gasoline range petroleum hydrocarbons DRO = Diesel range petroleum hydrocarbons

The environmental conditions of two oily soil stockpiles are presented in Tables 2 and 3. TPH concentrations ranged from 1,301.9 to 4,297 milligrams per kilogram (mg/Kg). Benzene concentrations were not detected in any of the samples collected. Total BTEX ranged from non-detect to 0.16 milligrams per liter (mg/L).

# Table 2ConocoPhillips Pipe Line CompanyLoco Hills Truck Loading StationExcavated Soils Analyses7/01/2008

	Total Pe	troleum Hyd	drocarbons	Toxic Characteristic Leaching Procedure					
Location	GRO (mg/Kg)	DRO (mg/Kg)	<b>Total</b> (mg/Kg)	Benzene (mg/L)	Ethyl- benzene (mg/L)	Toluene (mg/L)	Xylenes Total (mg/L)	Total BTEX (mg/L)	
E-SIDE	2.2	1,500	1,502.2	ND	ND	ND	ND	ND	
TOP	190.0	. 3,000	3,190.0	ND	0.04	0.03	0.09	0 16	
N-SIDE	8.4	3,600	3,608.4	ND	ND	ND	0.01	0.01	
S-SIDE	1.9	1,300	1,301 9	ND	ND	ND	ND	ND	
W-SIDE	26.0	4,100	4,126.0	ND	0.01	0.04	0.03	0.08	
SMALL PILE	97.0	4,200	4,297.0	ND	0.04	0.04	0.07	0.14	

ft = Feet

mg/Kg = Milligrams per kilogram

ND = Not detected at or above laboratory detection level

Toxic Characteristic Leaching Procedure, 40 CFR §261.24.

GRO = Gasoline range petroleum hydrocarbons DRO = Diesel range petroleum hydrocarbons mg/L = Milligrams per liter

#### Actions

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 laboratory analyses presented in Table 1, the soil remaining in the excavation was below the OCD action level for TPH and benzene. Hazardous characteristic analyses performed on the excavated soil piles (Table 3) indicated all examined constituents were below action levels.

# Table 3 ConocoPhillips Pipe Line Company Loco Hills Truck Loading Station

Excavated Soils Total Petroleum Hydrocarbon and Hazardous Characterization Analyses 7/01/2008

Constituent	Units	Result	Limits
<b>Total Petroleum</b>	lydrocarbo	ons	
GRO	mg/Kg	97	
DRO	mg/Kg	4,200	
Total	mg/Kg_	4,297	1,000
<b>Toxic Characteris</b>	tic Leachir	ng Procedure (	TCLP)
Benzene	mg/L	ND	0.5
Ethylbenzene	mg/L	0.04	
Toluene	mg/L	0.039	
Xylenes Total	mg/L	0.065	
Total BTEX	mg/L	0.144	
TCLP RCRA 8 Me	tals		
Arsenic	mg/L	ND	5.0
Barium	mg/L	1.2	100.0
Cadmium	mg/L	ND	1.0
Chromium	mg/L	ND	5.0
Lead	mg/L	ND	5.0
Mercury	mg/L	ND	0.2
Selenium	mg/L	ND	1.0
Silver	mg/L	ND	5.0
Reactivity			
Cyanate	mg/Kg	ND	Reacts with Water
Sulfate	mg/Kg	ND	Reacts with Water
Ignitability	°F	>212	<140
Corrosivity	pH units	7.5	< 2 or > 12.5

TCLP = Toxic Characteristic Leaching Procedure, 40 CFR §261.24. RCRA = Resource Conservation and Recovery Act

mg/Kg = Milligrams per kilogram

mg/L = Milligrams per liter

° F = Degrees Fahrenheit

ND = Not detected at or above laboratory detection level

Loco Hills Truck Loading Station Request for Closure

The excavated soil was combined and hauled to a State approved disposal location for disposal. Backfill was returned to the excavation and adjacent soil was used to cover the backfill. BLM seed mix # 2 was hand spread and soil was back dragged over the seed.

#### Recommendations

Tetra Tech recommends no further action be taken at the Loco Hills Site, and requests closure of this Site.

If you concur with this recommendation or if you have any questions or require additional information, please contact me (432-686-8081) or Mr. Thomas Lacki (ConocoPhillips, 432-368-1315),

Sincerely,

Tetra Tech, Inc. Charles Durrett

Charles Durrett Project Manager

Attachments: Figure Form C-141 Release Notification and Corrective Action Photo Log Appendix: Laboratory Analytical Reports







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FIGURE 2	CRUDE OIL RELEASE LOCATION				
ConocoPhillips Pipe Line Company	TETRA TECH, INC.				
Loco Hills Truck Loading B Eddy County, New Mex	attery DRAWING BY: CWD DRAWING DATE: 5/01/2008 CPPL PROJECT FILE				

<u>District 1</u> 1625 N French Dr., Hobbs. NM 88240 <u>District III</u> 1301 W. Grand Avenue. Artesia. NM 88210 <u>District III</u> 1000 Rio Brazos Road, Aztec, NM 87410 <u>District IV</u> 1220 S St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico Energy Minerals and Natural Resources AR 1 / 2008

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Form C-141 Revised October 10, 2003

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

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505	OCD-ARTESIA
	4°

368 0804433180 R	Release Notification and Corrective Action					
L SEO 0809433030 N SEO 0809354487	258995	OPERATOR	$\boxtimes$	Initial Report		Final Report
Name of Company - ConocoPhillips pip	e Line Company	Contact – Kirby Shipp				
Address - 4001 East 42 <sup>nd</sup> Street - Odess	Telephone No 575/391-820	62				
Facility Name - Loco Hills Truck Unloa	d Facility	Facility Type – Sour Crude C	Dil injecti	on site		
Surface Owner – U.S. Department of the Interior Bureau of Land Management	Mineral Owne	r	L	ease No. NM 10	1867	

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LOCA	ΓΙΟN C	)F REL	LEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
Þ	29	175	30E	130 feet	Northwest	160 feet	West	Eddy

Latitude\_N32 48.491\_Longitude\_W103 59.598\_

#### NATURE OF RELEASE

Type of Release – Crude oil	Volume of Release – 97 bbls.	Volume Recovered - 0
Source of Release – Pump site – suction pulsation dampner	Date and Hour of Occurrence – 02/27/08 – 04:50 to 05:17 PM	Date and Hour of Discovery - 02/27/08 - 05.17 PM
Was Immediate Notice Given?	If YES, To Whom?	
🛛 Yes 🗌 No 🗌 Not Required	Ponca City control center, NMOCE	Santa Fe Office; NMOCD District 2,
By Whom? Kirby Shipp contacted the control center and Thomas Lacki	Date and Hour: NMOCD was conta	acted on 2/27/08 at approximately 8:35 p m
contacted the NMOCD.	and 8:40 p.m. respectively. (I was o	ut of cell phone reach until 8.10 p.m.)
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	ercourse
📋 Yes 🖾 No	NA	N
If a Watercourse was Impacted, Describe Fully.*		
NT4		
NA		·
Describe Cause of Problem and Remedial Action Taken *	, ·,	
pesentee eulise of Problem and Remember Renot Paren.		
A bolt sheared off of a clamp holding an end cap on a suction pulsation of	dampner for a PD pump resulting in a fa	ntail spray of crude oil. The pump is used
to pull crude from the storage tank and LACT unit out to the line which	feeds Buckeye Station. The release laste	ed approximately 1.25 hours.
	-	
Describe Area Affected and Cleanup Action Taken* The impact area is	s approximately 20 feet wide by 125 fee	t long and extends from the pipe line right
of way out on to fand owned by the Bureau of Land Management. Vacu	um trucks were dispatched to the location Tech to develop a sempling plan to delive	in; however, due to the dry sandy soil little
extent of the contamination is known, a remediation plan will be developed	rech to develop a sampling plan to dem ed to address the issues. Both the samp	ling and remediation plans will be
submitted to your office for approval prior to implementation.	se to demess the rootes. Dour the outly	
I hereby certify that the information given above is true and complete to	the best of my knowledge and understan	d that pursuant to NMOCD rules and
regulations all operators are required to report and/or file certain release it	notifications and perform corrective acti	ons for releases which may endanger
public health or the environment. The acceptance of a C-141 report by the	he NMOCD marked as "Final Report" de	pes not relieve the operator of liability
should their operations have failed to adequately investigate and remedia	te contamination that pose a threat to gro	ound water, surface water, human health
federal state or local laws and/or regulations	loes not reneve the operator of responsit	builty for compliance with any other
rederin, suite, or room in the analysi regulations.	OR CONSERV	ATION DIVISION
·7/ >	<u>OIL CONSERV</u>	ATION DIVISION
Signature:		
	Approved by District Supervisor	
Printed Name: Thomas Lacki		un bush
Inte: Environmental Coordinator	Approval Date. 4-2-08 E	xpiration Date.
E mail Address's thomas lacti@concernhilling.com	Conditions of America KEMEDIA	ATION .
E-mail Address, uranas.iacki@conocopamilps.com	Conditions of Approval.	Attached []
Date: 3/12/08 Phone: (432) 368-1315	WORK PLAN DUE	5-2-08
Attach Additional Sheets If Necessary		100.71
pSEB0809433924		XKH-154
•		-

# ConocoPhillips

## PHOTO LOG



Excavation View: West



Excavation View: South







# APPENDIX Laboratory Analyses

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Report 08060038 TPH <sub>DRO - GRO</sub> BTEX

Report 08060038 TPH <sub>DRO - GRO</sub> TCLP Volatile Organics Corrosivity Total Metals Reactivity

Report 0871643 TCLP Metals

Report 8080253 Ignitability



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

### **Conoco Phillips**

Certificate of Analysis Number: <u>08060038</u>					
Report To:	Project Name:	CPPL Loco Hills			
Tetra Tech	<u>Site:</u>	Loco Hills, NM			
Charlie Durrett	Site Address:				
1703 W Industrial Avenue					
Midland	PO Number:	WO#4509610900			
TX	State:	New Mexico			
79701-	State Cert. No.:				
ph: (432) 686-8081 fax:	Date Reported:	6/6/2008			

# This Report Contains A Total Of 21 Pages

# Excluding This Page, Chain Of Custody

And

# Any Attachments

6/6/2008

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

Date

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

#### Case Narrative for: Conoco Phillips

Certificate of Analysis Number:

#### 08060038

Report To:	Project Name: CPPL Loco Hills
Tetra Tech	<u>Site:</u> Loco Hills, NM
Charlie Durrett	Site Address:
1703 W Industrial Avenue	
Midland	PO Number: WO#4509610900
тх	State: New Mexico
79701-	State Cert. No.:
ph: (432) 686-8081 fax:	Date Reported: 6/6/2008

Per your earnil request on May 29, 2008, the samples were analyzed for TCLP Volatile Organics by SW846 Method 8260B in addition to the analyses selected on the chain of custody.

A trip blank was received with the sample but was not listed on the chain of custody. Per our [conversation or email] on [date] SPL, Inc. analyzed the trip blank for [enter analysis and method].

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.

Results for soils are reported on a dry-weight basis.

The samples submitted for Purgeable Aromatics by SW846 Method 8021B analyses were received in a vessel that is not stipulated in Method 5035A; the samples were not preserved and/or analyzed within 48 hours of sample collection.

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.

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.

08060038 Page 1 6/6/2008

Bethany A. Agarwal Senior Project Manager

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



HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

#### Conoco Phillips

#### **Certificate of Analysis Number:** 08060038 Report To: Tetra Tech Project Name: **CPPL Loco Hills Charlie Durrett** Site: Loco Hills, NM 1703 W Industrial Avenue Site Address: Midland ТΧ PO Number: WO#4509610900 79701-State: **New Mexico** ph: (432) 686-8081 fax: (432) 686-8085 State Cert. No .: Fax To: Date Reported: 6/6/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SW-N	08060038-01	Soil	5/29/2008 2:12 00 PM	6/2/2008 10:00:00 AM	270410	
SW-S	08060038-02	Soil	5/29/2008 2:04:00 PM	6/2/2008 10 00:00 AM	270410	
SW-W	08060038-03	Soil	5/28/2008 12·35:00 PM	6/2/2008 10.00:00 AM	270410	
D-15	08060038-04	Soil	5/29/2008 11:27:00 AM	6/2/2008 10:00:00 AM	270410	
Trip Blank #1	08060038-05	Water	5/29/2008	6/2/2008 10:00:00 AM	270410	

Bethon Aquined

6/6/2008

Date

Bethany A. Agarwal Senior Project Manager

> Richard R. Reed Laboratory Director

Ted Yen Quality Assurance Officer

> 08060038 Page 2 6/6/2008 10 40:56 AM



#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SW-N				Co	Collected: 05		08 14:12	SPL Sa	mple	I <b>D:</b> 080	08060038-01	
				Si	te: Lo	oco Hills,	NM					
Analyses/Method		Result	t QUAL	R	ep.Limit		Dil. Facto	or Date Ana	alyzed	Analyst	Seq. #	
DIESEL RANGE ORG	ANICS					MCL		SW8015B	Ur	nits: mg/k	g-dry	
Diesel Range Organics (	C10-C28)	ND			5.1		1	06/04/08	15:11	NW	4484120	
Surr: n-Pentacosane		79 3		%	20-154		1	06/04/08	15:11	NW	4484120	
Prep Method	Prep Date		Prep Initials	Pre	Factor							
SW3550B	06/03/2008 11:03	3	QMT	1 00							i.	
GASOLINE RANGE O	RGANICS					MCL		W8015B	Un	hits: mg/k	g-dry	
Gasoline Range Organics	3	ND			0.1		1	06/03/08	12:38	SFE	4481156	
Surr: 1,4-Difluorobenze	ene	100		%	63-142		1	06/03/08	12:38	SFE	4481156	
Surr. 4-Bromofluorober	nzene	104		%	50-159	· · · · · · · · · · · · · · · · · · ·	1	06/03/08	12.38	SFE	4481156	
Pren Method	Pren Date		Pren Initials	Prer	Factor							
SW5030B	06/03/2008 12:32	?	SFE	1.00								
ION CHROMATOGRA	PHY					MCL	E30	0.0 MOD	Un	its: ma/k	a-drv	
Chloride		ND			5.12		1	06/04/08	18:38	A_E	4483194	
PERCENT MOISTURE						MCL		D2216	Un	its: wt%		
Percent Moisture		2.43			0		1	06/03/08	12:04	GF	4478426	
PURGEABLE AROMA	TICS					MCL	. S	W8021B	Un	its: ug/kg	J-dry	
Benzene		ND			1		1	06/04/08	14.20	NMa	4483551	
Toluene		ND			1		1	06/04/08	14:20	NMa	4483551	
Ethylbenzene		ND			1		1	06/04/08	14:20	NMa	4483551	
m,p-Xylene		ND			1		1	06/04/08	14:20	NMa	4483551	
o-Xylene		ND			1		1	06/04/08	14:20	NMa	4483551	
Xylenes, Total		ND			1	,	1	06/04/08	14:20	NMa	4483551	
Surr: 1,4-Difluorobenzer	ne	99.7		%	77-126		1	06/04/08	14.20	NMa	4483551	
Surr: 4-Bromofluoroben	zene	99.2		%	60-160		1	06/04/08	14.20	NMa	4483551	

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/04/2008 13.11	NMa	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

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

> 08060038 Page 3 6/6/2008 10:41 07 AM



#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SW-N

Collected: 05/29/2008 14:12

SPL Sample ID: 08060038-01

		Site: Loco Hills, NM								
Analyses/Method	Result	QUAL	R	ep.Limit		Dil. Factor	Date Analyz	zed	Analyst	Seq. #
TCLP VOLATILE ORGANICS					MCL	. SI	V8260B	Un	its: ug/L	
Benzene	ND			5	500	1	06/05/08 4	:40	LT	4483225
Ethylbenzene	ND			5		1	06/05/08 4	40	LT	4483225
Toluene	ND			5		1	06/05/08 4	40	LT	4483225
m,p-Xylene	ND			5		1	06/05/08 4	:40	LT	4483225
o-Xylene	ND			5		1	06/05/08 4	:40	LT	4483225
Xylenes,Total	ND			5		1	06/05/08 4	40	LT	4483225
Surr. 1,2-Dichloroethane-d4	106		%	62-130		1	06/05/08 4	:40	LT	4483225
Surr: 4-Bromofluorobenzene	88 0		%	70-130		1	06/05/08 4	.40	LT	4483225
Surr Toluene-d8	96.0		%	74-122		1	06/05/08 4	.40	LT	4483225

Leach Method	Leachate Date	Leach Initials
SW1311	06/03/2008	GF

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

> 08060038 Page 4 6/6/2008 10:41 07 AM



#### HOUSTON LABORATORY

8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SW-S				Collected: 05			05/29/2008 14:04			SPL Sa	mple	ID: 08	08060038-02	
				Si	te:	Loc	o Hills,	NM						
Analyses/Method	Re	sult	QUAL	R	ep.L	imit		Dil. F	actor	Date An	alyzed	Analys	t Seq. #	
DIESEL RANGE ORG	ANICS			-			MCL	-	SV	V8015B	U	nits: mg	kg-dry	
Diesel Range Organics (0	C10-C28)	ND				5.2			1	06/04/0	3 15 37	NW	4484121	
Surr: n-Pentacosane	ę	94 9		%	20-	154			1	06/04/08	3 15.37	NW	4484121	
Prep Method	Prep Date		Prep Initials	Pre	Fac	tor								
SW3550B	06/03/2008 11 03		QMT	1.00	)									
GASOLINE RANGE OF	RGANICS						MCL		SV	V8015B	Uı	nits: mg/	kg-dry	
Gasoline Range Organics	; ;	ND				0.1			1	06/03/08	3 13:06	SFE	4481157	
Surr: 1,4-Difluorobenze	ene	101		%	63-	142			1	06/03/08	3 13:06	SFE	4481157	
Surr 4-Bromofluorober	izene	104		%	50-	159			1	06/03/08	3 13:06	SFE	4481157	
Drop Mathad	Bron Data		Drop Initiale	Dear		·								
SW5030B	06/03/2008 12.33		SFE	1.00	Гас									
ION CHROMATOGRA	РНҮ						MCI		F300		Ur	nits: ma/	ka-dry	
Chloride		ND			Ę	5.19			1	06/04/08	19:28	A_E	4483197	
PERCENT MOISTURE							MCL			D2216	Ur	nits: wt%	······	
Percent Moisture	3	.75				0			1	06/03/08	12:04	GF	4478425	
PURGEABLE AROMA	TICS						MCL		SW	/8021B	Ur	nits: ua/k	a-drv	
Benzene		ND				1			1	06/04/08	14:49	NMa	4483552	
Toluene		ND				1			1	06/04/08	14.49	NMá	4483552	
Ethylbenzene		ND				1			1	06/04/08	14:49	NMa	4483552	
m,p-Xylene		ND				1			1	06/04/08	14:49	NMa	4483552	
o-Xylene	1	ND				1				06/04/08	14:49	NMa	4483552	
Xylenes,Total	1	ND				1				06/04/08	14:49	NMa	4483552	
Surr: 1,4-Difluorobenze	ne 1	00		%	77-	126				06/04/08	14:49	NMa	4483552	
Surr: 4-Bromofluoroben	zene 1	00		%	60-	60		1		06/04/08	14:49	NMa	4483552	

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/04/2008 13:12	NMa	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

08060038 Page 5 6/6/2008 10 41 08 AM



#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

CI	ient	Samp	le ll	D:	SW	-S

Collected: 05/29/2008 14:04

SPL Sample ID: 08060038-02

			Si	te: Loc	o Hills,	NM				
Analyses/Method	Result	QUAL	R	ep.Limit		Dil. Facto	or Date Analy	/zed	Analyst	Seq. #
TCLP VOLATILE ORGANICS					MCL		W8260B	Ur	its: ug/L	
Benzene	ND			5	500	1	06/05/08	5.06	LT	4483227
Ethylbenzene	42			5		1	06/05/08	5:06	LT	4483227
Toluene	29			5		1	06/05/08	5:06	LT	4483227
m,p-Xylene	58			5		1	06/05/08	5:06	LT	4483227
o-Xylene	32			5		1	06/05/08	5.06	LT	4483227
Xylenes,Total	90			5		1	06/05/08	5 06	LT	4483227
Surr: 1,2-Dichloroethane-d4	108		%	62-130		1	06/05/08	5:06	LT	4483227
Surr: 4-Bromofluorobenzene	104		%	70-130.		1	06/05/08	5:06	LT	4483227
Surr: Toluene-d8	98.0		%	74-122		1 •	06/05/08	5 <sup>.</sup> 06	LT	4483227

Leach Method	Leachate Date	Leach Initials
SW1311	06/03/2008	GF

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

> 08060038 Page 6 6/6/2008 10:41 08 AM



#### HOUSTON LABORATORY

8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SW-W				Co	llected	05/28/2	2008 12	2:35	SPL Sa	mple	I <b>D:</b> 08	060038-03
				Si	te: L	oco Hill	s, NM					
Analyses/Method		Result	QUAL	R	lep.Limit	ł	Dil. F	actor	Date Ana	lyzed	Analys	t Seq. #
DIESEL RANGE ORG	ANICS					M	CL	SV	N8015B	Ur	nits: mg/	kg-dry
Diesel Range Organics (	C10-C28)	· 6.1			5 2			1	06/04/08	16 03	NW	4484122
Surr: n-Pentacosane		101		%	20-154			1	06/04/08	16 03	NW	4484122
Prep Method	Prep Date		Prep Initials	Pre	p Factor	]						
SW3550B	06/03/2008 11.03	3	QMT	1.00	)	]						
GASOLINE RANGE O	RGANICS					M	CL	SV	V8015B	Ur	its: mg/	kg-dry
Gasoline Range Organic	S	ND			0.1			1	06/03/08	13:35	SFE	4481158
Surr: 1,4-Difluorobenz	ene	101		%	63-142			1	06/03/08	13:35	SFE	4481158
Surr: 4-Bromofluorobe	nzene	104		%	50-159			1	06/03/08	13:35	SFE	4481158
Prep Method	Prep Date		Prep Initials	Prer	Factor	ļ						
SW5030B	06/03/2008 12:34	ļ	SFE	1.00								
ION CHROMATOGRA	РНҮ					MC	L	E300	.0 MOD	Un	its: ma/	ka-drv
Chloride		11.2			5.24			1	06/04/08	19:44	A_E	4483198
PERCENT MOISTURE						MC	:L		D2216	Un	its: wt%	
Percent Moisture		4.63			0			1	06/03/08	12:04	GF	4478424
PURGEABLE AROMA	TICS					MC	L.	SM	/8021B	Un	its: ug/k	g-dry
Benzene		ND			1			1	06/04/08	18:13	NMa	4483556
Toluene		ND			1			1	06/04/08	18.13	NMa	4483556
Ethylbenzene		ND			1			1	06/04/08	18.13	NMa	4483556
m,p-Xylene		ND			1		,	1	06/04/08	18:13	NMa	4483556
o-Xylene		ND			1			1	06/04/08	18:13	NMa	4483556
Xylenes,Total		ND			1		1		06/04/08	18:13	NMa	4483556
Surr: 1,4-Difluorobenze	ne	100		%	77-126		1		06/04/08	18 <sup>.</sup> 13	NMa	4483556
Surr 4-Bromofluorober	izene	99.9		%	60-160		1		06/04/08	18.13	NMa	4483556

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/04/2008 13:14	NMa	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

> 08060038 Page 7 6/6/2008 10 41 08 AM



#### HOUSTON LABORATORY

8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SW-W

Collected: 05/28/2008 12:35

**SPL Sample ID:** 08060038-03

			Si	te: Loc	o Hills,	NM				
Analyses/Method	Result	QUAL	R	ep.Limit		Dil. Facto	r Date Analyz	zed	Analyst	Seq. #
TCLP VOLATILE ORGANICS					MCL	. s	W8260B	Un	its: ug/L	
Benzene	ND			5	500	1	06/05/08 5	5:32	LT	4483228
Ethylbenzene	ND			5		1	06/05/08 5	5 32	LT	4483228
Toluene	ND			5		1	06/05/08 5	5.32	LT	4483228
m,p-Xylene	ND			5		1	06/05/08 5	i:32	LT	4483228
o-Xylene	ND			5		1	06/05/08 5	5:32	LT	4483228
Xylenes,Total	ND			5		1	06/05/08 5	·32	LT	4483228
Surr. 1,2-Dichloroethane-d4	108		%	62-130		1	06/05/08 5	32	LT	4483228
Surr: 4-Bromofluorobenzene	88 0		%	70-130		1	06/05/08 5	32	LT	4483228
Surr: Toluene-d8	98.0		%	74-122		1	06/05/08 5	:32	LT	4483228

Leach Method	Leachate Date	Leach Initials
SW1311	06/03/2008	GF

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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08060038 Page 8 6/6/2008 10:41 08 AM

#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:D-15	5			Co	llected	I: 05	5/29/200	08 11:27	7 SPL Sa	mple	<b>ID:</b> 080	60038-04
		_		Si	te: L	-000	o Hills,	NM				
Analyses/Method		Result	QUAL	R	Rep.Lim	it		Dil. Fact	or Date Ana	alyzed	Analyst	Seq. #
DIESEL RANGE ORGA	ANICS					· ,	MCL		SW8015B	U	nits: mg/l	(g-dry
Diesel Range Organics (C	C10-C28)	ND			5.	6		1	06/04/08	3 16·28	NW	4484123
Surr: n-Pentacosane		90.2		%	20-15	4		1	06/04/08	16.28	NW	4484123
Prep Method	Prep Date		Prep Initials	s Pre	p Factor							
SW3550B	06/03/2008 11 0	3	QMT	1 00	)							
GASOLINE RANGE OF	RGANICS						MCL		SW8015B	Ur	nits: mg/k	ig-dry
Gasoline Range Organics		ND			0.1	1		1	06/03/08	14.04	SFE	4481159
Surr. 1,4-Difluorobenze	ne	101		%	63-14	2		1	06/03/08	14:04	SFE	4481159
Surr. 4-Bromofluorober	izene	101		%	50-15	9		1	06/03/08	14:04	SFE	4481159
Prep Method	Prep Date		Prep Initials	Pre	Factor	7						
SW5030B	06/03/2008 12:3	5	SFE	1.00	)	]						
ION CHROMATOGRAF	РНҮ						MCL	E30	0.0 MOD	Ur	nits: ma/k	a-drv
Chloride		30.9			5 5	7		1	06/04/08	20 01	A_E	4483199
PERCENT MOISTURE							MCL		D2216	Un	its: wt%	
Percent Moisture		10.2			(	)		1	06/03/08	12 04	GF	4478423
PURGEABLE AROMAT	rics						MCL	S	SW8021B	Un	its: ug/kg	a-dry
Benzene		ND			1.1			1	06/04/08	15.18	NMa	4483553
Toluene		ND			1.1			1	06/04/08	15:18	NMa	4483553
Ethylbenzene		ND			1.1			1	06/04/08	15:18	NMa	4483553
m,p-Xylene		ND			1.1			1	06/04/08	15:18	NMa	4483553
o-Xylene		ND			1.1			1	06/04/08	15:18	NMa	4483553
Xylenes,Total		ND			1.1			1	06/04/08	15 <sup>.</sup> 18	NMa	4483553
Surr: 1,4-Difluorobenzer	ne	100		%	77-126		_	1	06/04/08	15:18	NMa	4483553
Surr: 4-Bromofluoroben:	zene	99.9		%	60-160			1	06/04/08	15:18	NMa	4483553

Prep Method	Prep Date	Prep Initials	Prep Factor
SW5030B	06/04/2008 13:18	NMa	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

> 08060038 Page 9 6/6/2008 10:41 08 AM



#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:D-15

Collected: 05/29/2008 11:27.

SPL Sample ID: 08060038-04

			Si	te: Loc	o Hills,	NM				
Analyses/Method	Result	QUAL	Rep.Limit		Dil. Factor		Date Analyzed		Analyst	Seq. #
TCLP VOLATILE ORGANICS					MCL	. SI	N8260B	Un	its: ug/L	
Benzene	ND			5	500	1	06/05/08	5:58	LT	4483230
Ethylbenzene	ND			5		1	06/05/08	5.58	LT	4483230
Toluene	ND			5		1	06/05/08	5:58	LT	4483230
m,p-Xylene	ND			5		1	06/05/08	5 58	LT	4483230
o-Xylene	ND			5		1	06/05/08	5 58	LT	4483230
Xylenes,Total	ND			5		1	06/05/08	5:58	LT	4483230
Surr 1,2-Dichloroethane-d4	106		%	62-130		1	06/05/08	5:58	LT	4483230
Surr: 4-Bromofluorobenzene	86.0		%	70-130		1	06/05/08	5:58	LT	4483230
Surr: Toluene-d8	96 0		%	74-122		1	06/05/08	5:58	LT	4483230

Leach Method	Leachate Date	Leach Initials
SW1311	06/03/2008	GF

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

> 08060038 Page 10 6/6/2008 10 41 08 AM

# Quality Control Documentation

08060038 Page 11 6/6/2008 10.41.09 AM



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#### HOUSTON LABORATORY

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

#### •

### Conoco Phillips

CPPL Loco Hills

Analysis: Method:	Diesel Range Organ	ics				WorkOrder:	08060038
	Met	hod Blank	···· <u> </u>	<u> </u>	Samples in Analyti	cal Batch:	75000
RunID: HP_V_	080604D-4484118	Units	mg/kg		Lab Sample ID	Client Sar	nple ID
Analysis Date.	06/04/2008 14:20	Analyst:	NW		08060038-01B	SW-N	
Preparation Date	: 06/03/2008 11 <sup>.</sup> 03	Prep By:	QMT N	vlethod SW3550B	08060038-02B	SW-S	
		•			08060038-03B	SW-W	
	Analyte		Result	Rep Limit	08060038-04B	D-15	
Die	sel Range Organics (C10-C2	28)	ND	5.0		•	
	Surr n-Pentacosane		89.1	20-154			

#### Laboratory Control Sample (LCS)

RunID:	HP_V_080604D-4484119	Units:	mg/kg
Analysis Date:	06/04/2008 14 46	Analyst:	NW
Preparation Date:	06/03/2008 11:03	Prep By:	QMT Method SW3550B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	66.6	70 9	106	57	150
Surr: n-Pentacosane	1.66	1.64	99.0	20	154

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

Sample Spiked:	08051995-02			
RunID:	HP_V_080604D-4484127	Units:	mg/kg-dry	
Analysis Date:	06/05/2008 11:03	Analyst:	NW	
Preparation Date:	06/03/2008 11.03	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)	66.7	116	140	63.5	116	216	129	42.5	50	21	175
Surr: n-Pentacosane	ND	2.88	2.55	88.7	2.88	1.70	59.1	40.0 *	30	20	154

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
- 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

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.

08060038 Page 12

6/6/2008 10.41 10 AM



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

#### **Conoco Phillips**

CPPL Loco Hills

Analysis: Gasoline Range Organics						WorkOrder:	08060038 P239997
	Meth	od Blank		<u> </u>	Samples in Analyti	cal Batch:	
RunID: HP_R_	080603A-4479956	Units:	mg/kg		Lab Sample ID	Client Sar	nple ID
Analysis Date:	06/03/2008 4 33	Analyst:	SFE		08060038-01A	SW-N	
Preparation Date	: 06/03/2008 4:33	Prep By:	Ν	fethod	08060038-02A	SW-S	
					08060038-03A	SW-W	
	Analyte		Result	Rep Limit	08060038-04A	D-15	
Gas	soline Range Organics		ND	0 10			
	Surr 1,4-Difluorobenzene		98.2	63-142			
5	Surr: 4-Bromofluorobenzene		100.1	50-159			

<u> </u>		Laboratory Cont	rol Sample	(LCS)
	RunID: Analysis Date:	HP_R_080603A-4479955 06/03/2008 4:05	Units: Analvst:	mg/kg SFE
	Preparation Date:	06/03/2008 4:05	Prep By.	Method SW5030

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	1.03	103	70	130
Surr: 1,4-Difluorobenzene	0.100	0 104	104	63	142
Surr: 4-Bromofluorobenzene	0.100	0 104	104	50	159

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

Sample Spiker	1:
RunID:	
Analysis Date:	

iked: 08052131-03 HP\_R\_080603A-4479959 ate: 06/03/2008 5<sup>-</sup>58

159 Units. mg/kg-dry Analyst: SFE

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	4 20	1.08	3.55	-60.2 *	1.08	5.02	76.1	34.4	50	26	147
Surr: 1,4-Difluorobenzene	ND	0.108	0.0935	86.6	0.108	0 0642	59.5 *	37.1 *	30	63	142
Surr 4-Bromofluorobenzene	ND	0.108	0 0664	61.5	0.108	0.0658	61.0	0.816	30	50	159

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.

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.

08060038 Page 13 6/6/2008 10:41 10 AM



#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

## **Conoco Phillips**

**CPPL Loco Hills** 

Analysis: Method:	Purgeable Aromatics	•				WorkOrder:	08060038 P240243				
Method Blank					Samples in Analytic	Samples in Analytical Batch:					
RunID HP_C	D_080604A-4483549	Units:	ug/kg		Lab Sample ID	Client Sar	nple ID				
Analysis Date:	06/04/2008 12:37	Analyst:	NMa		08060038-01A	SW-N					
Preparation Dat	te: 06/04/2008 12.37	Prep By	Ν	fethod	08060038-02A	SW-S					
					08060038-03A	SW-W					
Г	Analyte		Result	Rep Limit	08060038-04A	D-15					
B	enzene		ND	1.0							
E	thylbenzene		ND	1.0							
T	oluene		ND	10							
m	i,p-Xylene		ND	10							
0	-Xylene		ND	1.0	•						
x	vlenes,Total		ND	1.0							
	Surr: 1,4-Difluorobenzene		100.6	77-126							
L	Surr: 4-Bromofluorobenzene		97.2	60-160							

	Laboratory	Control	Sample	(LCS)
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RunID:	HP_O_080604A-4483548	Units:	ug/kg		
Analysis Date:	06/04/2008 12 <sup>.</sup> 08	Analyst:	NMa		
Preparation Date:	06/04/2008 12:08	Prep By:		Method	SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Lımit	Upper Limit
Benzene	20.0	20 6	103	70	130
Ethylbenzene	20.0	20.4	102	70	130
Toluene	20.0	20.1	101	70	130
m,p-Xylene	40.0	40.9	102	70	130
o-Xyiene	20.0	19.9	99.4	70	130
Xylenes,Total	60.0	60.8	101	70	130
Surr: 1,4-Difluorobenzene	100	101	101	77	126
Surr: 4-Bromofluorobenzene	100	97.5	97 5	60	160

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

Sample Spiked.	0806003
RunID:	HP_O_08
Analysis Date:	06/04/20
Preparation Date:	06/04/20

8-03 0604A-4483557 Units: 08 18:42 Analyst: 08 13.16

ug/kg-dry NMa Prep By: NMa 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 08060038 Page 14 QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values 6/6/2008 10 41:11 AM

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

**CPPL Loco Hills** 

Analysis: ` Method:	Purgeable Aromatic SW8021B	S						WorkOrder Lab Batch	r: 080 ID: R24	)60038 40243		
	Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low . Limit	Hıgh Limit
Benzene		ND	21	19 7	93.9	21	19.4	92 4	1.69	32	36	139
Ethylbenzene	_	ND	21	198	94 5	21	18.9	90 0	4 91	32	25	138
Toluene		ND	21	19.4	92.4	21	18.8	89 5	3 19	34	31	138
m,p-Xylene		ND	41 9	39.2	93.5	41.9	37.1	88.5	5.48	34	25	139
o-Xylene		ND	21	18 9	90.1	21	17.7	84 5	6 35	32	19	144
Xylenes,Total		ND	62.9	58 1	92.4	62 9	54 8	87.2	5.76	32	19	144
Surr: 1,4-Diflue	probenzene	ND	105	107	102	105	106	101	0 676	30	77	126
Surr: 4-Bromof	luorobenzene	ND	105	107	102	105	105	99.9	1 90	30	60	160

 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
 08060038 Page 15

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.

6/6/2008 10 41-11 AM



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#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

#### Conoco Phillips

**CPPL Loco Hills** 

	Moti						Lab	Batch ID:	R240222
	Meth	od Blank			Sam	ples in Anal	ytical Bate	sh:	
≀uniD: N_0 nalysis Date:	80604A-4483223 06/05/2008 4:15	Units: Analyst:	ug/L LT		<u>Lab</u> 0806 0806 0806	Sample ID 60038-01B 60038-02B 60038-03B		<u>Client Sa</u> SW-N SW-S SW-W	mple ID
	Analyte Benzene Ethylbenzene foluene n,p-Xylene S-Xylene Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Toluene-d8		Result         Rep L           ND         ND           ND         ND           ND         0           ND         0           ND         0           110.0         62-           92.0         70-           100.0         74-	Imit 5.0 5.0 5.0 5.0 5.0 5.0 5.0 130 130 122	0806	30038-04B		D-15	
	Leach	ate Blank							
unID:	N_080604A-4483221	Units:	ug/L						
nalysis Date	06/05/2008 3:23	Analyst <sup>.</sup>	LT						
each Date:	06/03/2008 0:00	Leach By	: GF Method	SW1311					
-	Analyte		Result Rep Li	mit					
E	ithvibenzene		ND ND	5.0					
Ī	oluene		ND	5.0					
m	n,p-Xvlene		ND ND	<u>50</u>					
X	vlenes.Total	· · · · · · · · · · · · · · · · · · ·	ND ND	5.0					
Ľ	Surr: 1,2-Dichloroethane-d4		102.0 62-	130					
-	Surr: 4-Bromofluorobenzene		88.0 70-	130					
	Surr: Toluene-d8		96.0 74- Laborato	v Control	Samole (L	CS)			
			0000044 44020	40 44					
	RuniD:	Data	N_080604A-44832	19 UI	nits: U	g/L T	•		
	Analysis	Date.	06/05/2008 2:57	Ar	nalyst: L	1			
								·····-	
		Analyte	9	Spike	Result	Percent	Lower	Upper	
	Bonzone		<u> </u>	20.0	10.0	OF O	70	100	
	Ethylpenze	ne		20.0	19.0	95.0	67	120	
	Toluene			20.0	20.0	100	70	131	
	m n-Xvlene			40.0	36.0	90.0	70	150	
	o-Xvlene			20.0	19.0	95.0	72	141	
	<u>1</u>	· · · · · · · · · · · · · · · · · · ·		1					
Jualifiers:	ND/U - Not Detected a	t the Reportin	ig Limit	MI -	Matrix Inte	erference			
	B/V - Analyte detected	in the associa	ated Method Blar	ık D-	Recovery l	Jnreportable of	due to Dilu	tion	
	J - Estimated value bet	ween MDL ar	nd PQL	* - F	Recovery C	utside Advisa	ible QC Lir	nits	
	E - Estimated Value ex	ceeds calibra	tion curve						
	N/C - Not Calculated -	Sample conc	entration is great	er than 4 tim	nes the ame	ount of spike a	added. Cor	ntrol limits do	not apply.

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.

08060038 Page 16 6/6/2008 10:41 11 AM

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#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

122

74

#### **Conoco Phillips**

**CPPL Loco Hills** 

Analysis:	TCLP Volatile Organics		WorkOrder:	08060038				
Method:	SW8260B		Lab Batch ID:	R240222				
Laboratory Control Sample (LCS)								

N\_080604A-4483219

06/05/2008 2:57

RunID Analysis Date. Units. ug/L Analyst<sup>.</sup> LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Xylenes,Total	60	55	92	72	150
Surr: 1,2-Dichloroethane-d4	50.0	48	96.0	62	130
Surr 4-Bromofiuorobenzene	50 0	54	108	70	130
Surr: Toluene-d8	. 50 0	53	106	74	122

			Matrix Spik	<u>e (MS)</u>				
	Sample Spiked: RunID: Analysis Date:	08060038-0 N_080604A-4 06/05/2008	183232 Units: :24 Analyst: :00 Leach By:		ug/L LT	SW1311		
	Analyte		Sample Result	Spike Added	MS Result	MS % Recovery	Low Limit	High Limit
Benze	ne		ND	20	20.0	100	76	127
Ethylb	enzene		ND	20	17.0	85.0	35	175
Toluer	ne		ND	20	19.0	95 0	70	131
m,p-X	lene		ND	40	35.0	87.5	35	175
o-Xyle	ne		ND	20	18.0	90.0	35	175
Xylene	s,Total		ND	60	53	88	35	175
Sur	r. 1,2-Dichloroethane	e-d4	ND	50	50	100	62	130
Surr	: 4-Bromofluorobena	zene	ND	50	50	100	70	130

ND

Qualifiers:

ND/U - Not Detected at the Reporting Limit

Surr' Toluene-d8

B/V - Analyte detected in the associated Method Blank

J - Estimated value between MDL and PQL

MI - Matrix Interference

50

D - Recovery Unreportable due to Dilution

49

98.0

\* - 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

08060038 Page 17

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.

6/6/2008 10 41 11 AM



#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

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D-15

#### **Conoco Phillips**

CPPL Loco Hills

Analysis: Method:	PERCENT MOISTURE D2216		WorkOrder: Lab Batch ID:	08060038 R239897A				
		Samples in Analytica	Samples in Analytical Batch:					
		Lab Sample ID	Client Sar	mple ID				
		08060038-01B	SW-N					
		08060038-02B	SW-S					
		08060038-03B	SW-W					

#### Sample Duplicate

08060038-04B

Original Sample:	08060038-04		
RunID:	WET_080603C-4478423	Units:	wt%
Analysis Date:	06/03/2008 12:04	Analyst:	GF

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Percent Moisture	10.2	10.19	0 248	20

 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
 08060038 Page 18

 QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values
 6/6/2008 10:41:11 AM

 calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.
 6/6/2008 10:41:11 AM



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

#### **Conoco Phillips CPPL Loco Hills**

Analysis: Method:	lon Chromatograp E300.0 MOD	bhy					Wor Lab	kOrder: Batch ID:	08060038 R240219S
	<u>M</u>	ethod Blank	······································		Sam	ples in Analy	tical Batc	h:	
RunID IC	1_080604C-4483189	Units	mg/kg		Lab	Sample ID		Client Sa	mple ID
Analysis Date: 06/04/2008 17:33 Analyst:			A_E		08060	0038-01B		SW-N	
					08060	0038-02B		SW-S	
					08060	0038-03B		SW-W	
	Analyto		Bogult   Bog Lug	nit	08060	0038-04B		D-15	
	Chloride			5.0					
	Runi Anal	D: /sis Date:	Laborator IC1_080604C-4483 06/04/2008 17 <sup>,</sup> 49	190 Ur Ar	nits: -m nalyst: A	<u>cs)</u> ng/kg _E			
		Analyte			Result	Percent Recovery	Lower Limit	Upper Limit	
	Chloride			100.0	94.03	94.03	80	120	
		Matrix	Spike (MS) / Mat	rix Spike [	Duplicate (	MSD)			

Sample Spiked RunID: Analysis Date:

08060038-01 IC1\_080604C-4483195 06/04/2008 18.55

Units: mg/kg-dry Analyst: A\_E

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Chloride	ND	102.5	91 64	87.96	102.5	90.60	86.95	1.136	20	75	125

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

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QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values

08060038 Page 19 6/6/2008 10.41 11 AM

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

> 08060038 Page 20 6/6/2008 10 41.12 AM



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HOUSTON LABORATORY

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

#### Sample Receipt Checklist

Workorder:	08060038		Received By	L_C	
Date and Time Received:	6/2/2008 10:00:00 AM		Carrier name	Fedex-Priority	
Temperature	3.0°C		Chilled by:	Water Ice	
1. Shipping container/c	cooler in good condition?	Yes 🗹	No 🗌	Not Present	
2. Custody seals intact	on shippping container/cooler?	Yes 🗹	No 🗔	Not Present	
3. Custody seals intact	on sample bottles?	Yes 🗋	No 🗌	Not Present	
4. Chain of custody pre	esent?	Yes 🗹	No 🗌		
5. Chain of custody sig	ned when relinquished and received?	Yes 🗹	No		
6. Chain of custody agr 1. Received on set of	rees with sample labels? of trip blanks not indicated on chain of custody.	Yes	No 🗹		
7. Samples in proper co	ontainer/bottle?	Yes 🗹	No 🗌		
8. Sample containers in	tact?	Yes 🗹	No 🗔		
<b>9.</b> Sufficient sample vol	ume for indicated test?	Yes 🗹	No 🗌		
10. All samples received	within holding time?	Yes 🗹	No 🗔		
11. Container/Temp Blan	k temperature in compliance?	Yes 🗹	No 🗔		
12. Water - VOA vials hav	ve zero headspace?	Yes 🗌		Vials Not Present 🗹	
13. Water - Preservation	checked upon receipt (except VOA*)?	Yes 🗌	No 🗌	Not Applicable 🛛 🗹	
*VOA Preservation CI	necked After Sample Analysis				
SPL Representati	ve: Agarwal, Bethany A	Contact Date &	Time: 6/3/2008 10:15:	00 AM	
Client Name Contact	ed: Charles Durrett				
Non Conformance 1 Issues:	Logged in trip blanks on hold.				
Client Instructions: en	nailed client nonconformance issue				

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	💿 A	nalysis Re	quest	& (	Chain o	f Custe	ody Re	cord			$\left( \right)$	507	60	20	38	page_	of	
lieut Name: Tetra Tech					matrix	bottle	size	pres.			- <u></u> ~	R	eques	sted A	naly	sis		
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ite Location: Loco 14:	113, NM				ater ludg	stic	- Ter	SO4	er (	2	Ľ,	T			]			
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5W-N	5/25/04	14:12	V		5	6	X	NA	2	×	x	~	X					
511-5	5/29/08	14:=4	1		5	6	x	NA	2	×	x	×	×		T		T	
5W-W	5/24/04	12:35	V		5	6	X	NA	2	×	×	×	×		1		1	T
0-15	5/25/04	11:27	V		5	4	x	NA	2	×	×	×	X		·			
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lient/Consultant Remarks:					Labora	lory rema	arks:								Intact Ice? Temp	: >	X X Y X V Z	
Requested TAT	Special Repo	rting Require	ments	Resu	dis: Fa		Inail LA R		Speciz	al Detect	ion Lim	its (spec	ify):			PM re	eview (i	initia L
24hr Standard	1. Relinquish	ied by Sample			HT	•	date 5	1-108	time ON	15	2. Rec	eived by	;:			1		<i></i> ,
48hr 🛄	3. Relinquist	ied by:			1		date		time		4. Rec	eived by	y:					
Other	5. Relinquist	ied by:			- <u></u>	<b></b>	date	- 1	time		6. Received by Laboratory:					<b>~~</b>		
3 8880 Interch	ange Drive	<del></del>		Ō	500 An	nbassad	lor Cafi	<u>ferv</u> Par	⊥ <i>↓C</i> kway	- C(C) -				459	Hughe	s Driv	e	ن بر میں اور

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

#### **Conoco Phillips**

Certificate of Analysis Number: <u>08070257</u>								
Report To:	Project Name: CPPL Loco Hills							
Tetra Tech	Site: Loco Hills, NM							
Charlie Durrett	Site Address:							
1703 W Industrial Avenue								
Midland	PO Number: WO#4509610900							
TX	State: New Mexico							
79701-	State Cert. No.:							
ph: (432) 686-8081 fax:	Date Reported: 7/21/2008							

# This Report Contains A Total Of 26 Pages

# Excluding This Page, Chain Of Custody

And

## Any Attachments

7/21/2008

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

Date
## Case Narrative for: Conoco Phillips

Certificate of Analysis Number:

### 08070257

Report To:	Project Name: CPPL Loco Hills
Tetra Tech	<u>Site:</u> Loco Hills, NM
Charlie Durrett	Site Address:
1703 W Industrial Avenue	
Midland	PO Number: WO#4509610900
тх	<u>State:</u> New Mexico
79701-	State Cert. No.:
ph: (432) 686-8081 fax:	Date Reported: 7/21/2008

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.

Results for soils are reported on a dry-weight basis.

The samples submitted for Purgeable Aromatics by SW846 Method 8021B analyses were received in a vessel that is not stipulated in Method 5035A; the samples were not preserved and/or analyzed within 48 hours of sample collection

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.

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.

Bethery Agrined

08070257 Page 1 7/21/2008

Bethany A. Agarwal Senior Project Manager

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

Date



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

## **Conoco Phillips**

		Certificate of Analysis I	Number:	
		<u>08070257</u>		
<u>Report To:</u>	Tetra Tech Charlie Durrett		Project Name:	CPPL Loco Hills
	1703 W Industrial Avenue		<u>Site:</u>	LOCO HIIIS, NM
			<u>Site Address:</u>	
	Midland	×		
	тх		PO Number:	WO#4509610900
	79701-		State:	New Mexico
	ph: (432) 686-8081	fax: (432) 686-8085	State Cert. No .:	
<u>Fax To:</u>			Date Reported:	7/21/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
E-SIDE	08070257-01	Soil	7/1/2008 10.30.00 AM	7/3/2008 9:30:00 AM	278382	
TOP	08070257-02	Soil	7/1/2008 10:35:00 AM	7/3/2008 9·30:00 AM	278382	
N-SIDE	08070257-03	Soil	7/1/2008 10:40:00 AM	7/3/2008 9.30.00 AM	278382	
S-SIDE	08070257-04	Sorl	7/1/2008 10 45:00 AM	7/3/2008 9:30.00 AM	278382	
W-SIDE	08070257-05	Soil	7/1/2008 10:50:00 AM	7/3/2008 9:30.00 AM	278382	
SMALL PILE	08070257-06	Soil	7/1/2008 10:55:00 AM	7/3/2008 9:30:00 AM	278382	

Bother Aquind

Bethany A Agarwal Senior Project Manager 7/21/2008

Date

Richard R. Reed Laboratory Director

Ted Yen Quality Assurance Officer

> 08070257 Page 2 7/21/2008 1 19:32 PM



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:E-SI	DE			Co	llected:	07/01/20	08 10:3	0 SPL Sa	mple	<b>ID:</b> 08	070257-01
				Si	te: Lo	oco Hills,	NM				
Analyses/Method	Re	esult	QUAL	R	Rep.Limit		Dil. Fac	tor Date Ana	alyzed	Analys	t Seq. #
DIESEL RANGE ORGA	ANICS					MCL	-	SW8015B	U	nits: mg/	/kg-dry
Diesel Range Organics (C	C10-C28) 1	500			100		20	07/08/08	11.26	NW	4553589
Surr: n-Pentacosane		D	*	%	20-154		20	07/08/08	3 11:26	NW	4553589
Prep Method	Prep Date		Prep Initials	Pre	p Factor						
SW3550B	07/05/2008 15.20		QMT	1.00	)						
GASOLINE RANGE OF	RGANICS					MCL		SW8015B	Ur	nits: mg/	kg-dry
Gasoline Range Organics	;	2.2			0.52		1	07/05/08	21:16	NMa	4550431
Surr: 1,4-Difluorobenze	ene	104		%	63-142		1	07/05/08	21:16	NMa	4550431
Surr: 4-Bromofluorober	izene	142		%	50-159		1	07/05/08	21.16	NMa	4550431
Prep Method	Prep Date		Prep Initials	Prer	o Factor						
SW5030B	07/04/2008 16 48		XML	5.00	)						
PERCENT MOISTURE						MCL		D2216	Ur	nits: wt%	 )
Percent Moisture	3	8.28			0		1	07/03/08	18 <sup>.</sup> 27	ESK	4545380
TCLP VOLATILE ORG	ANICS					MCL		SW8260B	Un	nits: ug/L	
Benzene		ND			5	500	1	07/06/08	10:01	LT	4548860
Ethylbenzene		ND			5		1	07/06/08	10.01	LT	4548860
Toluene		ND	·		5		1	07/06/08	10.01	LT	4548860
m,p-Xylene		ND			5		1	07/06/08	10:01	LT	4548860
o-Xylene		ND			5		1	07/06/08	10:01	LT	4548860
Xylenes,Total		ND			5		1	07/06/08	10:01	LT	4548860
Surr: 1,2-Dichloroethan	e-d4 9	2.0		%	62-130		1	07/06/08	10:01	LT	4548860
Surr: 4-Bromofluoroben	zene 1	104		%	70-130		1	07/06/08	10:01	LT	4548860
Surr: Toluene-d8	1	100		%	74-122		1	07/06/08	10.01	LT	4548860

[	Leach Method	Leachate Date	Leach Initials
[	SW1311	07/04/2008	GF

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

> 08070257 Page 3 7/21/2008 1 19.49 PM



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID: TOP				Co	llect	t <b>ed:</b> 0	7/01/20	008 10:	35	SPL Sar	nple	ID: C	8070	)257-02
				s	ite:	Loc	o Hills,	NM						
Analyses/Method	Res	sult	QUAL	F	Rep.L	imit		Dil. Fa	ctor	Date Ana	lyzed	Anal	/st	Seq. #
DIESEL RANGE ORGA	NICS						MCI		SV	V8015B	U	nits: m	g/kg	-dry
Diesel Range Organics (C	10-C28) 30	00				200		40	)	07/08/08	13:10	NW		4553593
Surr: n-Pentacosane		D	*	%	20	-154		40	)	07/08/08	13.10	NW		4553593
Prep Method	Prep Date		Prep Initials	Pre	p Fac	tor								
SW3550B	07/05/2008 15:20		QMT	1.0	0									
GASOLINE RANGE OR	GANICS						MCL	-	SN	/8015B	U	nits: m	g/kg	-dry
Gasoline Range Organics	1	90				10		100		07/05/08	23:41	NMa		4552004
Surr: 1,4-Difluorobenzen	e 1	04		%	63-	142		100		07/05/08	23.41	NMa		4552004
Surr: 4-Bromofluorobenz	ene 1-	45		%	50-	159		100		07/05/08	23 <sup>.</sup> 41	NMa		4552004
Prep Method F	Prep Date		Prep Initials	Pre	p Fac	tor								
SW5030B 0	7/04/2008 17:06		XML	1.00	)									
PERCENT MOISTURE							MCL			D2216	Ur	nits: wt	%	
Percent Moisture	0.69	93				0		1		07/03/08	18.27	ESK		4545379
TCLP VOLATILE ORGA	NICS						MCL		SW	8260B	Un	its: ug	 /L	
Benzene	N	D		_		5	500	1		07/06/08	9.35	LT		4548859
Ethylbenzene	4	1				5		1		07/06/08	9.35	LT		4548859
Toluene	3	30				5		1		07/06/08	9:35	LT		4548859
m,p-Xylene	5	58				5		1		07/06/08	9.35	LT		4548859
o-Xylene	3	35				5		1		07/06/08	9:35	LT		4548859
Xylenes, Total	e e e e e e e e e e e e e e e e e e e	)3				5		1		07/06/08	9.35	LT		4548859
Surr. 1,2-Dichloroethane-	d4 10	0		%	62-1	130		1		07/06/08	9:35	LT		4548859
Surr: 4-Bromofluorobenze	ene 10	6		%	70-1	130		1		07/06/08	9:35	LT		4548859
Surr: Toluene-d8	98.	.0		%	74-1	122		1		07/06/08	9:35	LT		4548859

Leach Method	Leachate Date	Leach Initials
SW1311	07/04/2008	GF

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

> 08070257 Page 4 7/21/2008 1.19 49 PM



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

Client Sample ID:N-SIDE Collected: 07/01/2008 10.40 08070257-03 SPL Sample ID: Site: Loco Hills, NM Analyses/Method Result QUAL Rep.Limit Dil. Factor Date Analyzed Analyst Seq.# DIESEL RANGE ORGANICS MCL SW8015B Units: mg/kg-dry 3600 4553594 Diesel Range Organics (C10-C28) 500 100 07/08/08 13 36 NW 20-154 Surr n-Pentacosane D % 100 07/08/08 13.36 NW 4553594 Prep Method Prep Date Prep Initials Prep Factor SW3550B 07/05/2008 15:20 QMT 1.00 **GASOLINE RANGE ORGANICS** MCL SW8015B Units: mg/kg-dry 05 Gasoline Range Organics 8.4 1 07/05/08 20·47 NMa 4552002 Surr 1,4-Difluorobenzene 120 % 63-142 1 07/05/08 20·47 NMa 4552002 Surr 4-Bromofluorobenzene 160MI 50-159 1 07/05/08 20.47 NMa 4552002 % Prep Method Prep Date Prep Initials Prep Factor SW5030B 07/04/2008 16:46 XML 5.00 PERCENT MOISTURE MCL D2216 Units: wt% Percent Moisture 0.603 0 1 07/03/08 18:27 ESK 4545378 Units: ug/L TCLP VOLATILE ORGANICS MCL SW8260B ND Benzene 5 500 07/06/08 9:09 LT 4548858 1 Ethylbenzene ND 5 07/06/08 9.09 4548858 1 LT Toluene ND 5 4548858 1 07/06/08 9:09 LT 6 4548858 m,p-Xylene 5 1 07/06/08 9:09 LT o-Xylene ND 5 4548858 1 07/06/08 9.09 LT Xylenes, Total 6 5 4548858 1 07/06/08 9:09 1 T Surr: 1,2-Dichloroethane-d4 96.0 62-130 4548858 % 1 07/06/08 9:09 LT Surr: 4-Bromofluorobenzene 102 % 70-130 1 07/06/08 9:09 LT 4548858 Surr. Toluene-d8 98 0 % 74-122 1 07/06/08 9:09 LT 4548858

Leach Method	Leachate Date	Leach Initials
SW1311	07/04/2008	GF

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

> 08070257 Page 5 7/21/2008 1 19 49 PM



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:S-S	IDE			Co	llect	ed: 07	7/01/20	008 10:4	5 SPL Sar	nple	I <b>D:</b> 0807	0257-04
				S	ite:	Loco	o Hills,	, NM				
Analyses/Method		Resul	t QUAL	F	Rep.Li	mit		Dil. Fac	tor Date Ana	lyzed	Analyst	Seq. #
DIESEL RANGE ORG	ANICS						MCI		SW8015B	U	nits: mg/kg	g-dry
Diesel Range Organics (	C10-C28)	1300				110		20	07/08/08	12:44	NW	4553592
Surr: n-Pentacosane		D	*	%	20-	154		20	07/08/08	12:44	NW	4553592
Prep Method	Prep Date		Prep Initials	Pre	p Fact	or						
SW3550B	07/05/2008 15 20	۱ <u> </u>	QMT	1.0	0							
GASOLINE RANGE O	RGANICS						MCL	-	SW8015B	Ur	nits: mg/kg	g-dry
Gasoline Range Organics	S	1.9			0	.53		1	07/05/08	21:45	NMa	4550256
Surr: 1,4-Difluorobenze	ene	101		%	63-1	42		1	07/05/08	21:45	NMa	4550256
Surr: 4-Bromofluorober	nzene	129		%	50-1	59		1	07/05/08	21.45	NMa	4550256
Prep Method	Prep Date		Prep Initials	Pre	p Fact	or						
SW5030B	07/04/2008 16:42		XML	5.00	0							
PERCENT MOISTURE							MCL		D2216	Un	its: wt%	
Percent Moisture		5.08				0		1	07/03/08	18:27	ESK	4545377
TCLP VOLATILE ORG	ANICS						MCL		SW8260B	Un	its: ug/L	
Benzene		ND				5	500	1	07/06/08	8:43	LT	4548857
Ethylbenzene		ND				5	-	1	07/06/08	8:43	LT	4548857
Toluene		ND				5		1	07/06/08	8:43	LT	4548857
m,p-Xylene		ND				5		1	07/06/08	8:43	LT	4548857
o-Xylene		ND				5		1	07/06/08	8.43	LT	4548857
Xylenes,Total		ND				5		1	07/06/08	8.43	LT	4548857
Surr. 1,2-Dichloroethan	e-d4	96.0		%	62-1	30		1	07/06/08	8:43	LT	4548857
Surr: 4-Bromofluoroben	izene	104		%	70-1	30		1	07/06/08	8:43	LT	4548857
Surr: Toluene-d8		100		%	74-1	22		1	07/06/08	8:43	LT	4548857

Leach Method	Leachate Date	Leach Initials
SW1311	07/04/2008	GF

Qualifiers:

ND/U - Not Detected at the Reporting Limit

B/V - Analyte detected in the associated Method Blank

\* - Surrogate Recovery Outside Advisable QC Limits

 $\mathsf{J}$  - 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

1

08070257 Page 6 7/21/2008 1 19 49 PM



8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

· (713) 660-0901 .

Client Sample ID:W-S	SIDE		<u></u>	Co	llected	: 07/01/2	008 10:5	0 SPL Sam	ple	ID: 080	70257-05
				Si	te: L	.oco Hills	, NM				
Analyses/Method	ş	Result	QUAL	F	Rep.Limi	t	Dil. Fac	tor Date Analy	/zed	Analyst	Seq. #
DIESEL RANGE ORG	ANICS					MC	L	SW8015B	U	nits: mg/k	g-dry
Diesel Range Organics (	C10-C28)	4100			51	0	100	07/08/08 1	4:02	NW	4553595
Surr: n-Pentacosane		D	*	%	20-15	4	100	07/08/08 1	4.02	NW	4553595
Prep Method	Prep Date		Prep Initials	Pre	p Factor	]					
SW3550B	07/05/2008 15:20		QMT	1.00	)	]					
GASOLINE RANGE O	RGANICS					MC	L	SW8015B	Ur	nits: mg/k	g-dry
Gasoline Range Organic	S	26			0.5	1	1	07/05/08 2	2:14	NMa	4550257
Surr: 1,4-Difluorobenz	ene	106		%	63-142	2	1	07/05/08 2	2:14	NMa	4550257
Surr 4-Bromofluorobe	nzene 1	73MI	*	%	50-159	)	1	07/05/08 2	2 14	NMa	4550257
Prep Method	Prep Date	<u></u>	Prep Initials	Pre	Factor	7				•	
SW5030B	07/04/2008 16:39		XML	5.00	)	j					
PERCENT MOISTURE						MCI		D2216	Un	nits: wt%	
Percent Moisture		2.03				)	1	07/03/08 1	8:27	ESK	4545376
TCLP VOLATILE ORG	ANICS				-	MCI		SW8260B	Un	its: ug/L	
Benzene		ND			5	500	1	07/06/08	8:17	LT	4548856
Ethylbenzene		11	•		5		1	07/06/08	8·17	LT	4548856
Toluene		35			5		1	07/06/08	8:17	LT	4548856
m,p-Xylene	······································	19			5		1	07/06/08	3:17	LT	4548856
o-Xylene		14			5		1	07/06/08	3.17	LT	4548856
Xylenes,Total		33			5		1	07/06/08	3:17	LT	4548856
Surr: 1,2-Dichloroethar	ne-d4	94.0		%	62-130	·	1	07/06/08 8	3.17	LT	4548856

70-130

74-122

%

%

Leach Method	Leachate Date	Leach Initials
SW1311	07/04/2008	GF

1

1

07/06/08 8:17

07/06/08 8:17

LT

LT

Qualifiers:

Surr: 4-Bromofluorobenzene

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

98.0

98.0

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

> 08070257 Page 7 7/21/2008 1:19 50 PM

4548856

4548856



8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SM		······································	Collected:	07/01/20	08 10:55	SPL Sa	mple	<b>D:</b> 080	70257-06
			Site: Lo	oco Hills,	NM				
Analyses/Method	Res	ult QUAL	Rep.Limit	_	Dil. Factor	Date Ana	alyzed	Analyst	Seq.#
CORROSIVITY	•			MCL	. si	N9045D	Ur	nits: pH U	nits
Corrosivity	7	.5	01		1	07/07/08	3 11:40	PAC	4550603
DIESEL RANGE OR	GANICS			MCI	SI	N8015B	Ur	hits: ma/k	a-drv
Diesel Range Organics	(C10-C28) 420	0	510		100	07/08/08	3 14:28	NW	4553596
Surr: n-Pentacosane		D *	% 20-154		100	07/08/08	8 14 28	NW	4553596
Prep Method	Prep Date	Pren Initials	Prep Factor						
SW3550B	07/05/2008 15.20	QMT	1.00						
GASOLINE RANGE	ORGANICS		······································	MCI	S	N8015B	Un	its: ma/k	a-drv
Gasoline Range Organi	cs g	7	10		100	07/05/08	23:12	NMa	4552003
Surr: 1,4-Difluoroben	zene 10	2	% 63-142	*	100	07/05/08	23:12	NMa	4552003
Surr: 4-Bromofluorob	enzene 14	7	% 50-159	·····	100	07/05/08	23:12	NMa	4552003
Dura Mathad		D. Link			· · · · · · · · · · · · · · · · · · ·				
Prep Method	Prep Date	Prep Initials	Prep Factor						
SVV5030B	07/04/2008 17.09		1.00				······		
IGNITABILITY MODI	FIED OPEN CUP			MCL	ASTM	D92-01	Un	its: °F	
Ignitability	13	5	20		1	07/07/08	14:00	GF	4550037
MERCURY, TOTAL				MCL	SV	V7471A	Un	its: mg/k	g-dry
Mercury	0.058	6	0.0308	-	1	07/07/08	22:13	CMC	4551632
Pres Mathod	Bron Data	Prop Initiala	Bron Faster						
SW7471A	07/07/2008 17:00	CMC							
			11.00						
METALS BY METHO	D 6020, TOTAL		0.540	MCL	SV	V6020A	Un	its: mg/kg	g-dry
Arsenic	2.4		0.513			07/17/0	8 1:26 /	AL_H	45/0/6/
Cadmum		<u></u>	0.513	. <u> </u>	1	07/18/08	15/18 /		4575108
Caumum		, 	0.513			07/17/00	9 1 26 /	<u>~L_H</u>	4570767
Lead	3.5	)	0.513			07/17/00	31.26	<u>ч∟_п</u>	4570767
Selenium			0.513		1	07/17/08	18.43	<u></u>	4573134
Silver	0.93	, 	0.513		1	07/17/08	18:43		4573134
				· · · · · · · · ·					
Prep Method	Prep Date	Prep Initials	Prep Factor						
SW3050B	07/07/2008 9:55	DDW	1 00						
PERCENT MOISTURE				MCL		D2216	Uni	ts: wt%	<u> </u>
Percent Moisture	25		0		1	07/03/08	18.27	ESK	4545375
Percent Moisture REACTIVE CYANIDE-	2 : SOLID	;	0	MCI	1 	07/03/08	18.27 Uni	ESK	4545375

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

74



8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

Client Sample ID:SMALL PILE

Collected: 07/01/2008 10.55

SPL Sample ID: 08070257-06

			Si	te: Loc	o Hills, N	IM				
Analyses/Method	Result	QUAL	R	ep.Limit	D	il. Facto	or Date Anal	yzed	Analyst	Seq. #
REACTIVE SULFIDE - SOLID					MCL	S	W7.3.4.2	U	nits: mg/k	g-dry
Reactive Sulfide	ND			10.3		1	07/07/08	15 30	ESK	4550464
TCLP VOLATILE ORGANICS					MCL	S	W8260B	U	nits: ug/L	
Benzene	ND			5	500	1	07/06/08	7:51	LT	4548855
Ethylbenzene	40			5		1	07/06/08	7:51	LT	4548855
Toluene	39			5		1	07/06/08	7:51	LT	4548855
m,p-Xylene	42			5		1	07/06/08	7.51	LT ·	4548855
o-Xylene	23			5		1	07/06/08	7:51	LT	4548855
Xylenes,Total	65			5		1	07/06/08	7 <sup>.</sup> 51	LT	4548855
Surr: 1,2-Dichloroethane-d4	96.0		%	62-130		1	07/06/08	7:51	LT	4548855
Surr: 4-Bromofluorobenzene	104		%	70-130		1	07/06/08	7:51	LT	4548855
Surr: Toluene-d8	98 0		%	74-122		1	07/06/08	7 51	LT	4548855

Leach Method	Leachate Date	Leach Initials
SW1311	07/04/2008	GF

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

> 08070257 Page 9 7/21/2008 1 19:50 PM

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**Quality Control Documentation** 

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08070257 Page 10 7/21/2008 1 19 50 PM

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#### **Conoco Phillips CPPL Loco Hills**

Analysis: Method:	Diesel Range Organi SW8015B	cs			WorkOrder: Lab Batch ID:	08070257 81295
	Meth	od Blank		Samples in Analytic	al Batch:	
RunID: HP_	V_080707A-4553587	Units.	mg/kg	Lab Sample ID	Client Sar	mple ID
Analysis Date	07/08/2008 10:35	Analyst.	NW	08070257-01A	E-SIDE	
Preparation Da	ate: 07/05/2008 15:20	Prep By:	QMT Method SW3550B	08070257-02A	TOP	
				08070257-03A	N-SIDE	
Г	Apolito		Beault   Beaulimit	08070257-04A	S-SIDE	
l.	Analyte		Result Rep Limit	08070257-05A	W-SIDE	
	Surr. n-Pentacosane	8)	90.4 20-154	08070257-06A	SMALL PI	LE

#### Laboratory Control Sample (LCS)

RunID:	HP_V_080707A-4553588	Un
Analysis Date:	07/08/2008 11.01	An
Preparation Date:	07/05/2008 15.20	Pre

07A-4553588	Units
3 11·01	Analyst:
3 15·20	Prep By:

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Diesel Range Organics (C10-C28)	66.6	63 2	94.9	57	150
Surr: n-Pentacosane	1.66	1.66	100	20	154

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

Sample Spiked:	08070257-01
RunID:	HP_V_080707A-4553590
Analysis Date:	07/08/2008 11:52
Preparation Date:	07/05/2008 15:20

Units: mg/kg-dry Analyst: NW Prep By: QMT Method SW3550B

mg/kg

QMT Method SW3550B

NW

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)	1520	68.9	3400	N/C	68.9	3700	N/C	N/C	50	21	175
Surr: n-Pentacosane	ND	1.72	D	D	1 72	D	D	D	30	20	154

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
- 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

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.

08070257 Page 11 7/21/2008 1·19 52 PM



### Conoco Phillips CPPL Loco Hills

Analysis: Method:	Gasoline Range Org SW8015B	anics			WorkOrder: 08070257 Lab Batch ID: R244079	
·····	<u>Metr</u>	od Blank		Samples in Analytic	cal Batch:	<u> </u>
RunID HP_O_ Analysis Date: Preparation Date	080705A-4550233 07/05/2008 9.43 : 07/05/2008 9·43	Units: Analyst: Prep By:	mg/kg NMa Method	<u>Lab Sample ID</u> 08070257-01A 08070257-02A 08070257-03A	<u>Client Sample ID</u> E-SIDE TOP N-SIDE	
Ga	Analyte soline Range Organics Surr: 1,4-Difluorobenzene Surr: 4-Bromofluorobenzene Methanolic F	reparation	Result         Rep Limit           ND         0.10           102.1         63-142           90.1         50-159           Blank	08070257-04A 08070257-05A 08070257-06A	S-SIDE W-SIDE SMALL PILE	
RunID: HP_O_ Analysis Date: Preparation Date:	080705A-4550234 07/05/2008 10:11 : 07/05/2008 10:11	Units: Analyst: Prep By:	mg/kg NMa Method SW5030B			
Gas S S	Analyte soline Range Organics sur: 1,4-Difluorobenzene sur: 4-Bromofluorobenzene		Result         Rep Limit           ND         2.5           101 6         63-142           89 7         50-159			

#### Laboratory Control Sample (LCS)

RunID:	HP_O_080705A-4550232	Units	mg/kg
Analysis Date:	07/05/2008 9:14	Analyst:	NMa
Preparation Date:	07/05/2008 9:14	Prep By:	Method SW5030B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Gasoline Range Organics	1.00	1 06	106	70	130
Surr: 1,4-Difluorobenzene	0.100	0.106	106	63	142
Surr: 4-Bromofluorobenzene	0.100	0.095	95 0	50	159

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

Sample Spiked	08070246-08		
RunID:	HP_O_080705A-4550428	Units.	mg/kg-dry
Analysis Date:	07/05/2008 13:05	Analyst:	NMa
Preparation Date:	07/02/2008 14:45	Prep By:	Field Method SW5035A

		•						
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		08070257 Page 12					
QC results prese	ented on the QC Summary Report have been rounded RPD and	nd percent recovery values	7/21/2008 119:52 PM					

calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

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### **Conoco Phillips** CPPL Loco Hills

Analysis: Gasoline Range Organics Method: SW8015B						WorkOrder: 08070257 Lab Batch ID: R244079					
Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Gasoline Range Organics	ND	0.841	0.772	91.7	0 83	0 793	95.5	2.74	50	26	147
Surr 1,4-Difluorobenzene	ND	0.0841	0.0875	104	0 083	0.0864	104	1.25	30	63	142
Surr: 4-Bromofluorobenzene	ND	0 0841	0.0789	93.8	0.083	0.0762	91.8	3.44	30	50	159

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 the	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		08070257 Page 13							
QC results prese	ented on the QC Summary Report have been rounded. RPD ar	id percent recovery values	7/21/2008 1 19 53 PM							

calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.



### **Conoco Phillips**

CPPL Loco Hills

Analysis: Method:		Metals by Method 60 SW6020A	20, Total			WorkOrder: Lab Batch ID:	08070257 81323A-I		
Method Blank					Samples in Analytical Batch:				
RuniD: IC	CPMS2_08	80717A-4573131	Units.	mg/kg	Lab Sample ID	Client San	nple ID		
Analysis Da	ate <sup>.</sup>	07/17/2008 18:30	Analyst:	AL_H	08070257-06A	SMALL PIL	.E		
Preparation	Date:	07/07/2008 9:55	Prep By:	DD Method SW3050B					
		•							

Analyte	R	esuit	Rep Limi		
Selenium		ND	0.5		
Silver		ND	0.5		

#### Laboratory Control Sample (LCS)

RunID:	ICPMS2_080717A-4573132	Units:	mg/kg	3	
Analysis Date:	07/17/2008 18:36	Analyst:	AL_H	i	
Preparation Date:	07/07/2008 9.55	Prep By:	DD	Method	SW3050B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Selenium	82.90	73 87	89.11	76	124
Silver	80.00	90.91	1136	61	139

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

Sample Spiked:	08070257-06				
RunID:	ICPMS2_080717A-4573135	Units.	mg/k	g-dry	
Analysis Date:	07/17/2008 18:49	Analyst:	AL_F	ł	
Preparation Date:	07/07/2008 9:55	Prep By:	DD	Method	SW3050B

Analyte	Sample Result	MS Spike Added	MS -Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Selenium	ND	10.26	8 799	84.32	10.26	8.244	78 91	6 511	20	75	125
Silver	0.9389	10.26	12 23	110.0	10.26	11 88	106.6	2.894	20	75	125

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

- 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. 08070257 Page 14 7/21/2008 1:19 53 PM



HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

**Quality Control Report** 

#### **Conoco Phillips CPPL** Loco Hills

Analysis: Metals by Method 6020, Total WorkOrder: 08070257 81323C-I Method: SW6020A Lab Batch ID: Samples in Analytical Batch: Method Blank ICPMS2\_080718A-4575106 Units RunID: mg/kg Lab Sample ID **Client Sample ID** SMALL PILE Analysis Date: 07/18/2008 15:05 Analyst: AL\_H 08070257-06A DD Method SW3050B Preparation Date: 07/07/2008 9:55 Prep By: Rep Limit Result Analyte Barium ND 05 Laboratory Control Sample (LCS) RunID: ICPMS2\_080718A-4575107 Units: mg/kg

	Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Barium		156.0	146.7	94 04	82	119

Analyst:

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

07/18/2008 15:11

07/07/2008 9.55

Sample Spiked: RunID: Analysis Date: Preparation Date:

Analysis Date:

Preparation Date:

08070257-06 07/18/2008 16:59 07/07/2008 9:55

ICPMS2\_080718A-4575426 Units: mg/kġ-dry Analyst: AL\_H Prep By DD Method SW3050B

AL\_H

Prep By: DD Method SW3050B

	Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Barium		82.56	10.26	106.5	N/C	10 26	107 8	N/C	、 N/C	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 th	an 4 times the amount of spike added. Control limits do not a	pply.
	TNTC - Too numerous to count		08070257 Page 15
QC results presi calculated by the	ented on the QC Summary Report have been rounded. RPD a s SPL LIMS system are derived from QC data prior to the appli	nd percent recovery values cation of rounding rules,	7/21/2008 1 19 53 PM



#### **Quality Control Report**

#### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

## Conoco Phillips

CPPL Loco Hills

Analysis: Method:	Metals by Method 602 SW6020A	0, Total			WorkOrder: Lab Batch ID:	08070257 81323-1
	Metho	d Blank		Samples in Analytic	al Batch:	
RunID: ICPMS2_	_080716A-4570765	Units.	mg/kg	Lab Sample ID	Client Sam	ple ID
Analysis Date: Preparation Date:	07/17/2008 1:12 07/07/2008 9:55	Analyst: Prep By:	AL_H DD Method SW3050B	08070257-06A	SMALL PILE	Ξ

Analyte	Result	Rep Limit
Arsenic	ND	0.5
Cadmium	ND	0.5
Chromium	ND	0 5
Lead	ND	0.5

#### Laboratory Control Sample (LCS)

RunID:	ICPMS2_080716A-4570766	Units:	mg/kg	3	
Analysis Date:	07/17/2008 1:19	Analyst	AL_H		
Preparation Date:	07/07/2008 9.55	Prep By:	DD	Method	SW3050B

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Arsenic	80.90	65.74	81.26	79	121
Cadmium	233.0	248.1	106.5	81	119
Chromium	60.80	65.01	106.9	78	121
Lead	76.80	68 51	89.21	81	120

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

Sample Spiked:	
RunID:	
Analysis Date:	
Preparation Date:	

08070257-06 ICPMS2\_080716A-4570768 Units: 07/17/2008 1:32 Analys : 07/07/2008 9:55 Prep E

<sup>0768</sup> Units: mg/kg-dry Analyst: AL\_H Prep By: DD Method SW3050B

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Arsenic	2.490	10.26	11.46	87.42	10 26	11 26	85.52	1 716	20	75	125
Cadmium	ND	10 26	10.18	98.71	10.26	10.03	97.21	1 522	20	75	125
Chromium	5 471	10.26	16.31	105.7	10.26	16.19	104.6	0 6942	20	75	125
Lead	3.522	10.26	12 76	90.06	10.26	12.81	90.56	0.4011	20	75	125

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

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.

08070257 Page 16

7/21/2008 1 19 53 PM

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



Mercury

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

## **Conoco Phillips**

**CPPL Loco Hills** 

Analysis: Method:	Mercury, Total SW7471A							Work Lab E	Order: Batch ID:	0807025 81365	57	
	<u>M</u>	ethod Blank				Sample	s in Analy	tical Batch	:			
RunID. HGLC_08	0707B-4551616	Units:	mg/k	g		Lab Sa	mple ID		Client Sar	nple ID		
Analysis Date:	07/07/2008 21:35	Analyst <sup>.</sup>	СМС			080702	57-06A		SMALL PI	LE		
Preparation Date:	07/07/2008 17:00	Prep By	: CMC	Method SV	V7471A							
Mercu	- Analyte		Result	t Rep Limit	]							
						· · · · · · · · · · · · · · · · · · ·						
			Ī	aboratory	Control San	nple (LCS	<u>5)</u>					
	Run	D:	HGLC_(	080707B-455	617 Units:	mg/	'kg					
	Anal	ysis Date:	07/07/2	2008 21:38	Analy	st: CM	С					
	Prep	aration Date:	07/07/2	2008 17:00	Prep	Зу. СМ	C Method	SW7471A				
		Anaiy	te		Spike R	esult	Percent	Lower	Upper			
	Mercur	v			3.600	3 5 1 9	97 74	68	132			
		,		L		0.010						
		Matrix	Spike (	MS) / Matrix	CSpike Dup	licate (M	SD)					
	Sa	nole Spiked:	08061	895-06								
	Ru	nID:	HGLC	080707B-45	51619 Units	s: mo	a/ka-drv					
	Ana	alysis Date:	07/07/	- 2008 21.43	Anal	vst. CN	иС					
	Pre	paration Date:	07/07/	2008 17.00	Prep	By: CM	AC Method	SW7471A				
Ana	lyte	Sample Result	MS Spike	MS Result	MS % Recovery	MSD Spike	MSD Result	MSD Recov	% RP ery	D RPD	Low Limit	High Limit

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 08070257 Page 17 QC results presented on the QC Summary Report have been rounded RPD and percent recovery values 7/21/2008 1 19:53 PM calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.

ND 0.3589

0.3986

107.8 0 3589

0.4075

110.3

2.205

20

75

125



## **Conoco Phillips**

**CPPL Loco Hills** 

Analysis: Method:	TCLP Volatile Orgar SW8260B	nics					WorkOrder: Lab Batch ID:	08070257 R243970
	Met	nod Blank		····	5	Samples in Analyt	ical Batch:	
RunID: N_080	0706C-4548847	Units	ug/L		Ē	ab Sample ID	Client San	nple ID
Analysis Date:	07/06/2008 6:07	Analyst:	LT	<b>-</b>		8070257-01A 8070257-02A 8070257-03A 8070257-04A	E-SIDE TOP N-SIDE S-SIDE	
Bee Et Tc m, o-2 Xy	Analyte enzene hylbenzene juene p-Xylene Xylene tenes_Total Surr 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: Toluene-d8	nate Blank	Result ND ND ND ND 92.0 100.0 96.0	Rep Limit 5 0 5.0 5.0 5.0 5.0 62-130 70-130 74-122	0	8070257-05A 8070257-06A	W-SIDE SMALL PIL	E .
lunID:	N_080706C-4548840	Units:	ug/L					
nalysis Date: each Date:	07/06/2008 5:41 07/04/2008 0:00	Analyst: Leach By	LT <sup>·</sup> y: GF M	lethod SW13	11			
[	Analyte		Result	Rep Limit				
	nzene vylenzene b-Xylene Sylene enes_Total Surr: 1,2-Dichloroethane-d4 Surr: 4-Bromofluorobenzene Surr: 7.Duene-d8		ND ND ND ND ND 88 0 100 0 98 0	5.0 5.0 5.0 5.0 62-130 70-130 74-122		·		
××			Lab	oratory Con	trol Sample	e (LCS)		
	RunID: Analysis	; Date <sup>,</sup>	N_0807060 07/06/200	C-4548837 8 4 <sup>.</sup> 23	Units: Analyst.	ug/L LT		
	<b></b>				· · · · · · · · · · · · · · · · · · ·	<u> </u>		

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Benzene	20.0	21 0	105	76	126
Ethylbenzene	20.0	20 0	100	67	122
Toluene	20 0	21.0	105	70	131
m,p-Xylene	. 40.0	42.0	105	72	150
o-Xylene	20.0	22.0	110	78	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.

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.

08070257 Page 18 7/21/2008 1 19 53 PM



#### **Quality Control Report**

Analysis Date:

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

		Conoco Phillips			
	•	CPPL Loco Hills			
Analysis:	TCLP Volatile Organics		WorkOrder:	08070257	
Method:	SW8260B		Lab Batch ID:	R243970	
		Laboratory Control Sample (LCS)			
	BunD.	N 080706C-4548837 Units: ug/l			

Analyst:

LT

Analyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit
Xylenes,Total	60	64	110	72	150
Surr: 1,2-Dichloroethane-d4	50.0	45	90.0	62	130
Surr: 4-Bromofluorobenzene	50.0	54	108	70	130
Surr Toluene-d8	50.0	50	100	74	122

Matrix	Spike	(MS)	

Sample Spiked:	08070030-01		
RunID:	N_080706C-4548854	Units:	ug/L
Analysis Date:	07/06/2008 7.25	Analyst:	LT

07/06/2008 4.23

Analyte	Sample Result	Spike Added	MS Result	MS % Recovery	Low Limit	High Limit
Benzene	ND	200	190	95.0	76	127
Ethylbenzene	ND	200	180	90.0	35	175
Toluene	ND	200	190	95.0	70	131
m,p-Xylene	ND	400	390	97.5	35	175
o-Xylene	ND	200	190	95.0	35	175
Xylenes, Total	ND	600	580	97	35	175
Surr: 1,2-Dichloroethane-d4	ND	500	480	96.0	62	130
Surr: 4-Bromofluorobenzene	ND	500	520	104	70	130
Surr: Toluene-d8	ND	500	490	98.0	74	122

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

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

08070257 Page 19 7/21/2008 1:19:54 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.



SMALL PILE

#### Conoco Phillips CPPL Loco Hills

Analysis: Method:	PERCENT MOISTURE D2216		WorkOrder: Lab Batch ID:	08070257 R243812A	
	· · · · · · · · · · · · · · · · · · ·	Samples in Analytica	al Batch:		
		Lab Sample ID	Client Sam	nple ID	
		08070257-01A	E-SIDE		
		08070257-02A	TOP		
		08070257-03A	N-SIDE		
		08070257-04A	S-SIDE		
		08070257-05A	W-SIDE		

	Sample Du	<u>plicate</u>		,	
Original Sample.	08070257-06				
RuniD:	VVE1_080703VV-4545375	Units:	Wt%		
Analysis Date:	07/03/2008 18:27	Analyst:	ESK		

08070257-06A

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Percent Moisture	2.5	2.492	0.156	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

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

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.

08070257 Page 20 7/21/2008 1.19<sup>.</sup>54 PM



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#### HOUSTON LABORATORY

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

# Conoco Phillips CPPL Loco Hills

Analysis: Method:	Reactive Cyanide-Solid SW7.3.3.2					Wor Lab	kOrder: Batch ID:	08070257 R244047
	Method B	lank		Sam	ples in Analy	tical Batc	h:	
RunID: WET_0	080707J-4549960 L	Inits mg/kg		Lab	Sample ID		Client Sa	mple ID
Analysis Date:	07/07/2008 13:00 A	nalyst: ESK		0807	0257-06A		SMALL P	ILE
			<del></del>					
Pa	Analyte	Result Rep Lin	nit					
I.C.E.			1.0					
	<u></u>	Laborator	v Control Sa	nple (L	. <u>CS)</u>			
,	RunID:	WET_080707J-454	19961 Units	: n	ng/kg			
	Analysis Date	e 07/07/2008 13:00	) Anal	vst: E	SK			
		Analyte	Spike	Result	Percent	Lower	Upper	
	Deseting Oracle		Added	0.1010	Recovery	Limit	Limit	
	Reactive Cyanic	<u>s</u>	ample Dupli	ate	21.55	5	50	,
		-						
	Original S BudD:	ample: 08070249-01 WET 080707J-	4549964	nite:	ma/ka			
	Analysis [	Date: 07/07/2008 13	0.00 A	nalyst:	ESK			
				·				
	L.	Analyte	Samp	e Di t Re	UP RPi sult	D RI	PD	
	Reactive C	Cyanide		ID	ND	0	20	
	·							
							,	
		,						
							,	
Qualifiers:	ND/U - Not Detected at the F	Reporting Limit	MI - M	trix Inte	erference			
	B/V - Analyte detected in the	associated Method Blank	D - Re	overy L	Jnreportable d	ue to Dilut	ion	
	J - Estimated value between	MDL and PQL	* - Rec	overy O	utside Advisa	ble QC Lin	nits	
	E - Estimated Value exceeds	calibration curve	· • • • • • • • • • • • • • • • • • • •	u			teel Paris - 1	
	TNTC - Too numerous to co	ie concentration is greater	inan 4 times	ine amo	ount of spike a	idded. Con	trol limits do	not apply. 08070257 Page (
C results preser	nted on the QC Summary Report	have been rounded RPE	) and percent	recover	y values			7/21/2008 1 19:54 F
alculated by the	SPL LIMS system are derived fro	om QC data prior to the ap	oplication of ro	unding	rules.			1212000 1 19 04 1



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

## **Conoco Phillips**

CPPL Loco Hills

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Analysis: Method:	lgnitability Modified Open Cup ASTM D92-01				WorkOrder: Lab Batch ID:	08070257 R244066
<u></u>			S	amples in Analyt	ical Batch:	
			<u>L</u> 08	<u>ab Sample ID</u> 8070257-06A	<u>Client San</u> SMALL PIL	n <u>ple ID</u> .E
		Laboratory Con	trol Sample	e (LCS)		
•	RunID.	WET_080707L-4550028	Units:	°F		
	Analysis Date:	07/07/2008 14.00	Analyst:	GF		
	Anal	vte Soil	Re Res	uit Percent	Lower Lipper	

	Ignitability	81.00	81.00	100.0	97 5	102.5	~
		Added		Recovery	Limit	Limit	
	Analyte	Spike	Result	Percent i	Lower	Upper I	

## Sample Duplicate

Original Sample:	08070249-03		
RunID:	WET_080707L-4550034	Units:	°F
Analysis Date:	07/07/2008 14:00	Analyst:	GF

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Ignitability	212	212	0	20

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	08070257 Page 22				
QC results prese calculated by the	ented on the QC Summary Report have been rounded. RPD ar SPL LIMS system are derived from QC data prior to the applic	nd percent recovery values 7/21/2008 1.19.54 PM cation of rounding rules.				



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### HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054

(713) 660-0901 .

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## **Conoco Phillips**

CPPLI

RuniD WET_08070 Analysis Date 0 Reactive	<u>Method Bla</u> 17Q-4550451 Uni 17/07/2008 15:30 Ana	n <u>k</u> ts. mg/kg ilyst: ESK		Sam	ples in Analy	tical Batc	h:		
RunID WET_08070 Analysis Date 0 Reactive	07Q-4550451 Uni 07/07/2008 15:30 Ana	ts. mg/kg Ilyst: ESK							
Analysis Date <sup>,</sup> C	)7/07/2008 15:30 Ana	lyst: ESK		Lab	Sample ID		Client Sa	Imple ID	
Reactive				0807	0257-06A		SMALL P	ILE	
Reactive			<u>.</u>						
	Sulfide	ND	10						
		Laborator	y Control	Sample (L	.CS)				
	RunlD:	WET_080707Q-45	50453 U	Inits: n	ng/kg				
	Analysis Date:	07/07/2008 15:30	) A	nalyst <sup>,</sup> E	SK				
	A	nalyte	Spike	Result	Percent	Lower	Upper		
			Added	ļ	Recovery	Limit	Limit		
	Reactive Sulfide		100.0	93.50	93.50	85	115		
	Analysis Dat	e: 07/07/2008 15	5.30 Sar	Analyst.	ESK	D RF			
			Re	esult Re	sult	Lir	nit		
	Reactive Sul	fide		ND	ND	0	20		
Qualifiers: NI	D/U - Not Detected at the Rep	MI -	Matrix Inte	rference					
B/	V - Analyte detected in the as	sociated Method Blank	D - I	D - Recovery Unreportable due to Dilution					
- L -	- Estimated value between MI	DL and PQL	* - R	Recovery O	utside Advisa	ble QC Lim	lits		
E · N/	<ul> <li>Esimated value exceeds ca</li> <li>C - Not Calculated - Sample a</li> </ul>	anoration curve	than 4 tim	ies the amo	ount of spike a	dded, Coni	rol limits do	not apply.	
TN	NTC - Too numerous to count				ant of spine a			08070257 Page 23	
C results presented of alculated by the SPL L	n the QC Summary Report han a system are derived from	ave been rounded. RPE QC data prior to the ap	and perce oplication of	ent recoven f rounding	y values rules.			7/21/2008 1 19 54 PM	

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## HOUSTON LABORATORY 8880 INTERCHANGE DRIVE

HOUSTON, TX 77054 (713) 660-0901

## **Conoco Phillips**

CPPL Loco Hills

Analysis: Method:	Corrosivity SW9045D	·				Wor Lab	kOrder: Batch ID:	08070257 R244098
				Samp	les in Analy	tical Batc	h:	
				<u>Lab S</u> 08070	iample ID 0257-06A		<u>Client Sa</u> SMALL PI	mple ID LE
		Laborator	v Control	Sample (L	<u>CS)</u>	<u></u>		
	RunID: Analysis Date:	WET_080707ZH-4 07/07/2008 11:40	550598 Ui ) Ar	nits: pl nalyst P	H Units AC			
	An	alyte	Spike Added	Result	Percent Recovery	Lower Limit	Upper Limit	
	Corrosivity		7.000	7.030	100.4	98	102	
		<u>s</u>	ample Dur	olicate				
	Original Samp RuniD: Analysis Date	le: 08070284-01 WET_080707ZI 07/07/2008 11	H-4550604 :40	Units: Analyst:	pH Units PAC			

Analyte	Sample Result	DUP Result	RPD	RPD Limit
Corrosivity	9.18	9.18	0	20

 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
 08070257 Page 24

 QC results presented on the QC Summary Report have been rounded. RPD and percent recovery values
 7/21/2008 1 19.54 PM

 calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.
 7/21/2008 1 19.54 PM

Sample Receipt Checklist And Chain of Custody

> 08070257 Page 25 7/21/2008 1.19 55 PM



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

## Sample Receipt Checklist

Workorder:	08070257		Received By	L_C
Date and Time Received:	7/3/2008 9:30:00 AM		Carrier name.	Fedex-Standard Overnight
Temperature:	3.5°C		Chilled by:	Water Ice
1. Shipping container/c	ooler in good condition?	Yes 🗹	No 🗌	Not Present
2. Custody seals intact	on shippping container/cooler?	Yes 🗹	No 🗌	Not Present
3. Custody seals intact	on sample bottles?	Yes	No 🗔	Not Present
4. Chain of custody pre	sent?	Yes 🗹	No 🗌	
5. Chain of custody sig	ned when relinquished and received?	Yes 🗹	No 🗔	
6. Chain of custody agr	ees with sample labels?	Yes 🗹	No 🗔	
7. Samples in proper co	ntainer/bottle?	Yes 🗹	No 🗌	
8. Sample containers in	tact?	Yes 🗹	No 🗌	
<b>9.</b> Sufficient sample vol	ume for Indicated test?	Yes 🗹	No 🗌	
10. All samples received	within holding time?	Yes 🗹	No 🗀	
11. Container/Temp Blan	k temperature in compliance?	Yes 🗹	No 🗌	
12. Water - VOA vials hav	e zero headspace?	Yes		Vials Not Present
13. Water - Preservation of	checked upon receipt (except VOA*)?	Yes	No 🗌	Not Applicable
*VOA Preservation Ch	ecked After Sample Analysis			
SPL Representati	ve:	Contact Date &	Time:	
Client Name Contact	ed:	]		
Non Conformance Issues:				
Client Instructions:				

	7		S	PL,	Inc.					SPL V	Varkore	der No.		1	57	902	2
	A	nalysis Re	quest	& Cha	in of Cust	ody Re	cord			$\overline{\mathcal{O}}$	Fr	17	77	5-7	page	of	
Client Name: Tetra Tech /	GnowPh	Il's Pige	Line	ma	trix bottle	size	pres.				Ř	eque	sted A	nalys	sis		
Address: 1703 West Indu	strict		<b></b>	i	ler les	al la			0			<u> </u>					
Phone/Fax: 432 - 686 - 80	\$(			Ö	= of	othe			Ŕ		5						
Client Contact: Charles Durre	H Emailth	tla.durret	Ctobet	ctah ·	x ibc		her 63	inci	/~'	X	1º						
Project Name/No.: 11556460	24				(=0) =ai	402	H I	onte	0	Ш	Z		l				
Site Name: Loca Hills				~\S		4	X N	U C	30	6							
Site Location: Loco Hills N	Lew Mexic	0		ater	udg stic ISS	ter 1	- 5	6.0	T	<u> </u>	Ă	18			I		
Invoice To:	<b>1</b>	<u> </u>	<del></del>	<u>ال</u>	-sla -gla	1 11	HU	qui	G	13	a U	2	}				
SAMPLE ID	DATE	TIME	comp	grab 🗦	0 Å N	` <i>±</i>	] _ ~	ź	12	4	à	14	1				
E-side	7-1-08	10:30		X				2	X	X							
Top		10:35		X				2	X	X							
N-side		10:40	X			1	Ţ	2	X	X			[				
5-side		10:45	X				~	2	X	X	T	1					
W-side		10:50		X	L' La Vi			2	X	X	1			1			
small ## Pile	V	10:55	X					Z	X	X	X	X					
			+-+						+	+		+	<b>+</b>			+	
			††				1	+			+	1	<u>†</u>	1			
						1	1			1		+					
Client/Consultant Remarks: Grad P.O. # 45 09610	2Ph111:ps 1900	PipeLin	<u>ال ا</u>	1.4	boratory ren	urks:			- <del></del>	<u></u>			<u> </u>	Intact Ice? Temp	? .	<u>.</u>	N L
Requested TAT	Special Repo	rting Require	ments	Results:	Fax 📕	Email 🖵	PDF 🖵	Speci	al Detect	tion Linn	its (spe	cífy):			PM re	view (in	itial): ^
Contract 🛄 🛛 72hr 🛄	Standard QC	Level 3 QC	- <b>- 1</b> -	at QC	TX TRRP	L LAR	ECAP.						<u></u>		1/1	<u> </u>	<u>ki</u>
24hr 🗍 - Mandard 🗍	1. Relinquished by Sampler				7-02-09 fime 7-02-09 9:00 au			:00 an	2. Received by: am				·····				
48hr .	3. Relinguished by:					date	2/08	time 3	:00 pu	4. Rec	eived b	y:					
Other ASAP	5. Relinquist	red by:				date 7	3/18	time C	30	6. Ret	ceived h	Y Labo	netory:				· ····································
<b>4</b> 8880 Interchang Houston, TX 77054 (71	ge Drive 3) 660-0901			1 50 See	0 Ambassa htt, LA 705	dor Cafi 83 (337)	fery Pai 237-47	rkway 75		-2+	Tra	verse	<b>J</b> 459 Lity M	Hughe I 4968	s Driv 6 (231	e ) 947-5	777

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## **Conoco Phillips**

Certificate of Analysis Number: <u>08071643</u>							
Report To:	Project Name: CPPL Loco Hills						
Tetra Tech	<u>Site:</u> Loco Hills, NM	1					
Charlie Durrett	Site Address:						
1703 W Industrial Avenue							
Midland	PO Number: WO#4509610900						
TX	State: New Mexico						
79701-	State Cert. No.:						
ph: (432) 686-8081 fax:	Date Reported: 8/4/2008						

## This Report Contains A Total Of 9 Pages

## Excluding This Page, Chain Of Custody

And

## Any Attachments

8/4/2008

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

Date .



## Case Narrative for: Conoco Phillips

Certificate of Analysis Number:

## 08071643

Report To:	Project Name: CPPL Loco Hills
Tetra Tech	Site: Loco Hills, NM
Charlie Durrett	Site Address:
1703 W Industrial Avenue	
Midland	PO Number: WO#4509610900
тх	<u>State:</u> New Mexico
79701-	State Cert. No.:
ph: (432) 686-8081 fax:	Date Reported: 8/4/2008

This report contains additional analysis for the samples originally received on July 3, 2008 and assigned to Certificate of Analysis Number 08070257. Per your request on July 28, 2008 via phone conversation, the sample"Small Pile" (SPL ID: 08071643-01) was analyzed for TCLP Metals.

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

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.

Bithey Again

08071643 Page 1 8/4/2008

Bethany A Agarwai Senior Project Manager

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

Date



## **Conoco Phillips**

#### Certificate of Analysis Number: 08071643 Report To: **Tetra Tech** Project Name: **CPPL Loco Hills Charlie Durrett** Loco Hills, NM Site: 1703 W Industrial Avenue Site Address: Midland ТΧ PO Number: WO#4509610900 79701-New Mexico State: fax: (432) 686-8085 ph: (432) 686-8081 State Cert. No.: Fax To: Date Reported: 8/4/2008

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
SMALL PILE	08071643-01	Soil	7/1/2008 10:55:00 AM	7/3/2008 9:30:00 AM	278382	

Bother Again

8/4/2008

Bethany A. Agarwal Senior Project Manager

Date

Richard R. Reed Laboratory Director

Ted Yen Quality Assurance Officer

> 08071643 Page 2 8/4/2008 3 37 15 PM



8880 INTERCHANGE DRIVE HOUSTON, TX 77054

(713) 660-0901

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Collected: 07/01/2008 10.55 SPL Sam

SPL Sample ID: 08071643-01

Analyses/Method	Result	QUAL	Rep.Limit	MCL D	il. Fact	or Date Analyze	d Analyst	Seq. #
TCLP MERCURY				MCL		SW7470A U	Jnits: ma/L	
Mercury	ND		0 0002	0 2	1	08/01/08 16 1	1 CMC	4605657
Prep Method	Prep Date	Prep Initials	Prep Factor	Leach Metho	d	Leachate Date	Leach I	nitials
SW7470A	07/29/2008 12:50	CMC	1 00	SW1311		07/28/2008	GF	
TCLP METALS BY	METHOD 6010B			MCL		SW6010B L	Jnits: mg/L	
Arsenic	. ND		0 2	5	2	08/02/08 13.3	1 EG	4606663
Barium	1 24		1	100	2	08/02/08 13:3	1 EG	4606663
Cadmium	ND		0 01	1	2	08/02/08 13:3	1 EG	4606663
Chromium	ND		0.02	5	2	08/02/08 13.3	1 EG	4606663
Lead	ND		0.1	5	2	08/02/08 13 3	1 EG	4606663
Selenium	ND		0 2	1	2	08/02/08 13.3	1 EG	4606663
Silver	ND		0.02	5	2	08/02/08 13.3	1 EG	4606663

	11010
SW3010A 07/29/2008 13:20 DDW 1.00 SW1311 07/28/2008 GF	

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

E - Estimated value exceeds calibration cur

TNTC - Too numerous to count

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

> 08071643 Page 3 8/4/2008 3 37 23 PM

**Quality Control Documentation** 

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08071643 Page 4 8/4/2008 3:37.23 PM

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

### Conoco Phillips

CPPL Loco Hills

Analysis: Method:	TCLP Mercury SW7470A						Wor Lab	kOrder: Batch ID:	08071643 82194a
	Meth	od Blank			Sarr	ples in Anal	ytical Batc	h:	
RunID. HGLC_0	80801B-4605649	Units:	mg/L		Lab	Sample ID		Client San	nple ID
Analysis Date:	08/01/2008 15:53	Analyst	CMC		0807	71643-01A		SMALL PI	LE
Preparation Date:	07/29/2008 12.50	Prep By:	CMC Method	SW7470A					
Merci	Analyte		Result Rep Lir	nıt 02					
	Leach	ate Blank				•			
RunID:	HGLC_080801B-4605650	Units:	mg/L						
Analysis Date:	08/01/2008 15:55	Analyst:	СМС						
Preparation Date:	07/29/2008 12:50	Prep By:	CMC Method S	SW7470A					
Leach Date:	07/28/2008 0:00	Leach By	: GF Method S	SW1311					
[	Analyte		Result Rep Lin	nit					
Mercu	ıry		ND 0.00	02					
			Laborator	y Control	Sample (I	<u>.CS)</u>			
	RunID:		HGLC_080801B-46	605651 U	nits. r	ng/L			
	Analysis	Date:	08/01/2008 15 <sup>.</sup> 57	' A	nalyst: (	СМС			
	Preparat	ion Date.	07/29/2008 12 50	P	rep By: (	CMC Method	SW7470A		
	Leach D	ate.	07/28/2008 0:00	Le	each By: (	GF Method	SW1311		
		Analyte	9	Spike	Result	Percent	Lower	Upper	
				Added		Recovery	Limit	Limit	
	Mercury			0.002000	0.001896	94.79	80	120	
	4	Matrix	<u>Spike (MS) / Mat</u>	rix Spike	Duplicate	(MSD)			

Sar Rui Ana Pre Lea	nple Spiked: nID: nlysis Date: paration Date: ch Date:	080713 HGLC_ 08/01/2 07/29/2 07/28/2	579-03 080801B-4605 2008 16:07 2008 12:50 2008 0:00	655 Units: Analy: Prep I Leach	: mg st: CM By. CM ∋By. GF	g/L /IC /IC Method S - Method S	W7470A W1311				
Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Mercury	ND	0.002	0.002705	135 3 *	0.002	0.002706	135.3 *	0.03700	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 tha	n 4 times the amount of spike added. Control limits do not appl	<i>y</i> .				
	TNTC - Too numerous to count	08071643 Page 5					
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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## Conoco Phillips

CPPL Loco Hills

Analysis: Method:	TCLP Metals by Met SW6010B	hod 6010B					Wor Lab	kOrder: Batch ID:	08071643 82197A	
······	Meth	nod Blank			Sam	ples in Anal	ytical Bato	:h:		
RunID TJA_080 Analysis Date: Preparation Date:	802A-4606652 08/02/2008 12:41 07/29/2008 13 20	Units: Analyst <sup>.</sup> Prep By:	mg/L EG DD Meth	od SW3010A	<u>Lab 1</u> 0807	<u>Sample ID</u> 1643-01A		<u>Client Sa</u> SMALL PI	<u>nple ID</u> LE	
[	Analyte		Result Re	n Limit						
Arser	ic		ND.	0.1						
Bariu	n		ND	0.5						
Cadm	ium		ND	0.005						
Chror				0.01						
Selen			ND	0.1						
Silver			ND	0.01						
	Leact	nate Blank								
RunID:	TJA_080802A-4606653	Units:	mg/L			*				
Analysis Date:	08/02/2008 12.46	Analyst:	EG							
Preparation Date:	07/29/2008 13:20	Prep By:	DD Meth	od SW3010A						
each Date.	07/28/2008 0.00	Leach By:	GF Meth	od SW1311						
	Analyte		Result Re	o Limit						
Arsen	ic		ND	02						
Bariur	n			1						
Chron	nium		ND	0.02						
Lead			ND	0.1						
Seleni	um		ND ND	0.2						
Silver		d	Labora	tory Control	Sample (L	CS)			<u> </u>	
	RunID:	т	JA_080802A-	4606654 Ui	nits m	ig/L				
	Analysis	Date: 0	8/02/2008 1	2.50 Ar	nalyst: E	G				
	Prepara	tion Date: 0	7/29/2008 1	3:20 Pr	ep By: D	D Method	SW3010A			
	Leach D	)ate: 0	7/28/2008 0	:00 Le	ach By: G	F Method	SW1311			
Analyte				Snike	Result	Percent	LOWER	Upper		
		, maryto		Added	rtesuit	Recovery	Limit	Limit		
	Arsenic			2.000	1.998	99.89	80	120		
	Barium			2.000	1.954	97.69	80	120		
	Cadmium			2.000	1.925	96.25	80	120		
	Chromium			2.000	1.940	96 98	80	120		
	Lead			2.000	1.975	98.74	80	120		
	Selenium			2 000	2:045	102 3	80	120		
	Silver			2.000	1 933	96.66	80	120		

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.

08071643 Page 6 8/4/2008 3 37.24 PM



## **Conoco Phillips**

CPPL Loco Hills

Analysis: Method:	TCLP Metals by Method 6010B SW6010B							WorkOrder: 08 Lab Batch ID: 82		071643 197A		
Matrix Spike (MS) / Matrix Spike Duplicate (MSD)												
	S R A P L	ample Spiked unID. nalysis Date reparation Date: each Date <sup>.</sup>	08071 TJA_08 08/02/ 07/29/ 07/28/	579-03 30802A-460665 2008 12.59 2008 13:20 2008 0:00	66 Units: Analy Prep L Leach	: mg, st: EG By: DD n By: GF	/L Method S <sup>1</sup> Method S <sup>1</sup>	W3010A W1311				
,	Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Límit
Arsenic		ND	2	1.876	93.79	2	2.174	108.7	14.73	20	75	125
Barium		1 014	2	2.813	89.95	2	3.338	116.2	17.09	20	75	125
Cadmium		ND	2	1.793	89.66	2	2.092	104.6	15 37	20	75	125
Chromium		ND	2	1.779	88.93	2	2.051	102.6	14.23	20	75	125
Lead		ND	2	1.872	89.25	2	2.125	101.9	12.64	20	75	125
Selenium		ND	2	1.815	90.77	2	2.276	113.8	22.49 *	20	75	125
Silver		ND	2	1.877	93 84	2	2.318	115.9	21.02 *	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
 \* - 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.

 TNTC - Too numerous to count
 08071643 Page 7

 QC results presented on the QC Summary Report have been rounded RPD and percent recovery values
 8/4/2008 3:37 24 PM

 calculated by the SPL LIMS system are derived from QC data prior to the application of rounding rules.
 8/4/2008 3:37 24 PM

Sample Receipt Checklist And Chain of Custody

> 08071643 Page 8 8/4/2008 3:37.24 PM


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

## Sample Receipt Checklist

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Workorder. Date and Time Received. Temperature:	. 08071643 Time Received. 7/3/2008 9:30:00 AM Tre: 3.5°C		Received By: Carrier name. Chilled by <sup>.</sup>	L_C Fedex-Standard Overnight Water Ice
1. Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present
2. Custody seals intact	on shippping container/cooler?	Yes	No 🗌	Not Present
3. Custody seals intact	on sample bottles?	Yes	No 🗔	Not Present 🗹
4. Chain of custody present?		Yes 🗹		
5. Chain of custody signed when relinquished and received?		Yes 🗹	No 🗆	
6. Chain of custody agr	ees with sample labels?	Yes 🗹	No 🗀	
7. Samples in proper co	ontainer/bottle?	Yes 🔽		
8. Sample containers in	tact?	Yes 🗹	No 🗔	
<b>9</b> . Sufficient sample vol	ume for indicated test?	Yes 🗹	No 🗌	
10. All samples received	within holding time?	Yes 🗹	No 🗔 .	
11. Container/Temp Blan	k temperature in compliance?	Yes 🗹	No 🗌	
2. Water - VOA vials have zero headspace?		Yes		Vials Not Present 🗹
3. Water - Preservation checked upon receipt (except VOA*)?		Yes	No 🗔	Not Applicable
*VOA Preservation Ch	ecked After Sample Analysis			
SPL Representative:		Contact Date &	Time:	
Client Name Contact	ed:			
Non Conformance Issues:				
Client Instructions:				
	······································			

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Requested TAT	Special Reporting Requirements Resul				ults: Fax Email ProF Special Detect				ction Limits (specify):					PM review (initial				
Contract 72hr	Nandard QC Level 3 QC Level 4 QC TA JRKP LA RECAP L						<b></b>	12. Rec	eived h	<i>.</i>			11	Ĭ	<u> </u>			
24hr 🗋 Standard 🛄	the South						7-02-08 9:00 am					·		<b>-</b>	r			
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