GW - 032

C-141s

GALLUP

RECEIVED OCD

2012 FEB -9 A 10: 17

HECEIVE 2012 FEB - C

February 7, 2012

New Mexico Environmental Department Hazardous Waste Bureau (HWB) 1301 Siler Road, Building B Santa Fe, NM 87507 Attn: Ms Kristen Van Horn

New Mexico Energy, Minerals, and Natural Resources Oil Conservation Division (OCD) 1220 South St. Francis Drive Santa Fe, NM 87505

Attn: Mr. Carl J. Chavez

Re: Tank (T-35) Overflow Cleanup and Final (C-141) Submittal

Dear Ms Van Horn and Mr. Chavez:

Western Refining Company - Gallup Refinery is submitting the following report as a final to the Tank 35 (T-35) cleanup of a release that occurred on October 2, 2011. Western Refining (Gallup Refinery) previously submitted an initial C-141 along with the Confirmation Soil Sampling Plan as presented in the letter that was addressed to the Agency of November 10, 2011. The initial plan addresses the soil excavation and removal of contamination from the Tank 35 (T-35) area. Due to the area and processes involved, it was decided to manage this excavated soil as a Hazardous Waste and to dispose of this material off-site to an approved TSD Facility.

Approximately one inch of visually stained soil was first removed prior to conducting the initial Confirmation cleanup and sampling assessment requirements. A third party Environmental Consulting firm (Trihydro Corporation) was came out on October 28, 2011 in order to perform visual assessment and extent of the contaminated area. As a result of this initial assessment, Trihydro identified five distinct locations, (T-35-1, T-35-2, T-35-3, T-35-4, and T-35-5), as shown in the map from the November 10, 2011 (Confirmation Sampling Plan) report. Each of the five locations that were identified were also staked out for sampling.

In December 2011, Trihydro was called back to perform the initial sampling in accordance with the Confirmation Sampling Plan. On December 15, 2011, Trihydro Consultants began sampling at these five locations. The laboratory analysis was conducted by Hall Environmental Laboratory using Method 8260 (VOC, Volatile Organic Compounds), Method 8270 (Semi volatile Organic compounds), Method 8015B (Diesel and Gasoline Range Organics (DRO/GRO)), and RCRA Metals. One sample was taken at each of the five locations. The analytical report was received on December 27, 2011. Upon receipt of the analytical data on December 27, it was noticed that all of the parameters were Total Values. Therefore, Western requested additional testing for TCLP for Methods 8260, 8270, and RCRA 8 Metals. Also, Western requested that an RCI to be conducted. The final Analysis (Order #: 1112721) for the initial sampling is enclosed. The results of this analysis indicated a high value of TPH in areas T-35-1 and T-35-5, in particular, DRO and MRO. Based on this evaluation, additional remediation would be required in these two areas. Based on the analysis contractors were give the authorization to replace the excavated soil from T-35-2, T-35-3, and T-35-4 areas with clean soil and gravel.

Contract personnel were given permission to conduct additional remediation in the two areas of question, i.e. around Tank 35 (T-35-1 and T-35-5). Contractors were to remove about 1 to 2 inches of additional soil in area T-35-1 and about 2 to 3 inches of additional soil in area T-35-5. Once contractors finished the remediation from these two areas, additional sampling was

GALLUP

conducted using the same criteria as performed previously. On January 5, additional sampling was conducted in these two locations (T-35-1 and T-35-5) was sent to Hall Laboratory for analysis. The final Analysis (Order #: 1201183) for the additional confirmation sampling was received on January 13, 2012. Again upon receipt of the analysis as mentioned above, Western requested additional analysis on January 16, 2012. A modified report that is attached was received with the additional testing in the final report of January 24, 2012. Based on the analysis contractors were give the authorization to replace the excavated soil from T-35-1 and T-35-5 areas with clean soil and gravel.

If you should require additional information, please feel free to contact me at (505) 722-0258.

Sincerely,

Beck Larsen, CHMM/REM

Western Refining-Southwest (Gallup Refinery)

Office: (505) 722-0258 Cell: (505) 862-1749 District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

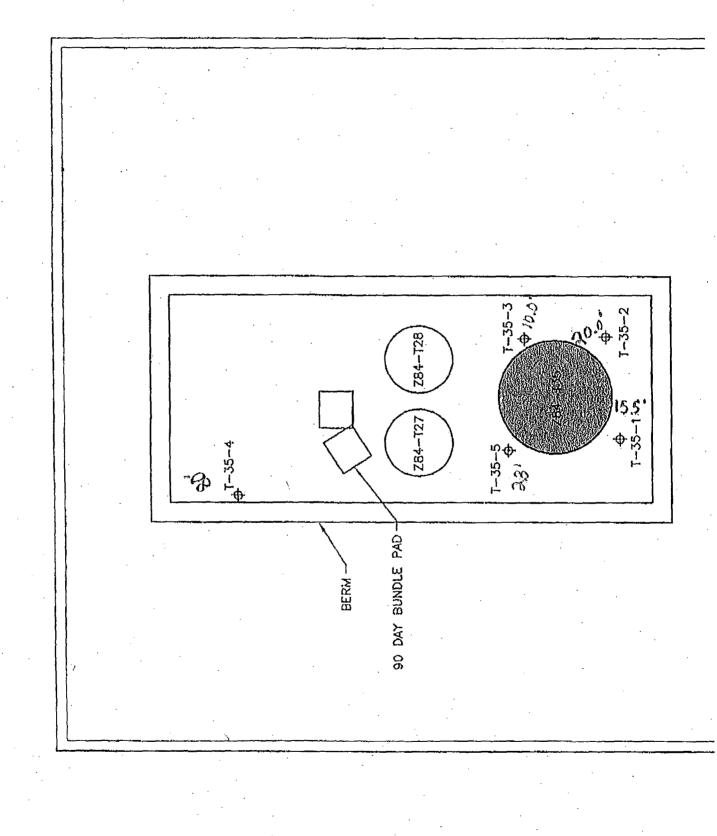
Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised October 10, 2003

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

Release Notification and Corrective Action

				, and 1 (c	·	OPERA'	TOR		Initia	l Report 🛛 Final Report
Name of Co	ompany: W	estern Refin	ing	·	······	Contact: B		<u></u>		
		, Jamestowi		347		Telephone 1	No: (505) 722-0	258		·
Facility Nat	ne: Weste	rn Refining	(Gallup)			Facility Typ	e: Petroleum Re	efinery		
Surface Ow	ner:			Min	eral Owner:			Lea	ase No	0.
				· L	OCATIO	N OF RE	LEASE	,		
Unit Letter	Section 28	Township 15 N	Range 15 W	Feet from	the North	n/South Line	Feet from the	East/West L	ine	County McKinley
		· .			NATURE	OF REL		• .		
mixture)		(oil) / 1240 b	bls (proce	ss and storr	nwater	bbls (oil)	Release Estimate	1240 water	bbls (r)/ 13	ecovered (stormwater and oily process bbls (oil)
Source of Re Tank (T-35)	Overflow	· -			·	10/02/201	Hour of Occurrenc I; 1540 hrs (3:40 I			Iour of Discovery 1; 1540 hrs (3:40 PM)
Was Immedia	ate Notice C		· Yes · 🗌	No 🗀 i	Not Required	Kristen Va Brandon P	Whom? witz, NMED HW in Horn, NMED H owell, NMED HV vez, OCD (telepho	IWB (telephor VB (telephone	ne call)
By Whom? L						Date and I-	Iour 10/3/201; 13	23 hrs (1:23 P		approximately)
Was a Water	course Reac		Yes 🖂	No		If YES, Vo	olume Impacting t	he Watercours	se.	
If a Watercou										
cleanup arour 35 area was d around T-35.	nd T-35 beg ry to allow	an via vacuun access of heav	n truck tha	t removed ent, soil re	the stormwate	er and oily pro	cess water surrou	nding T-35. C	Ince th	of 10/26/2011. The initial ne water was removed and T-inated soil was removed
T-35-5 (accorremoved in an	nples were ording to diagreas 1 and 5 clean fill dir	collected on 1 gram). Contract T-35. Conf	2/15/2011 ctors bega firmation s	according n remediati ampling w	on activities i as again cond	in areas T-35- lucted on 1/5/2	l and T-35-5. App 2012. Sample resu	proximately 1 alts indicated the	to 3 in hat are	required in areas T-35-1 and iches of additional soil were as were clean and could be D Facility in accordance to all
regulations al public health should their o	l operators a or the envir- perations ha nment. In ac	are required to onment. The ave failed to a ddition, NMO	report an acceptance dequately CD accept	d/or file cer e of a C-14 investigate	rtain release r I report by th and remediat	notifications ar ne NMOCD m te contaminati	nd perform correct arked as "Final Re on that pose a thre	tive actions fo eport" does no eat to ground v	r relea t relie vater,	ant to NMOCD rules and uses which may endanger we the operator of liability surface water, human health inpliance with any other
Signature:		36					OIL CONS	SERVATIO	<u>I NC</u>	DIVISION
Printed Name	: Beck Lars	en		····	^	Approved by	District Superviso	or:		
Title: Enviror	mental Eng	ineer		· · · · · · · · · · · · · · · · · · ·		Approval Dat	e:	Expirat	tion D	ate:
E-mail Addre	ss: Thurmar	n.larsen@wnr.	.com			Conditions of	Approval:			Attached
Date: 2/07/	2012	Phone:	(505) 722	-0258			•	<u> </u>		

^{*} Attach Additional Sheets If Necessary



Larsen, Thurman

From:

Riege, Ed

Sent:

Thursday, November 10, 2011 12:37 PM

To:

Chavez, Carl J, EMNRD; VanHorn, Kristen, NMENV

Cc:

Larsen, Thurman, Morgan, Loretta, Dorsey, Alvin

Subject:

Confirmation Soil Sampling Plan

Attachments:

20111110122317137.pdf

Carl.

The soil cleanup work is to begin on Monday November 14. The Confirmation Soil Sampling Plan is attached for your and Kristen's approval.

Thanks,

Ed

Ed Riege

Environmental Manager

Western Refining
Gallup Refinery
Route 3 Box 7
Gallup, NM 87301
(505) 722-0217
ed.riege@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Thursday, October 27, 2011 7:31 AM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

Good morning.

The C-141 Form is marked final report, but the corrective actions have not been completely implemented yet. Please resubmit the form as the initial report and when the corrective actions are completed, Western must submit the final report with all of the attached supporting documentation of the actions taken to correct the situation. Also, please notify the agencies when the work is scheduled to begin so we may be present to witness the corrective action(s).

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the

Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Morgan, Loretta [mailto:Loretta.Morgan@wnr.com]

Sent: Wednesday, October 26, 2011 3:50 PM

To: Chavez, Carl J, EMNRD

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Hi Carl

Sorry I had the incorrect date. Attached is the revised C-141 and original placed in mail to you. Thanks.

Loretta Morgan

Environmental Specialist

Western Refining
Route 3 Box 7
Gallup, NM 87301
Phone: (505) 722-0242
Fax: (505) 722-0268
loretta.morgan@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Tuesday, October 25, 2011 4:33 PM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

The C-141 does not concur with the OCD e-mail dated October 3, 2011 (see OCD Online <u>C-141s</u> thumbnail page 2). Could you please re-evaluate the C-141 information and revise it and resend it with the revised information by COB tomorrow.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

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Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Morgan, Loretta [mailto:Loretta.Morgan@wnr.com]

Sent: Tuesday, October 25, 2011 3:27 PM

To: Chavez, Carl J, EMNRD

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Hi Carl

Sorry, the report was sent out in the mail today. Attached is copy of the C141. Thanks

Loretta Morgan

Environmental Specialist

Western Refining Route 3 Box 7 Gallup, NM 87301

Phone: (505) 722-0242 Fax: (505) 722-0268 loretta.morgan@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Tuesday, October 25, 2011 2:50 PM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV

Subject: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

Good afternoon. Did Western send the C-141 for this release that was reported on 10/3/2011?

OCD does not see this form in our files. Thank you.

Carl J. Chavez. CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

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Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

November 10, 2011

Mr. Carl J. Chavez
Environmental Engineer
New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Confirmation Soil Sampling Plan, October 2, 2011 Tank 35 Release, Western Refining Company Southwest, Inc., Gallup Refinery, Gallup, New Mexico

Dear Mr. Chavez:

Western Refining Company's Gallup Refinery (Gallup) has prepared this Confirmation Soil Sampling Plan to guide Tank 35 confirmation soil sampling activities. Confirmation soil sampling will be conducted to verify that soil contaminated as a result of the October 2, 2011 release is removed during soil removal activities. A release of a mixture of stormwater, process water, and oily wastewater occurred when Tank 35 overflowed on October 2, 2011. The location of Tank 35 is shown on Figure 1. Form C-141 was completed and submitted to the New Mexico Oil Conservation Division (OCD) to report the release on October 3, 2011. A copy of From C-141 is included as Attachment A. At the time of the release, Tank 35 was being used to temporarily hold process waters so that API separator issues could be addressed. A heavy rain event occurred during this time frame and runoff water from the process units caused Tank 35 to overflow. Released fluids were contained by the tank berm. The refinery's Maintenance Department immediately began recovery of released fluids using a vacuum truck. Recovered fluids were temporarily stored in Tank 105 (slop oil tank). Based on the volume of fluids stored in Tank 105, approximately 1,240 barrels of process water/stormwater and 13 barrels of oily wastewater were recovered from the Tank 35 overflow.

Soil removal work, consisting of excavating contaminated gravel and soil, is scheduled to commence on November 14, 2011. Gallup believes that contaminated soil may be visually identified by staining and intends to excavate visually stained soil within the Tank 35 berm. Contaminated soil will be managed as hazardous waste and will be shipped off-site for disposal. After visually stained soil is excavated, Gallup proposes to collect five confirmation soil samples to confirm that the contamination associated with the October 2, 2011 release has been removed.

Trihydro Corporation (Trihydro) inspected the release area on October 28, 2011. Areas exhibiting staining were evident during Trihydro's inspection. Trihydro assisted in identifying five locations representative of the areas exhibiting the highest degree of staining. These locations were staked by Trihydro. Gallup intends to collect the confirmation samples from these five locations after soil removal is complete. Approximate confirmation sample locations are shown on Figure 2. Based on the observed staining, these five locations are representative of areas most heavily impacted by the October 2, 2011 release. Therefore, if contaminant concentrations in the confirmation soil samples are less than applicable cleanup standards, contamination associated with the October 2, 2011 release has likely been removed.

Mr. Carl J. Chavez November 10, 2011 Page 2

Care will be taken during soil removal activities to preserve the staked locations (i.e. staked locations will be surveyed with a global positioning system or their distance from a stationary reference point will be measured so that the areas can be relocated after soil removal activities are complete.) Soil samples will be collected using a clean, stainless steel trowel from approximately 0 to 6 inches below the post-excavated ground surface. The trowel will be decontaminated before and after sample collection using an Alconox or Simple Green solution followed by a de-ionized water rinse. The sampler will use clean latex gloves in order to minimize cross contamination. The sampler will use a new pair of latex gloves for each sample location. Samples will be collected in laboratory-provided sample containers and placed on ice or refrigerated immediately after collection. The soil samples will be analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi volatile organic compounds (SVOCs) by EPA Method 8270, diesel range organics extended (DRO) and gasoline range organics (GRO) by EPA Method 8015M, and RCRA metals. One sample will be submitted from each of the five locations; samples will not be composited.

Analytical results will be compared to the New Mexico Environment Department (NMED) industrial/occupational soil screening standards. If exceedances of the NMED industrial/occupational soil screening standards are identified, additional excavation will be conducted in the area from which the exceeding sample was collected. An additional confirmation sample will be collected to confirm that the additional excavation was successful in removing soil contamination. This process will be repeated until confirmation samples do not exceed the NMED industrial/occupational soil screening standards.

Soil removal activities are scheduled to commence on November 14. Confirmation soil samples will be collected pending OCD approval of this correspondence. If you have any questions or comments, please do not hesitate to call me at (505) 722-0217.

Sincerely,

Western Refining Company

Ed Riege

Environmental Manager

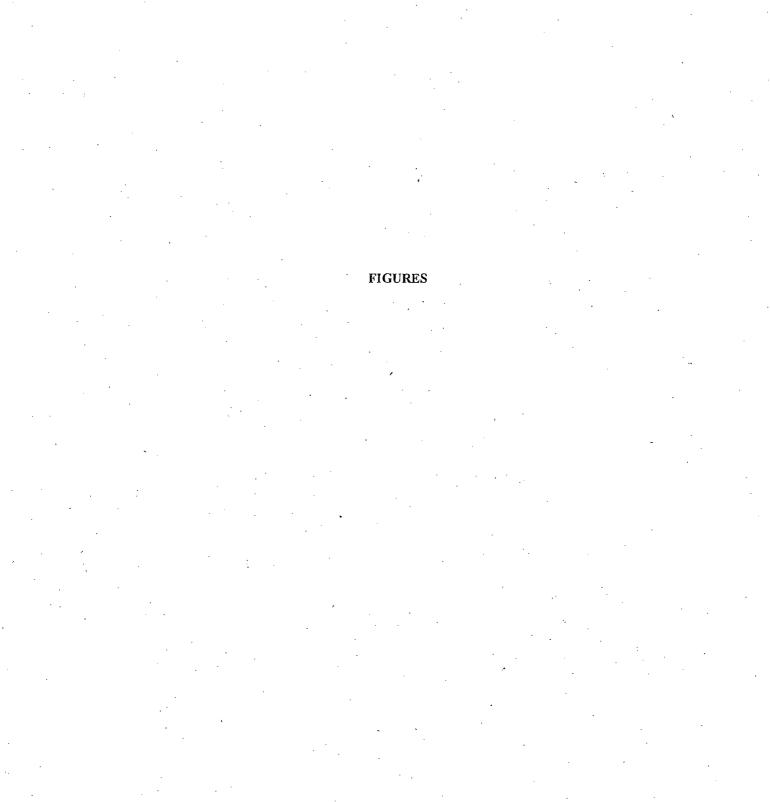
697-039-002

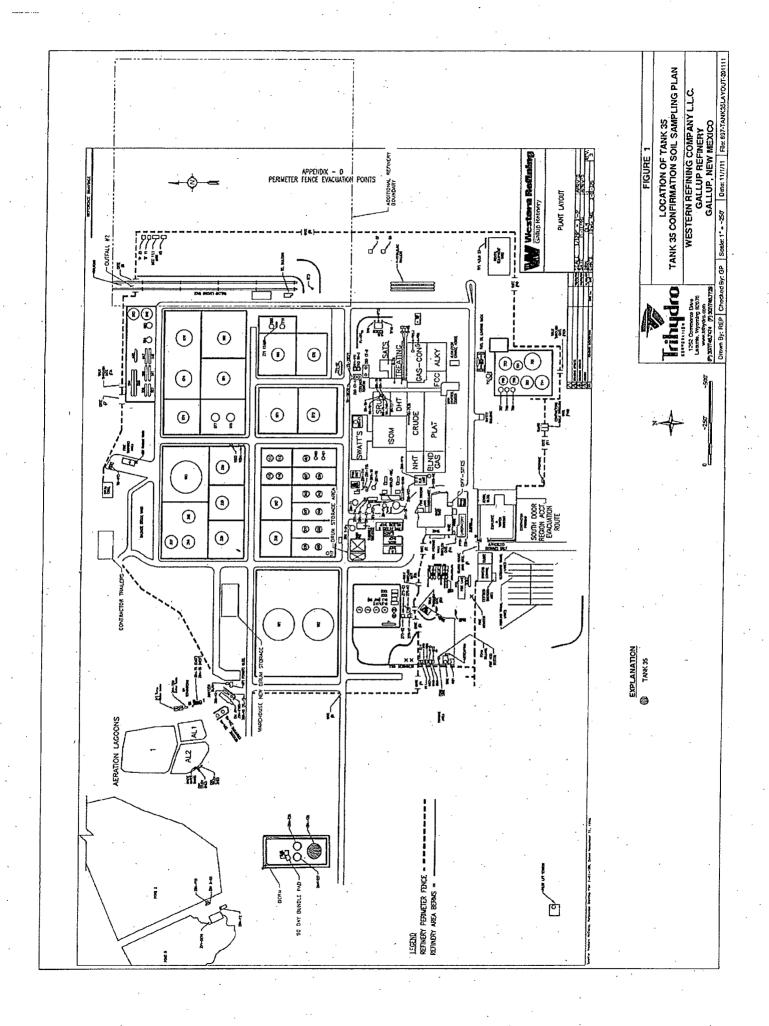
Attachments

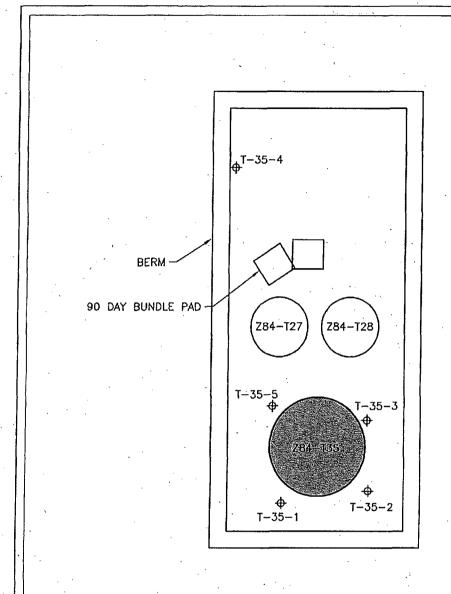
cc: L. Morgan, Western Refining

G. Price, Trihydro Corporation

K. Van Horn, NM







EXPLANATION

APPROXIMATE LOCATION OF PROPOSED CONFIRMATION SOIL SAMPLE



TANK 35





FIGURE 2

APPROXIMATE LOCATIONS OF PROPOSED **CONFIRMATION SOIL SAMPLES** TANK 35 CONFIRMATION SOIL SAMPLING PLAN

> WESTERN REFINING COMPANY L.L.C. **GALLUP REFINERY GALLUP, NEW MEXICO**

Drawn By: REP | Checked By: GP | Scale: 1" = ~80"

Date: 11/1/11 | File: 697-TANK35LAYOUT-201111

ATTACHMENT A

FORM C-141

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

applicable regulations.

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notifica	tion and Corrective Actio	
	OPERATOR	Initial Report Final Repor
Name of Company:	Contact:	That I was a second of the sec
Western Refining Southwest Inc.	Loretta Morgan	
Address:	Telephone No:	
1-40 Exit 39	505-722-3833	
Jamestown, NM 87347 Facility Name:	Facility Type:	
Gallup Refinery	Oil Refinery	•
Surface Owner: Mineral Ow Western Refining Western Re:		Lease No.
	TON OF RELEASE	
		West Line County
23&33 I5N I5W	Teet nominate Eggs	McKinley
Latitude <u>35°29'22"</u>	Longitude 108°25'24"	
NATU	RE OF RELEASE	
Type of Release: Oily Waste Water 13 bbls (oil) / 1240 bbls (process and stormwater)	Volume of Release: Estimate 13 barrel of oil	Volume Recovered:
Source of Release:	Date and Hour of Occurrence:	Date and Hour of Discovery:
Tank 35 overflow	10/2/2011 3:40 pm	10/2/2011 3:40 pm
Was Immediate Notice Given?	ired Ruth Horowitz, NMED Hazardous	Waste Burgan (ahong call)
[Kristen VanHorn, NMBD Hazardon	
	Brando Powell, NMED Hazardous	
By Whom?	Carl J. Chavez, NMEMNRD, Oil C Date and Hour:	onservation Division (phone call)
Lorella Morgan	10/3/2011 1:23 pin (approximately)	
		·
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	ercourse.
☐ Yes ☒ No	No, did not impact watercourse.	
If a Watercourse was impacted, Describe Fully. Not applicable		·
Describe Cause of Problem and Remedial Action Taken:		
At approximately 3:40 pm on 10/2/2011, Tank 35 overflowed due to I water while waiting for the API operator to troubleshoot the API foan process units overfilled Tank 35. API operator was trying to manuall Tank 35 overflowed water from the vents. Immediate action was take vacuuming up the area. Overflow did not reach any watercourse and water and process water first was removed by the vacuum truck and p sent process water and storm water from T-105 back to T-35 for repro and estimated to be 13 bbls. Rain water was included because during a heavy equipment into the area.	ning issue. During this period, it started to y open the valves to the overflow tanks (To in to clean up the spill. The Maintenance I was contained in the berm area of the tank but into T-105 (slop oil tank). Water was the cessing. The final oil volume in T-105 was	rain heavily and all runoff water from the ank 27 and 28), but did not open in time. Department was called out to start Approximately 75,600 gallons of rain en decanted from T-105. The decanting is determined from a T-105 strapping chart
Describe Area Affected and Cleanup Action Taken:		
The area affected is in the dirt berm area of Tank 35. The area is appropriately was used to collect the oily-water mixture. The soil in this berm		

excavated, confirmatory environmental samples will be collected and analyzed, and all contaminated materials will be disposed off in accordance with

I hereby certify that the information given above regulations all operators are required to report an public health or the environment. The acceptanc should their operations have failed to adequately	nd/or file certain release se of a C-141 report by investigate and remed	se notifications and perform corrective the NMOCD marked as "Final Repording the contamination that pose a threat t	e actions for releases which may endanger rt" does not relieve the operator of liability to ground water, surface water, human heal	th
or the environment. In addition, MMOCD accep	tance of a C-141 repo	rt does not relieve the operator of respe	onsibility for compliance with any other	
federal, state, or local Rivs and or regulations.			·	
Signature: / Dark) Luni	· · · · · · · · · · · · · · · · · · ·	_ OIL CONSEI	RVATION DIVISION	
Printed Name: Mark B. Turri	•			
		Approved by District Supervisor:		
Title: Refinery Manager – Gallup		Approval Date:	Expiration Date:	
E-mail Address: Mark.Turri@wnr.com		·		
Date: 10-26-2011 Phone	: 505-722-3833	Conditions of Approval:	Attached [
A Hach Additional Sheets If Necessary				



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

January 30, 2012

Thurman B. Larsen

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-3833

FAX (505) 722-0210

RE: Tank 35 Cleanup

OrderNo.: 1201585

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/20/2012 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative. Analytical results designated with a "J" qualifier are estimated and represent a detection above the Method Detection Limit (MDL) and less than the Reporting Limit (PQL). These analytes are not reviewed nor narrated as to whether they are laboratory artifacts.

Quality control data is within laboratory defined or method specified acceptance limits except if noted.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

Date Reported: 1/30/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: T-35-5

Project: Tank 35 Cleanup

Collection Date: 1/17/2012 11:20:00 AM

Lab ID: 1201585-001

Received Date: 1/20/2012 7:45:00 AM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE O	RGANICS				Analyst: JMP
Diesel Range Organics (DRO)	43	9.8	mg/Kg	` 1	1/24/2012 8:59:41 AM
Motor Oil Range Organics (MRO)	ND	49	mg/Kg	1	1/24/2012 8:59;41 AM
Surr: DNOP	85.8	77.4-131	%REC `	1	1/24/2012 8:59:41 AM
EPA METHOD 8015B: GASOLINE RANGI	E ·		,	•	Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/23/2012 5:29:09 PM
. Surr: BFB	94.7	69.7-121	%REC	1	1/23/2012 5:29:09 PM
MERCURY, TCLP			•		Analyst: JLF
Mercury	ND	0.020	mg/L	1	1/23/2012 3:26:45 PM
EPA METHOD 6010B: TCLP METALS			J	•	Analyst: ELS
Arsenic	ND	5.0	mg/L	1	1/24/2012 6:22:56 AM
Barium	-ND	100	mg/L	5	1/24/2012 6:47:47 AM
Cadmium	ND ND	1.0	mg/L	1	1/24/2012 6:22:56 AM
Chromium	ND	5.0	mg/L	1	1/24/2012 6:22:56 AM
Lead	ND	5.0	mg/L	1	1/24/2012 6:22:56 AM
Selenium	ND	1.0	mg/L	1	1/24/2012 6:22:56 AM
Silver	ND	5.0	mg/L	1	1/24/2012 6:22:56 AM
EPA METHOD 8270C TCLP	,				Analyst: JDC
2,4-Dinitrotoluene	.ND	0.13	mg/L	1	1/25/2012 12:36:32 PM
Hexachlorobenzene	ND	0.13 -	mg/L	1	1/25/2012 12:36:32 PM
Hexachlorobutadiene	ND	0.50	mg/L	. 1	1/25/2012 12:36:32 PM
Hexachloroethane	ND	3.0	mg/L	. 1 ·	1/25/2012 12:36:32 PM
Nitrobenzene	ND	2.0	mg/L	1	1/25/2012 12:36:32 PM
Pentachlorophenol	ND	100	mg/L	· 1	1/25/2012 12:36:32 PM
Pyridine	ND	5.0	mg/L	1	1/25/2012 12:36:32 PM
2,4,5-Trichlorophenol	ND	400	mg/L	1	1/25/2012 12:36:32 PM
2,4,6-Trichlorophenol	ND	2.0	mg/L	1.	1/25/2012 12:36:32 PM
Cresols, Total	ND	200	mg/L	1 .	1/25/2012 12:36:32 PM
2-Methylphenol	ND	200	mg/L	1	1/25/2012 12:36:32 PM
3+4-Methylphenol	ND	200	. mg/L	1	1/25/2012 12:36:32 PM
Phenol	ND	200	mg/L	1	1/25/2012 12:36:32 PM
Surr: 2,4,6-Tribromophenol	75.3	18.2-136	%REC	-1	1/25/2012 12:36:32 PM
Surr: 2-Fluorobiphenyl	78.0	40.5-108	%REC	. 1	1/25/2012 12:36:32 PM
Surr: 2-Fluorophenol	46.9	23-101	%REC	1	1/25/2012 12:36:32 PM
Surr: 4-Terphenyl-d14	66.9	40.9-112	%REC	. 1	1/25/2012 12:36:32 PM
Surr: Nitrobenzene-d5	74.6	41-115	%REC	1	1/25/2012 12:36:32 PM
Surr: Phenol-d5	37.9	23.4-73.6	%REC	1 .	1/25/2012 12:36:32 PM
VOLATILES BY 8260B/1311					Analyst: JDJ
Benzene	ND	0.50	mg/L	1	1/25/2012 10:20:42 PM
2-Butanone	ND	10	mg/L	1	1/25/2012 10:20:42 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S . Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

Page 1 of 12

Analytical Report

Lab Order 1201585

Date Reported: 1/30/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: T-35-5

Project: Tank 35 Cleanup

Collection Date: 1/17/2012 11:20:00 AM

Lab ID: 1201585-001

Received Date: 1/20/2012 7:45:00 AM

Analyses	Result	RL Q	ial Units	DF	Date Analyzed
VOLATILES BY 8260B/1311			٠		Analyst: JDJ
Carbon Tetrachloride	ND	0.50	mg/L	1	1/25/2012 10:20:42 PM
Chlorobenzene	ND	100	mg/L	1	1/25/2012 10:20:42 PM
Chloroform	. ND	6.0	mg/L	1	1/25/2012 10:20:42 PM
1,4-Dichlorobenzene	ND	7.5	mg/L	1	1/25/2012 10:20:42 PM
1,2-Dichioroethane (EDC)	ND ·	0.50	mg/L	1	1/25/2012 10:20:42 PM
1,1-Dichloroethene	ND	0.70	mg/L	1.	1/25/2012 10:20:42 PM
Hexachlorobutadiene	· ND	0.50	mg/L	1	1/25/2012 10:20:42 PM
Tetrachioroethene (PCE)	ND	0.70	mg/L	1	1/25/2012 10:20:42 PM
Trichloroethene (TCE)	ND	0.50	mg/L	1	1/25/2012 10:20:42 PM
Vinyl chloride	ND	0.20	mg/L	1	1/25/2012 10:20:42 PM
Surr: 1,2-Dichloroethane-d4	. 81.2	69.9-130	%REC	1	1/25/2012 10:20:42 PM
Surr: 4-Bromofluorobenzene	92.8	71.2-123	%REC	1	1/25/2012 10:20:42 PM
Surr: Dibromofluoromethane	86.7	73.9-134	%REC	. 1	1/25/2012 10:20:42 PM
Surr: Toluene-d8	85.8	81.9-122	%REC	-1	1/25/2012 10:20:42 PM

Matrix: SOIL

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
 - Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

7.5

5.000

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:	Tank 35	Cleanup									
Sample ID	MB-373	SampTy	/pe: Mi	BLK	Tes	tCode: El	PA Method	8015B: Dies	el Range (Organics	
Client-ID:	PBS	Batch	ID: 37	3		RunNo: 5	17				
Prep Date:	1/20/2012	Analysis Da	ate: 1/	23/2012		SeqNo: 1	4910	Units: mg/k	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
•	Organics (DRO)	ND	10								
	e Organics (MRO)	ND	50		+ 1					. ,	
Sun: DNOP		10		10.00		104	77.4	131			
Sample ID	LCS-373	SampTy	pe: LC	s	. Tes	tCode: El	PA Method	8015B: Diese	el Range C	Organics	
Client ID:	LCSS -	Batch	ID: 37 :	3	F	RunNo: 5	17				•
Prep Date:	1/20/2012	Analysis Da	nte: 1/	23/2012		SeqNo: 1	4913	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	43	10	50.00	0	85.5	62.7	139			
. Surr: DNOP	• •	6.1		. 5.000		122	, 77. 4	131	<u> </u>		
Sample ID	1201584-001AMS	SampTy	pe: MS	3	Tes	tCode: EF	A Method	8015B: Diese	el Range C	Organics	
Client ID:	BatchQC	Batch	ID: 37 :	3 .	F	RunNo: 5'	17	•			•
Prep Date:	1/20/2012	Analysis Da	ite: 1/	24/2012	\$	SeqNo: 1	5102	Units: mg/K	g		
Analyte	•	Result	PQL	SPK value	SPK:Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range C	Organics (DRO)	38	9.9	49.65	0 ′	75.9	57.2	146			
Surr: DNOP	•	7.2		4.965		145	77.4	131			S
Sample ID	1201584-001AMS	SampTy	pe: MS	SD .	Tes	tCode: EF	A Method	8015B: Diese	el Range C	Organics	
Client ID:	BatchQC	Batch	ID: 37	3	· F	RunNo: 51	17				
Prep Date:	1/20/2012	Analysis Da	te: 1/:	24/2012	·s	SeqNo: 1	5200	Units: mg/K	g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
, a lary to								•			

Qualifiers:

Surr: DNOP

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

RPD outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

77.4

151

Not Detected at the Reporting Limit

Reporting Detection Limit

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0

131

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Client ID: PBS Batch ID: 370 RunNo: 522	Project: Tank	SS Cleanup								
Prop Date 1/20/2012	Sample ID MB-370	· SampType: M	BLK	Tes	tCode: El	PA Method	8015B: Gas	oline Rang	ge .) .
Analyte	Client ID: PBS	Batch ID: 37	0	·	RunNo: 52	22				
Sample D LCS-370 SampType: LCS TestCode: EPA Method 8015B: Gasoline Range	Prep Date: 1/20/2012	Analysis Date: 1	/23/2012	9	SeqNo: 1	5530	Units: mg/l	< g		
Sum: BFB 940 1,000 93.9 69.7 121	Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Complete D LCS-370 SampType: LCS TestCode: EPA Method 8015B: Gasoline Range	Gasoline Range Organics (GRO)	ND 5.0			•					
Client D: LCS	Surr: BFB	940	1,000	·	93.9	69.7	121	_		
Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15534 Units: mg/Kg	Sample ID LCS-370	SampType: LC	S	Tes	tCode: EF	A Method	8015B: Gas	oline Rang	je	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 29 5.0 25.00 0 116 86.4 132 Surr. BFB 990 1,000 99.4 69.7 121 Sample ID 1201584-001AMS SampType: MS TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15535 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 26 4.8 23.97 0 110 72.4 149 Surr. BFB 970 958.8 101 69.7 121 Sample ID 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Sample ID 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Srep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Client ID: LCSS	Batch ID: 37	0		RunNo: 52	22	•			
Analyte Result PQL SPK value SPK Ref Val Result PQL SPS.8	Prep Date: 1/20/2012	Analysis Date: 1	/23/2012	5	SeqNo:, 18	5534	Units: mg/k	⟨ g		
Surr: BFB 990 1,000 99.4 69.7 121	Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	. %RPD	RPDLimit	Qual
Sample ID 1201584-001AMS SampType: MS TestCode: EPA Method 8015B: Gasoline Range	Gasoline Range Organics (GRO)	29 5.0	25.00	0	116	86.4	132 .			
Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15535 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 26 4.8 23.97 0 110 72.4 149 Surr: BFB 970 958.8 101 69.7 121 Sample ID 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Sur: BFB	990	1,000		99.4	69.7	121	•		
Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15535 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual ascline Range Organics (GRO) 26 4.8 23.97 0 110 72.4 149 Surr: BFB 970 958.8 101 69.7 121 Sample ID 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual ascline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Sample ID 1201584-001AN	SampType: MS	3	Tes	tCode: EP	A Method	8015B: Gaso	oline Rang	e	
Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 26 4.8 23.97 0 110 72.4 149 Surr: BFB 970 958.8 101 69.7 121 Sample ID 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg sanalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Client ID: BatchQC	Batch ID: 37	0	F	RunNo: 52	22	~			
Sactine Range Organics (GRO) 26 4.8 23.97 0 110 72.4 149	Prep Date: 1/20/2012	Analysis Date: 1/	23/2012	8	SeqNo: 15	535	Units: mg/k	(g		
Surr: BFB 970 958.8 101 69.7 121 Sample ID: 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg Innalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Issoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sample ID 1201584-001AMSD SampType: MSD TestCode: EPA Method 8015B: Gasoline Range Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg Inalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual Issoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Gasoline Range Organics (GRO)	26 4.8	23.97	. 0	110	72.4	149			
Client ID: BatchQC Batch ID: 370 RunNo: 522 Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Surr: BFB	970	958.8		101	69.7	121			
Prep Date: 1/20/2012 Analysis Date: 1/23/2012 SeqNo: 15536 Units: mg/Kg analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Sample ID 1201584-001AM	SD - SampType: MS	SD	Tes	Code: EP	A Method	8015B: Gasc	line Rang	е	
nalyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Client ID: BatchQC	Batch ID: 37	0	· R	tunNo: 52	2				
asoline Range Organics (GRO) 27 4.9 24.27 0 113 86 149 4.02 19.2	Prep Date: 1/20/2012	Analysis Date: 1/	23/2012		eqNo: 15	536	Units: mg/K	(g		
	Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB 990 970.9 102 69.7 121 0 0	Gasoline Range Organics (GRO)	27 4.9	24.27	0	113	86	149	4.02	19.2	
	Sum: BFB	990	970.9		102	69.7	. 121	. 0	0	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 4 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-404	Samp [*]	Type: Mi	BLK ·	Tes	stCode: V	olatiles by	8260B/1311			
Client ID: PBS	Bato	h ID: 40	4	:	RunNo: 5	591				
Prep Date: 1/23/2012	Änalysis [Date: 1/	/25/2012	;	SeqNo: 1	6884	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD_	RPDLimit	Qual
Benzene	ND -	0.50			,			٠		
2-Butanone	ND	10						-		
Carbon Tetrachloride	ND	0.50				:				
Chlorobenzene	ND	100	,		•					
Chloroform	. ND	6.0								
1,4-Dichlorobenzene .	ND	7.5								
1,2-Dichloroethane (EDC)	ND	0.50								
1,1-Dichloroethene	ND	0.70:								
Hexachlorobutadiene	· ND	0.50					•			
Tetrachloroethene (PCE)	ND	0.70					•			
Trichloroethene (TCE)	ND	0.50	•							
Vinyl chloride	ND	0.20	•							÷
Surr: 1,2-Dichloroethane-d4	0.16		0.2000		81.1	69.9	130		. '	
Surr: 4-Bromofluorobenzene	. 0.18		0.2000		89.0	71.2	123		•	
Surr: Dibromofluoromethane	0.17		0.2000		87.0	73.9	134			•
Surr: Toluene-d8	0.17		0.2000		82.9	81.9	122			
Sample ID Ics-404	SampT	ype: LC	s [·]	Tes	tCode: V	olatiles by t	8260B/1311		**	
Client ID: LCSS	Batch	n ID: 404	4	•	RunNo: 5	=		- '		
Prep Date: 1/23/2012	Analysis D	oate; 1/	25/2012	5	SeqNo: 1	6885	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.45	0.10	0.4000	0	113	51.1	171			
Chlorobenzene	0.42	0.10	0.4000	0	106	36.1	191			•
1,1-Dichloroethene	0.45	0.10	0.4000	0	112	49.1	162			
Trichloroethene (TCE)	0.41	0.10	0.4000	. 0	103	41.2	166			
Surr: 1,2-Dichloroethane-d4	0.15		0.2000		75.8	69.9	. 130	•		
Surr: 4-Bromofluorobenzene	0.18		0.2000		90.2	71.2	123			:
Surr: Dibromofluoromethane	0.17		0.2000		84.3	73.9	134			
Sum: Toluene-d8	0.17		0.2000		87.2	81.9	. 122			
Sample ID 1201447-003ams	SamnT	ype: MS		Tec	Code: V	alatilaa bu 9	260B/1311			
Campic in Izoi Tri-coulding	Cumpi	ypo. Ino		103	Code. V	Maures by o	2000/1311			

Qualifiers:

Analyte

Benzene

Chlorobenzene

1,1-Dichloraethene

Trichloroethene (TCE)

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

*/X Value exceeds Maximum Contaminant Level.

Analysis Date: 1/25/2012

PQL

0.10

0.10

0.10

0.10

SPK value SPK Ref Val

0

0

0

0.3995

0.3995

0.3995

0.3995

0.1998

0.1998

Result

0.44

0.41

0.43

0.42

0.16

0.18

E Value above quantitation range

Prep Date: 1/23/2012

- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

LowLimit

51.1

36.1

49.1

41.2

69.9

71.2

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

SegNo: 16886

%REC

111

103

108

106

79.6

92.5

Units: mg/L

HighLimit

171

191

162

166

130

123

%RPD

RPDLimit

Qual

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

0.38

0.41

0.37

0.16

0.19

0.17

0.17

0.10

0.10

0.10

0.3995

0.3995

0.3995

0.1998

0.1998

0.1998

0.1998

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Chlorobenzene

1,1-Dichloroethene

Trichloroethene (TCE)

Sur: Toluene-d8

Surr: 1,2-Dichloroethane-d4

Sun: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Tank 35 Cleanup

Sample ID 1201447-003ams	SampT	ype: M	S	Tes	tCode: V	olatiles by	8260B/1311	•		
Client ID: BatchQC	Batch	ID: 40	14	RunNo: 591						
Prep Date: 1/23/2012	Analysis D	ate: 1	/25/2012		SeqNo: 1	16886	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.17		0.1998		83.6	73.9	134		,	
Sur: Toluene-d8	0.16		0.1998		82.3	81.9	122		·	
Sample ID 1201447-003ams	d SampT	ype: MS	SD	Tes	tCode: V	olatiles by	8260B/1311			
Client ID: BatchQC	Batch	ID: 40	4 _	٠. ۴	RunNo: 5	i91	* • •	•	•	
Prep Date: 1/23/2012	Analysis D	ate: 1/	25/2012	5	SeqNo: 1	6887	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.41	0.10	0.3995	0	102	51.1	171	8.36	0	

0

0

0

96.3

103

93.3

78.0

93.3

82.9

85.5

36.1

49.1

41.2

69.9

71.2

73.9

81.9

191

162

166

130

123

134

122

6.83

5.34

12.7

0

0

0

0

0

0

0

0

0

Ô

Oua	lifi	ers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 6 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-420	SampT	ype: Mi	BĽK	Tes	stCode: E	PA Method	8270C TCLP		<u></u>	
Client ID: PBS	Batch	n ID: 42	0	F	RunNo: 5	73		-	•	
Prep Date: 1/25/2012	Analysis D	ate: 1/	25/2012		SeqNo: 1	6253	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene .	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND .	0.50						-	-	
Hexachloroethane	. ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	. ND	100						•		•
Pyridine ·	ND ·	5.0								•
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0	•							
Cresols, Total	ND	200		-						
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								•
Phenol	ND	200					•		•	•
Surr: 2,4,6-Tribromophenol	0.18		0.2000		87.8	18.2	136			•
Surr: 2-Fluorobiphenyl	0.090	٠.	0.1000		90.3	40.5	108			
Surr: 2-Fluorophenoi	0.13	•	0.2000	-	64.3	23	101			
Surr: 4-Terphenyl-d14	0.083		0.1000		82.6	40.9	112			
Surr: Nitrobenzene-d5	0.092		0.1000		91.7	41	115			
Surr: Phenol-d5	0.11		0.2000		52.8	23.4	73.6			
Sample ID Ics-420	SampT	ype: LC	s	Tes	tCode: El	PA Method	8270C TCLP			-
Client ID: LCSS	Batch	ID: 420		. R	RunNo: 5	73			,	
Prep Date: 1/25/2012	Analysis D	ate: 1/2	25/2012	S	SeqNo: 10	6254	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	0.077	0.010	0.1000	0	77.4	18.2	108			

Client ID: LCSS	Batc	h ID: 42	0	· F	RunNo: 5	73				٠,
Prep Date: 1/25/2012	Analysis [Date: 1/	25/2012	5	SeqNo: 1	6254	Units: mg/L	•	•	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	0.077	0.010	0.1000	0	77.4	. 18.2	108	•		
Hexachlorobenzene	0.064	0.010	0.1000	0	64.1	34.2	74.5			٠.
Hexachlorobutadiene .	0.063	0.010	0.1000	0	63.2	31.3	88.5			
Hexachloroethane	0.064	0.010	0.1000	0	63.7	31.6	94.6			
Nitrobenzene	0.074	0.010	0.1000	0	73.7	39.7	107			
Pentachlorophenol	0.042	0.010	0.1000	. 0	41.9	15.9	86.7			
Pyridine	0.043	0.010	0.1000	0	43.2	14.7	73.6		•	
2,4,5-Trichlorophenol	0.064	0.010	0.1000	0	64.0	18.9	102			
2,4,6-Trichlorophenol	0.055	0.010	0.1000	0	55.0	12.3	103			
Cresols, Total	0.21	0.010	0.3000	0	68.6	25.9	99.2			
2-Methylphenol	0.063	0.010	0.1000	0 .	62.6	22	81.7			
3+4-Methylphenol	0.14	0.010	0.2000	0	71.6	2.89	157			
Surr: 2,4,6-Tribromophenol	0.16		0.2000		78.2	18.2	136			
Surr: 2-Fluorobiphenyl	0.080		0.1000	•	80.2	40.5	108			
Surr: 2-Fluorophenol	0.099		0.2000		49.3	23	101			*
Surr: 4-Terphenyl-d14	0.069		0.1000	•	68.9	40.9	112			

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 7 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID Ics-420	SampT	ype: LCS	Tes	tCode: Ei	PA Method	8270C TCLP			
Client ID: LCSS	Batcl	iD: 420	F	RunNo: 5	73			•	
Prep Date: 1/25/2012	Analysis D	ate: 1/25/2012	8	SeqNo: 1	6254	Units: mg/L			
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.075	0.1000		75.0	41	115			
Surr: Phenol-d5	0.089	0.2000		44.7	23.4	73.6			

Sample ID 1201447-003Ams	Samp	Type: MS	5	Tes	tCode: E	PA Method	8270C TCLP			
Client ID: BatchQC .	Bato	h ID: 42	0	F	RunNo: 5	73				
Prep Date: 1/25/2012	Analysis [Date: 1/	25/2012		SeqNo: 1	6259	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual -
2,4-Dinitrotoluene	0.10	0.010	0.1000	0	104	9.57	115			
Hexachlorobenzene	0.080	. 0.010	0.1000	Ó	80.4	15.9	96.9			
Hexachlorobutadiene	0.079	0.010	0.1000	0	78.5	21.1	97.9			
Hexachloroethane	0.076	0.010	0.1000	0	76.4	18.1	105			
Nitrobenzene	0.099	0.010	0.1000	. 0	99.4	23.3	123		٠,	
Pentachiorophenol	0.073	0.010	0.1000	0	72.8	10	150			
Pyridíne	0.050	0.010	0.1000	0	50.0	9.15	86.2			
2,4,5-Trichlorophenol	0.092	0.010	0.1000	0	91.7	8.46	119			
2;4,6-Trichlorophenal	0.090	0.010	0.1000	0.	90.2	4.44	115			•
Cresols, Total	0.26	0.010	0.3000	0 .	85.4	8.35	114	•		
2-Methylphenol	0.074	0.010	-0.1000	. 0	73.8	17.5	78.8			
3+4-Methylphenol	0.18	0.010	0.2000	0	91.2	17.5	. 78.8			S
Surr: 2,4,6-Tribromophenol	0.21		0,2000	•	107	18.2	136		-	
Surr: 2-Fluorobiphenyl	.0.11		0,1000		108	40.5	108			
Surr: 2-Fluorophenol	0.14		0.2000		69.6	23	101			
Surr: 4-Terphenyl-d14	0.097		0.1000		96.9	40.9	112			
Surr: Nitrobenzene-d5	0.10		0.1000		103	41	115			
Surr: Phenol-d5	0.11		0.2000		55.6	23.4	73.6			

Sample ID 1201447-003Ams	d SampT	ype: MS	SD	Tes	tCode: E	PA Method	8270C TCLP			
Client ID: BatchQC	Batch	ID: 42	0	· F	RunNo: 5	73 -		•		
Prep Date: 1/25/2012	Analysis D	ate: 1/	25/2012	S	SeqNo: 1	6263	Units: mg/L	٠.		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	0.11	0.010	0.1000	0	114	9.57	115	9.49	20	
Hexachlorobenzene	0.086	0.010	0.1000	. 0	86.4	15.9	96.9	7.20	20	
Hexachlorobutadiene	0.075	0.010	0.1000	0	75.2	21.1	97.9	4.35	20.	
Hexachloroethane	0.086	0.010	0.1000	0	85.8	18.1	105	11.6	20	
Nitrobenzene	0.097	0.010	0.1000	0	97.5	23.3	123	1.93	20	
Pentachlorophenol	0.071	0.010	0.1000	. 0	71.1	10	150	2.31	20	
Pyridine	0.051	0.010	0.1000	0	51.4	9.15	86.2	2.84	20	
2,4,5-Trichlorophenol	0.099	0.010	0.1000	0 -	99.4	8.46	119	8.02	20	
2,4,6-Trichlorophenal	0.090	0.010	0.1000	. 0	90.0	4.44	115	0.266	⁾ 20	
Cresols, Total	0.30	0.010	0.3000	0	99.6	8.35	114	15.4	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

Page 8 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID 1201447-003Ams	d Samp1	Type: MS	SD	Tes	tCode: E	PA Method	8270C TCLP			
Client ID: BatchQC	Batcl	h ID: 42	0	. F	RunNo: 5	73	.*			
Prep Date: 1/25/2012	Analysis E	Date: 1/	25/2012	. §	SeqNo: 1	6263	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.089	0.010	0.1000	0	89.1	17.5	78.8	0	20	s
3+4-Methylphenol	0.21	0.010	0.2000	0	105	17.5	78.8	0	20	s
Surr: 2,4,6-Tribromophenol	0.23		0.2000		113	18.2	136	0	0	
Surr: 2-Fluorobiphenyl	0.11		0.1000		109	40.5	108	0	. 0	S
Surr: 2-Fluorophenol	0.16		0.2000	•	78.0	23	101	0	0	
Surr: 4-Terphenyl-d14	0.10		0.1000		101	40.9	112	0	0	•
Surr: Nitrobenzene-d5	0.11	~	0.1000		107	41	115	0	0	
Sur: Phenol-d5	0.12		0.2000		60.7	23.4	73.6	0 -	0	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 9 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID	IA1D-225
Cliant ID.	DDM

SampType: MBLK

TestCode: MERCURY, TCLP

Client ID:

Batch ID: 392

RunNo: 532

Prep Date: 1/23/2012

Analysis Date: 1/23/2012

SeqNo: 15158

SPK value SPK Ref Val %REC LowLimit

Units: mg/L HighLimit

%RPD

RPDLimit Qual

Analyte Mercury

Result PQL ND 0.020

TestCode: MERCURY, TCLP

Sample ID LCS-392 Client ID: LCSW

Client ID: BatchQC

SampType: LCS Batch ID: 392

RunNo: 532

Units: mg/L

Analyte

Prep Date:

Analysis Date: 1/23/2012

SeqNo: 15159

HighLimit

Qual

Mercury

Result PQL 0.020

SPK value SPK Ref Val %REC

LowLimit 80 %RPD RPDLimit

ND

Result

0.005000

96.9

120

Sample ID 1201427-001AMS

1/23/2012

SampType: MS

TestCode: MERCURY, TCLP

RunNo: 532

Units: mg/L

Analyte

1/23/2012

Batch ID: 392 Analysis Date: 1/23/2012

SeqNo: 15161 0

SPK value SPK Ref Val %REC LowLimit

HighLimit

%RPD RPDLimit

Qual

Mercury

Prep Date:

SampType: MSD

0.020

TestCode: MERCURY, TCLP RunNo: 532

97.3

125

Qual

Prep Date: Analyte

Client ID:

BatchQC 1/23/2012

Sample ID 1201427-001AMSD

Batch ID: 392

Analysis Date: 1/23/2012

SeqNo: 15162

Units: mg/L

RPDLimit

Mercury

PQL' 0.020 ND

SPK value SPK Ref Val 0.005000

0.005000

%REC

97.6

LowLimit

HighLimit 125 %RPD

Qualifiers:

R

Value exceeds Maximum Contaminant Level., */X

Value above quantitation range

Analyte detected below quantitation limits RPD outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 10 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585

30-Jan-12

Client:

Western Refining Southwest, Gallup

Chene.			Doubling	or, Cumup		-					
Project:	Tank 35	Cleanup									
Sample ID	MB-393	Samp	Type: M	BLK	Те	stCode: E	PA Method	16010B: TCL	P Metals	· · · · · · · · · · · · · · · · · · ·	
Client ID:	PBW	Bato	ch ID: 39	3		RunNo:	529			•	•
Prep Date:	1/23/2012	Analysis	Date: 1	/24/2012		SeqNo:	15082	Units: mg/L	,	•	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		. ND	5.0					:			
Barium	•	ND	100	•							
Cadmium	•	ND	1.0								•
Chromium		ND	5.0								
Lead		ND	5.0		•					•	
Selenium	•	ND	1.0				,				
Silver		, ND	5.0								
Sample ID	LCS-393	Samp	Type: LC	s	Te	stCode: E	PA Method	6010B: TCL	P Metals	,	<u> </u>
Client ID:	LCSW	Bato	h ID: 39	3		RunNo:	529				
Prep Date:	1/23/2012	Analysis I	Date: 1	24/2012		SeqNo: 1	15083	Units: mg/L		••	•
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	5.0	0.5000	0	101	80	120			
Barium		ND .	- 100	0.5000	. 0	91.7	. 80	120			
Cadmium		ND	1.0	0.5000	0	96.3	80	120		•	
Chromium		ND	5.0	0.5000	. 0	93.3	. 80	120			
Lead	•	ND	5.0	0.5000	· O	90.6	80	120			
Selenium		ND	1.0	0.5000	0	102	80	120			
Silver ·		ND.	5.0	0.1000	0	101	80	120		•	
Sample ID	1201447-003AMS	Samp	Type: MS	3	Tes	stCode: E	PA Method	6010B: TCLF	Metals		***
Client ID:	BatchQC	Batc	h ID: 39	3	i	RunNo: 5	529	,			
Prep Date:	1/23/2012	Analysis I	Date: 1/	24/2012	:	SeqNo: 1	5089	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	`	ND	5.0	0.5000	0.02046	103	75	125	-		•
Cadmium		ND	1.0	0.5000	0.05392	98.8	75	125			
Chromium:		ND -	5.0	0.5000	0	92.5	75	125			
Lead		ND	5.0	0.5000	0.3232	88.7	75	125		•	
Selenium		ND	1.0	0.5000	0	98.6	75	125			
Silver		ND	5.0	0.1000	0	100	75	125			
Sample ID	1201447-003AMSD	Samp	Type: MS	D .	Tes	tCode: E	PA Method	6010B: TCLF	Metals		
Client ID:	BatchQC	•	h ID: 39:			RunNo: 5			•	.*	
Prep Date:	1/23/2012	Analysis E	Date: 1/	24/2012		SeqNo: 1	5090	Units: mg/L			
Analyte	·	Result	PQL		SPK Ref Val		LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND ,	5.0	. 0.5000	0.02046	96.7	75	125	0	20	,
Cadmium		ND	1.0	0.5000	0.05392	91.3	75	125	0	20	
Chromium	÷	ND	5.0	0.5000	0	85.9	75	125	0	20	
Lead	• .	ND	5.0	0.5000	0.3232	78.0	75	125	0	20	

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

Page 11 of 12

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201585 30-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID	1201447-003AMSD	SampTy	oe: MS	SD [*]	Tes	tCode: E	PA Method	6010B: TCL	P Metals			
Client ID:	BatchQC	Batch I	D: 39	3 ′.	· ,	RunNo: 5	29					
Prep Date:	1/23/2012	Analysis Dat	e: 1/	24/2012	. 👇 8	SeqNo: 1	5090	Units: mg/L			•	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RP	DLimit	Qual
elenium		ND	1.0	0.5000	0	94.2	75	125	0	٠.	20	
Silver	•	ND ·	5.0	0.1000	O	93.2	75	. 125	0		20	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

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٠.				4901 Hawkins NE	Tel. 505-345-3975		ıJA).	as or	ອ)	PH B (G	+ 18 18	7 P 1 80 3 E	bor bor	DB (Wei bH Weij LEX + V LEX + V	5 T		-	,					Remarks:		possibility. Any sub-contract
Turn Around Time.		□ Standard Kush	Project Name:	TANK 35 CLEANUR	Project #: N1/	€/ ₂ ,	Project Manager:	~	BELK LAIBEN	Sampler A. Dorsey	an Inc.	Sample Temperature Z Z Z		Container Preservative Type Type	3-8,-1 N/D	- 1						///	Recogned by:	received by Time	If necessary, samples submitted to Hall Environmental maybe subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
	Chain-or-Custody Record	WESTEIN REFINING	Grallun Refivery	Mailing Address: RT 3 Box 7	Splle NM 87301	505 722	email or Fax#: 505722-0210		☐ Standard ☐ Level 4 (Full Validation)	- · · · · · · · · · · · · · · · · · · ·	□ Omer	□ EDD (Type)		Date Time Matrix Sample Request ID	11-12 11:00 Gall T-35-C	100		 -					Date: Trime: Relinquished by: 17-12 12: od 000	Date: Time: Relinquished by:	If necessary, samples submitted to Hall Environmental may be subc



Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87105

TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com

Sample Log-In Check List

Client Nam	ne: Western R	lefining Gallup		Wo	rk Ord	ler N	lumbe	er: 1 :	201585			•	•	
Logged by	: Lindsay M	angin	1/20/2012 7:45	MA 00:			Ĺ	Jin.	edsy Horiza	י פ	٠.			
Completed	l By: Lindsay M	angin	1/20/2012 8:54	:44 AM			۷	- Jetm	uby Hong	D		• ,	•	
Reviewed I	Ву:	1/20	12		-	٠					•			-
Chain of	Custody			*										
1 Were	seals intact?				Yes	V	No		Not Pre	sent				
	in of Custody com	plete?	•		Yes	v	No		Not Pre	sent				
	vas the sample deli				FedE	X								
Log In				٠										
4. Coole	rs are present? (se	e 19. for cooler sp	ecific information	1)	Yes	v	No-			NA				
5. Was a	n attempt made to	cool the samples	?		Yes	v	No			NA . ′				
6. Were	all samples receive	ed at a temperatur	e of `>0° C to 6.0	°C	Yes	~	No			NA			•	
7 Sampl	le(s) in proper cont	ainer(s)?		,	Yes	. 🗸	No							
	ent sample volume		(s)?		Yes	✓	No							
	mples (except VO				Yes	ď	No	,						
	reservative added				Yes		No '	✓		NA	*			
11 is the	headspace in the V	/OA vials less that	n 1/4 inch er 6 m	m? ·	Yes		No		No VOA	Vials ✓				
	any sample contair				Yes		No '	_						
13 Does	paperwork match b	ottle labels?			Yes	_	No		bot	of preser tiles che pH:				
-	atrices correctly ide		f Custody?		Yes	~	No		·-	pr.n.	(<2	or >12 u	nless no	oted)
	ear what analyses v				Yes	~	No			Adju	sted?			
16. Were a	all holding times at notify customer for	ole to be met?		•	Yes	~	No			Checl	ked by:			
Special H	landling (if app	olicable)				·								
	lient notified of all o		this order?		Yes		No .			NA 🗸				
Р	erson Notified:		CARA CONTRACTOR AND	Date:				***********************	-					
	y Whom:	<u> </u>	<u> </u>	Via:	еМаі	l	Pho	one	Fax	In Pe	rson			
	egarding:						an constant							
	lient Instructions:		<u>eronyana arang da aran basa aya mari da aran</u>	<u></u>			uara menura	origina des descri			MIN. 14 15 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 1	<u></u>		
18. Additio	nal remarks:	· •												
		•	`				•							
	, ,			•										
	<u>r Information</u> eler No │ Temp ºC	Condition Se	eal Intact Seal	No Se	eal Dat	e	s	igne	d By					
1	2.2	Good Yes	· · · · · · · · · · · · · · · · · · ·									,		

	ENVIRONMENTAL MATERIAL	MINITAL INDONESTICATION WARMAN Pallenvironmental com	NM 87109	505-345-4107	est		di W	SIS	1) L L(8)	,	2/ '	-jwj	8) 07S8 6) 0 6) 0 6) 0	XX									
		MINAMA TOLO LA	4901 Hawkins NE - Albuqueraue, NM 87109		Analysis	(les	eiQ	/SE;	(I) (1) (1) (1) (2)	811 400 11Ac	4 80 3 bo 1 10 1 10	ethoc ethoc ethoc AN ^o S Me	BTEX + Ma TPH (M EDB (W 8310 (P RCRA 8 RCRA 8	X						ırks:			
Turn-Around Time:	□ Standard X Rush	,	TANK 35 CLEANUR		£1/2		120			+ Parties NO District the second of the seco		TM -	Type HEALNO X Type MILES TO THE TYPE TYPE TYPE TYPE TYPE TYPE TYPE TYP	3-802 MB -1						Received W: Remarks	Thung of Many Joseph ones	Secence by Usice Time	If necessary samples submitted to Hall Environmental maybe subcontracted to other according of this season of this season in the same of t
Chain-of-Custody Record	T	Refinery		301	505 722 3	5722-0210	QA/QC Package:	☐ Standard ☐ Level 4 (Full Validation)	Accreditation	Oulea	□ EDD (Type)		Date Time Matrix Sample Request ID	1-12 11:10 sour T-35-5						Relinquished by:	2 12:00 (Ween 6)	Date: Reinquisned by:	If necessary camples cultimitted to Half Environmental matche subcor



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

TOTAL + TCLP

January 24, 2012

Thurman B. Larsen

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-3833

FAX (505) 722-0210

RE: Tank 35 Cleanup

OrderNo.: 1201183

Dear Thurman B. Larsen:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/9/2012 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued January 13, 2012

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE

Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com Case Narrative

W⊖#:

1201183

Date:

1/24/2012

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Any comments or problems with the analytical events associated with this report are noted below. Analytical Comments for METHOD 8270_S, SAMPLE 1201183-001C, Batch ID 194: Oily Matrix, surrogates not recovered due to dilution.

Analytical Report Lab Order 1201183

Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-001

Client Sample ID: T-35-5

Collection Date: 1/5/2012 10:15:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS				Analyst: JMP
Diesel Range Organics (DRO)	85	9.7	mg/Kg	1	1/10/2012 1:45:12 PM
Motor Oil Range Organics (MRO)	240	49	mg/Kg	.1	1/10/2012 1:45:12 PM
Surr: DNOP	118	77.4-131	%REC	.1	1/10/2012 1:45:12 PM
EPA METHOD 8015B: GASOLINE RA	ANGE			•	Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/10/2012 4:29:46 PM
Sum: BFB	106 ·	69.7-121	%REC	1	1/10/2012 4:29:46 PM
EPA METHOD 7471: MERCURY					Analyst: JLF
Mercury	ND	0.033	mg/kg	· 1	1/11/2012 2:42:52 PM
MERCURY, TCLP					Analyst: JLF
Mercury	ND	0.020	mg/L	1.	1/18/2012 3:01:36 PM
•		0.020	nig/L	• •	
EPA METHOD 6010B: SOIL METALS		. · · · · · · · · · · · · · · · · · · ·			Analyst: ELS
Arsenic	3.5	2.5	mg/L	1	1/11/2012 9:30:55 AM
Cadmium	ND	0.10	mg/L	1	1/11/2012 9:30:55 AM
Chromium	7.8	0.30	mg/L	1	1/11/2012 9:30:55 AM
Lead	8.6	0.25	mg/L	1	1/11/2012 9:30:55 AM
Selenium	ND	2.5	mg/L	1	1/11/2012 9:30:55 AM
Silver	. ND .	0.25	mg/Ļ	.1	1/11/2012 9:30:55 AM
Barium	. 310	1.0	mg/L	10	1/11/2012 10:19:09 AM
EPA METHOD 6010B: TCLP METAL	S				Analyst: ELS
Arsenic	ND	5.0	mg/L	1 .	1/19/2012 6:48:00 AM
Cadmium	ND	1.0	mg/L	. 1	1/19/2012 6:48:00 AM
Chromium	. ND	5.0	mg/L	1 .	1/19/2012 6:48:00 AM
Lead *	ND	5.0	mg/L	1	1/19/2012 6:48:00 AM
Selenium	ND	1.0	mg/L	1	1/19/2012 6:48:00 AM
Silver	ND	5.0	mg/L	1	1/19/2012 6:48:00 AM
Barium	ND	100	mg/L	5	1/19/2012 6:53:34 AM
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: JDC
Acenaphthene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Acenaphthylene . '	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Aniline	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Anthracene	ND	4.0	mg/Kg	. 1	1/10/2012 8:34:41 PM
Azobenzene	ND	4.0	mg/Kg	. 1	1/10/2012 8:34:41 PM
Benz(a)anthracene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Benzo(a)pyrene	ND	4.0	mg/Kg	,1	1/10/2012 8:34:41 PM
Benzo(b)fluoranthene	ND	4.0	mg/Kg	<u>`</u> 1	1/10/2012 8:34:41 PM
Benzo(g,h,i)perylene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Benzo(k)fluoranthene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Benzoic acid	ND	9.9	mg/Kg	1	1/10/2012 8:34:41 PM
Benzyl alcohol	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-001

Client Sample ID: T-35-5

Collection Date: 1/5/2012 10:15:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL Qı	ial Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES				Analyst: JD 0
Bis(2-chloroethoxy)methane	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Bis(2-chloroethyl)ether	ND .	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Bis(2-chloroisopropyl)ether	. ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Bis(2-ethylhexyl)phthalate	ND	9.9	mg/Kg	1 .	1/10/2012 8:34:41 PM
4-Bromophenyl phenyl ether	ND ·	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Butyl benzyl phthalate	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Carbazole	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
4-Chloro-3-methylphenol	ND	9.9	mg/Kg	· 1	1/10/2012 8:34:41 PM
4-Chloroaniline	ND	9.9	mg/Kg	1 .	1/10/2012 8:34:41 PM
2-Chloronaphthalene	· ND	5.0	mg/Kg	1	1/10/2012 8:34:41 PM
2-Chlorophenol	ND	4.0	mg/Kg	, · 1	1/10/2012 8:34:41 PM
4-Chlorophenyl phenyl ether	ND	4.0	mg/Kg	. 1	1/10/2012 8:34:41 PM
Chrysene	. ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Di-n-butyl phthalate	ND	9.9	mg/Kg	1	1/10/2012 8:34:41 PM
Di-n-octyl phthalate	ND	5.0	mg/Kg	1	1/10/2012 8:34:41 PM
Dibenz(a,h)anthracene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Dibenzofuran	. ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
1,2-Dichlorobenzene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
1,3-Dichlorobenzene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
1,4-Dichlorobenzene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
3,3'-Dichlorobenzidine	ND	5.0	mg/Kg	1	1/10/2012 8:34:41 PM
Diethyl phthalate	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Dimethyl phthalate	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
2,4-Dichlorophenol	ND	7.9	mg/Kģ	1	1/10/2012 8:34:41 PM
2,4-Dimethylphenol	ND .	6.0	mg/Kg	. 1	1/10/2012 8:34:41 PM
4,6-Dinitro-2-methylphenol	ND	9.9	mg/Kg	. 1	1/10/2012 8:34:41 PM
2,4-Dinitrophenol	ND	7.9	mg/Kg	1	1/10/2012 8:34:41 PM
2,4-Dinitrotoluene	ND .	9.9	mg/Kg	. 1	1/10/2012 8:34:41 PM
2,6-Dinitrotoluene	ND	9.9	mg/Kg	1	1/10/2012 8:34:41 PM
Fluoranthene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Fluorene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Hexachlorobenzene	ND .	4.0	. mg/Kg	1	1/10/2012 8:34:41 PM
Hexachlorobutadiene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Hexachlorocyclopentadiene	. ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Hexachloroethane	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
indeno(1,2,3-cd)pyrene	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
Sophorone	ND	9.9	mg/Kg	1	1/10/2012 8:34:41 PM
1-Methylnaphthalene	ND	4.0	mg/Kg	· 1	1/10/2012 8:34:41 PM
2-Methylnaphthalene	ND	4.0	mg/Kg	. 1	1/10/2012 8:34:41 PM
2-Methylphenol	ND	9.9	mg/Kg	1	1/10/2012 8:34:41 PM
3+4-Methylphenol	ND	4.0	mg/Kg	1	1/10/2012 8:34:41 PM
N-Nitrosodi-n-propylamine	ND	4.0	mġ/Kg	1	1/10/2012 8:34:41 PM

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Lab Order 1201183

Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-001

Client Sample ID: T-35-5

Collection Date: 1/5/2012 10:15:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL .	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S					Analyst: JDC
N-Nitrosodiphenylamine	. ND	4.0	:	mg/Kg	1	1/10/2012 8:34:41 PM
Naphthalene	, ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
2-Nitroaniline	ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
3-Nitroaniline	ND	4.0		mg/Kg	1 .	1/10/2012 8:34:41 PM
4-Nitroaniline	ND	7.9		mg/Kg	1	1/10/2012 8:34:41 PM
Nitrobenzene	ND	9.9		mg/Kg	1	1/10/2012 8:34:41 PM
2-Nitrophenol	ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
4-Nitrophenol	· ND	- 5.0		mg/Kg	1	1/10/2012 8:34:41 PM
Pentachlorophenol	ND	7.9		mg/Kg	· 1	1/10/2012 8:34:41 PM
Phenanthrene	. ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
Phenol	ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
Pyrene	ND ·	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
Pyridine	ND	9.9		mg/Kg	1 .	1/10/2012 8:34:41 PM
1,2,4-Trichlorobenzene	ND	4.0		mg/Kg	. 1	1/10/2012 8:34:41 PM
2,4,5-Trichlorophenol	· ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
2,4,6-Trichlorophenol	; ND	4.0		mg/Kg	1	1/10/2012 8:34:41 PM
Surr: 2,4,6-Tribromophenol	0	24.9-115	S	%REC	1	1/10/2012 8:34:41 PM
Surr: 2-Fluorobiphenyl	0	26.2-108	s	%REC	. 1	1/10/2012 8:34:41 PM
Surr: 2-Fluorophenol	. 0	17.7-98	s	%REC	1_	1/10/2012 8:34:41 PM
Surr: 4-Terphenyl-d14	0	33.8-108	S	%REC	1	1/10/2012 8:34:41 PM
Surr: Nitrobenzene-d5	. 0	23-109	S	%REC	1	1/10/2012 8:34:41 PM
Surr: Phenol-d5	. 0	22.1-103	s	%REC	1	1/10/2012 8:34:41 PM
EPA METHOD 8270C TCLP						Analyst: JDC
2,4-Dinitrotoluene	ND	0.13		mg/L	1	1/19/2012 10:19:56 AM
Hexachlorobenzene	ND	0.13		. mg/L	1	1/19/2012 10:19:56 AM
Hexachlorobutadiene	ND .	0.50		mg/L	1	1/19/2012 10:19:56 AM
Hexachloroethane	. ND	3.0		mg/L	1	1/19/2012 10:19:56 AM
Nitrobenzene	ND	2.0		mg/L	· 1	1/19/2012 10:19:56 AM
Pentachlorophenol	ND	100		mg/L	· 1	1/19/2012 10:19:56 AM
Pyridine	, ND	5.0		mg/L	1	1/19/2012 10:19:56 AM
2,4,5-Trichlorophenol	ND	400		mg/L	1.	1/19/2012 10:19:56 AM
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	1/19/2012 10:19:56 AM
Cresols, Total	,ND	200		mg/L	1 ·	1/19/2012 10:19:56 AM
2-Methylphenol	ND:	200		mg/L	1	1/19/2012 10:19:56 AM
3+4-Methylphenol	ND	200	~	mg/L	. 1	1/19/2012 10:19:56 AM
Phenol	ND .	200		mg/L	1	1/19/2012 10:19:56 AM
Surr: 2,4,6-Tribromophenol	78.5	18.2-136		%REC	1	1/19/2012 10:19:56 AM
Surr: 2-Fluorobiphenyl	88.8	40.5-108	•	%REC	.1	1/19/2012 10:19:56 AM
Surr: 2-Fluorophenol	. 67.9	23-101		%REC	1	1/19/2012 10:19:56 AM
Surr: 4-Terphenyl-d14	80.2	40.9-112		%REC	1	1/19/2012 10:19:56 AM
Surr: Nitrobenzene-d5	89.6	41-115		%REC	· 1	1/19/2012 10:19:56 AM.

Matrix: SOIL

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- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Analytical Report Lab Order 1201183

Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-001

Client Sample ID: T-35-5

Collection Date: 1/5/2012 10:15:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C TCLP			,		Analyst: JDC
Surr: Phenol-d5	52.4	23.4-73.6	%REC	. 1	1/19/2012 10:19:56 AM
EPA METHOD 8260B: VOLATILES	•		• •		Analyst: NSB
Benzene	ND	0.049	. mg/Kg	1	1/11/2012 5:50:37 AM
Toluene	0.067	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Ethylbenzene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Methyl tert-butyl ether (MTBE)	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,2,4-Trimethylbenzene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,3,5-Trimethylbenzene	NĎ	0.049	. mg/Kg	1	1/11/2012 5:50:37 AM
1,2-Dichloroethane (EDC)	ND	0.049	mg/Kg	· 1	1/11/2012 5:50:37 AM
1,2-Dibromoethane (EDB)	ND	0.049	mg/Kg	. 1	1/11/2012 5:50:37 AM
Naphthalene	ND	0.097	mg/Kg	.1	1/11/2012 5:50:37 AM
1-Methylnaphthalene	ND	0.19	mg/Kg	1	1/11/2012 5:50:37 AM
2-Methylnaphthalene	ND	0.19	mg/Kg	· 1	1/11/2012 5:50:37 AM
Acetone	ND	0.73	mg/Kg	1	1/11/2012 5:50:37 AM
Bromobenzene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Bromodichloromethane	ND	0.049	mg/Kg	. 1	1/11/2012 5:50:37 AM
Bromoform	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Bromomethane	ND	0.15	mg/Kg	. 1.	1/11/2012 5:50:37 AM
2-Butanone	ND	0.49	mg/Kg	1	1/11/2012 5:50:37 AM
Carbon disulfide	ND	0.49	mg/Kg	1 1	1/11/2012 5:50:37 AM
Carbon tetrachloride	ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM
Chlorobenzene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Chloroethane	ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM
Chloroform	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Chloromethane	ND	0.15	mg/Kg	1	1/11/2012 5:50:37 AM
2-Chlorotoluene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
4-Chlorotoluene	ND	0.049	mg/Kg	i	1/11/2012 5:50:37 AM
cis-1,2-DCE	ND .	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
cis-1,3-Dichloropropene	, ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,2-Dibromo-3-chloropropane	ND	0.097	mg/Kg		1/11/2012 5:50:37 AM
Dibromochloromethane	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Dibromomethane	. ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM
1,2-Dichlorobenzene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,3-Dichlorobenzene	ND	0.049	mg/Kg	· 1	1/11/2012 5:50:37, AM
1,4-Dichlorobenzene	ND ·	0.049	mg/Kg	· 1	1/11/2012 5:50:37 AM
Dichlorodifluoromethane	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,1-Dichloroethane	ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM
1,1-Dichloroethene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,2-Dichloropropane	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,3-Dichloropropane	ND	0.049	mg/Kg	. 1	1/11/2012 5:50:37 AM
2,2-Dichloropropane	· ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM

Qualifiers:

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- B Analyte detected in the associated Method Blank
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- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Analytical Report

Lab Order **1201183**Date Reported: **1/24/2012**

Hall Environmental Analysis Laboratory, Inc.

'Matrix: SOIL

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-001

Client Sample ID: T-35-5

Collection Date: 1/5/2012 10:15:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES			,		Analyst: NSB
1,1-Dichloropropene	ND	0.097	mg/Kg	. 1	1/11/2012 5:50:37 AM
Hexachlorobutadiene	ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM
2-Hexanone	ND	0.49	mg/Kg	1	1/11/2012 5:50:37 AM
Isopropyibenzene	ND	0.049	mg/Kg	. 1	1/11/2012 5:50:37 AM
4-Isopropyltoluene	ND	0.049	mg/Kg .	1	1/11/2012 5:50:37 AM
4-Methyl-2-pentanone	ND	. 0.49	mg/Kg	1	1/11/2012 5:50:37 AM
Methylene chloride	. ND	0.15	mg/Kg	1	1/11/2012 5:50:37 AM
n-Butylbenzene	. ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
n-Propylbenzene	, ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
sec-Butylbenzene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Styrene	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
tert-Butylbenzene	ND	0.049	mg/Kg	1 -	1/11/2012 5:50:37 AM
1,1,1,2-Tetrachloroethane	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,1,2,2-Tetrachloroethane	ND	0.049	mg/Kg	1 .	1/11/2012 5:50:37 AM
Tetrachloroethene (PCE)	ND	0.049	. mg/Kg	1	1/11/2012 5:50:37 AM
trans-1,2-DCE	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
trans-1,3-Dichloropropene	ND	0.049	mg/Kg	1	. 1/11/2012 5:50:37 AM
1,2,3-Trichlorobenzene	ND	0.097	mg/Kg	· 1	1/11/2012 5:50:37 AM
1,2,4-Trichlorobenzene	ND	0.049	. mg/Kg	1 .	1/11/2012 5:50:37 AM
1,1,1-Trichloroethane	ND	0.049	mg/Kg	. 1	1/11/2012 5:50:37 AM
1,1,2-Trichloroethane	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Trichloroethene (TCE)	ND	0.049	mg/Kg	1 .	1/11/2012 5:50:37 AM
Trichlorofluoromethane	· ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
1,2,3-Trichloropropane	. ND	0.097	mg/Kg	.1	1/11/2012 5:50:37 AM
Vinyl chloride	ND	0.049	mg/Kg	1	1/11/2012 5:50:37 AM
Xylenes, Total	ND	0.097	mg/Kg	1	1/11/2012 5:50:37 AM
Surr: 1,2-Dichloroethane-d4	94.3	70-130	%REC	1-	1/11/2012 5:50:37 AM
Surr: 4-Bromofluorobenzene	93.5	70-130	%REC	1	1/11/2012 5:50:37 AM
Surr: Dibromofluoromethane	112	63.1-128	%REC	1	1/11/2012 5:50:37 AM
Surr: Toluene-d8	92.5	70-130	%REC	. 1	1/11/2012 5:50:37 AM
VOLATILES BY 8260B/1311				÷	Analyst: NSB
Benzene	ND	0.50	. · mg/L	. 1	1/17/2012 4:39:38 PM
2-Butanone	ND	10	mg/L	. 1	1/17/2012 4:39:38 PM
Carbon Tetrachloride	ND	0.50	mg/L	1	1/17/2012 4:39:38 PM
Chlorobenzene	ND	100	mg/L	1 .	1/17/2012 4:39:38 PM
Chloroform	ND	6.0	mg/L	1	1/17/2012 4:39:38 PM
1,4-Dichlorobenzene	ND	7.5		1	1/17/2012 4:39:38 PM
1,2-Dichloroethane (EDC)	ND	0.50	mg/L	· 1	1/17/2012 4:39:38 PM
1,1-Dichloroethene	ND	0.70 .	mg/L	1	1/17/2012 4:39:38 PM
Hexachlorobutadiene	ND	0.50	mg/L	. 1	1/17/2012 4:39:38 PM
Tetrachloroethene (PCE)	ND	0.70	mg/L	1	1/17/2012 4:39:38 PM

\sim	lifiers
t ma	mners

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Analytical Report

Lab Order 1201183

Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-001

Client Sample ID: T-35-5

Collection Date: 1/5/2012 10:15:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL Qu	al Units	,) DF	Date Analyzed
VOLATILES BY 8260B/1311			<u> </u>		Analyst: NSB
Trichloroethene (TCE)	ND	0.50	mg/L	1	1/17/2012 4:39:38 PM
Vinyl chloride	ND	0.20	mg/L	` 1	1/17/2012 4:39:38 PM
Surr: 1,2-Dichloroethane-d4	92.7	69.9-130	%REC	1	1/17/2012 4:39:38 PM
Surr: 4-Bromofluorobenzene	95.2	71.2-123	%REC	1.	1/17/2012 4:39:38 PM
Surr: Dibromofluoromethane	109	73.9-134	%REC	1	1/17/2012 4:39:38 PM
Surr: Toluene-d8	95.8	81.9-122	%REC	1	1/17/2012 4:39:38 PM

Matrix: SOIL

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

S Spike Recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 8 of 33

Analytical Report Lab Order 1201183

Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-002

Client Sample ID: T-35-1

Collection Date: 1/5/2012 10:30:00 AM

Received Date: 1/9/2012 12:50:00 PM

EPA METHOD 8015B: DIESEL RANGE ORGANICS Analyst: JMP	Analyses	Result	ŖL	Qual Units	DF	Date Analyzed
Motor Oil Range Organics (MRO)	EPA METHOD 8015B: DIESEL RAN	GE ORGANICS				Analyst: JMP
Motor Oil Range Organics (MRO)	Diesel Range Organics (DRO)	34	. 10	mg/Kg	1	1/10/2012 12:36:46 PM
Carbinary Carb	Motor Oil Range Organics (MRO)	ND	50		1	1/10/2012 12:36:46 PM
Gasoline Range Organics (GRO) ND 4.9 mg/Kg 1 1/10/2012 4:59:57 PM	Surr: DNOP	130	77.4-131	, %REC	1	1/10/2012 12:36:46 PM
Sum: BFB	EPA METHOD 8015B: GASOLINE R	ANGE			-	Analyst: RAA
Mercury ND 0.033 mg/kg 1 1/11/2012 2:48:16 PM	Gasoline Range Organics (GRO)	ND	4.9	mg/Kg	1	1/10/2012 4:59:57 PM
Mercury ND 0.033 mg/kg 1 1/1/1/2012 2:48:16 PM MERCURY, TCLP Analyst: JLF Mercury ND 0.020 mg/L 1 1/18/2012 3:03:23 PM EPA METHOD 6010B: SOIL METALS Arsenic ND 2.5 mg/L 1 1/11/2012 9:35:14 AM Cadmium ND 0.10 mg/L 1 1/11/2012 9:35:14 AM Chromium 6.7 0.30 mg/L 1 1/11/2012 9:35:14 AM Lead 1.9 0.25 mg/L 1 1/11/2012 9:35:14 AM Selenium ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/11/2012 9:35:14 AM Barium ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium ND 0.25 mg/L 1 1/11/2012 10:21:11 AM Chaptania <	Surr: BFB	99.7	69.7-121	%REC	1 ·	1/10/2012 4:59:57 PM
MERCURY, TCLP Mercury ND 0.020 mg/L 1 1/1/8/2012 3:03:23 PM EPA METHOD 6010B: SOIL METALS Arsenic ND 2.5 mg/L 1 1/1/1/2012 9:35:14 AM Cadmium ND 0.10 mg/L 1 1/1/1/2012 9:35:14 AM Chromium 6.7 0.30 mg/L 1 1/1/1/2012 9:35:14 AM Lead 1.9 0.25 mg/L 1 1/1/1/2012 9:35:14 AM Selenium ND 2.5 mg/L 1 1/1/1/2012 9:35:14 AM Selenium ND 0.25 mg/L 1 1/1/1/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/1/1/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/1/1/2012 9:35:14 AM Barium ND 5.0 mg/L 1 1/1/1/2012 9:35:14 AM Cadmium ND 5.0 mg/L 1 1/1/1/2012 9:52:12 AM Cadmium ND 1.0 mg/L 1 <td>EPA METHOD 7471: MERCURY</td> <td></td> <td></td> <td></td> <td></td> <td>Analyst: JLF</td>	EPA METHOD 7471: MERCURY					Analyst: JLF
MERCURY, TCLP Mercury ND 0.020 mg/L 1 1/1/8/2012 3:03:23 PM EPA METHOD 6010B: SOIL METALS Arsenic ND 2.5 mg/L 1 1/1/1/2012 9:35:14 AM Cadmium ND 0.10 mg/L 1 1/1/1/2012 9:35:14 AM Chromium 6.7 0.30 mg/L 1 1/1/1/2012 9:35:14 AM Lead 1.9 0.25 mg/L 1 1/1/1/2012 9:35:14 AM Selenium ND 2.5 mg/L 1 1/1/1/2012 9:35:14 AM Selenium ND 0.25 mg/L 1 1/1/1/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/1/1/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/1/1/2012 9:35:14 AM Barium ND 5.0 mg/L 1 1/1/1/2012 9:35:14 AM Cadmium ND 5.0 mg/L 1 1/1/1/2012 9:52:12 AM Cadmium ND 1.0 mg/L 1 <td>Mercury</td> <td>ND</td> <td>0.033</td> <td>mg/kg</td> <td>1</td> <td>1/11/2012 2:48:16 PM</td>	Mercury	ND	0.033	mg/kg	1	1/11/2012 2:48:16 PM
Arsenic	MERCURY, TCLP			•		Analyst: JLF
Arsenic ND 2.5 mg/L 1 1/11/2012 9:35:14 AM Cadmium ND 0.10 mg/L 1 1/11/2012 9:35:14 AM Chromium 6.7 0.30 mg/L 1 1/11/2012 9:35:14 AM Lead 1.9 0.25 mg/L 1 1/11/2012 9:35:14 AM Selenium ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Silver ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 10 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/11/2012 9:35:14 AM EPA METHOD 6010B: TCLP METALS Analyst: ELS Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1	Mercury	· / ND	0.020	· mg/L	1	1/18/2012 3:03:23 PM
Cadmium ND 0.10 mg/L 1 1/11/2012 9:35:14 AM Chromium 6.7 0.30 mg/L 1 1/11/2012 9:35:14 AM Lead 1.9 0.25 mg/L 1 1/11/2012 9:35:14 AM Selenium ND 2.5 mg/L 1 1/11/2012 9:35:14 AM Silver ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 10 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 1 1/11/2012 9:35:14 AM EPA METHOD 6010B: TCLP METALS Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM	EPA METHOD 6010B: SOIL METALS	S .				Analyst: ELS
Cadmium	Arsenic	ND	2.5	mg/L	. 1	1/11/2012 9:35:14 AM
Chromium 6.7 0.30 mg/L 1 1/11/2012 9:35:14 AM Lead 1.9 0.25 mg/L 1 1/11/2012 9:35:14 AM Selenium ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Silver ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 10 1/11/2012 10:21:11 AM EPA METHOD 6010B: TCLP METALS Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM	Cadmium	ND	0.10	-	. 1	1/11/2012 9:35:14 AM
Lead 1.9 0.25 mg/L 1 1/11/2012 9:35:14 AM	Chromium	6.7	0.30	_	· 1	1/11/2012.9:35:14 AM
Selenium ND 2.5 mg/L 1 1/11/2012 9:35:14 AM Silver ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Barium 320 1.0 mg/L 10 1/11/2012 9:35:14 AM EPA METHOD 6010B: TCLP METALS Fareic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM	Lead	, 1.9	0.25	_	1	1/11/2012 9:35:14 AM
Silver Banium ND 0.25 mg/L 1 1/11/2012 9:35:14 AM Banium 320 1.0 mg/L 10 1/11/2012 10:21:11 AM EPA METHOD 6010B: TCLP METALS Fanalyst: ELS Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 5.0 mg/Kg 1 <	Selenium	ND	2.5	-	1	1/11/2012 9:35:14 AM
Barium 320 1.0 mg/L 10 1/11/2/2012 10:21:11 AM EPA METHOD 6010B: TCLP METALS Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 5.0 mg/K 1 1/19/2012 6:52:12 AM Barium ND 2.0 mg/Kg<	Silver	ND		•	1	1/11/2012 9:35:14 AM
Arsenic ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 100 mg/L 5 1/19/2012 6:52:12 AM Silver ND 100 mg/L 5 1/19/2012 6:52:12 AM Silver ND 100 mg/L 5 1/19/2012 6:55:42 AM Silver ND 100 mg/L 5 1/19/2012 6:55:55 PM Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(c)hiporylene	Barium	320	1.0		10	1/11/2012 10:21:11 AM
Cadmium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 100 mg/L 5 1/19/2012 6:52:12 AM Beralium ND 100 mg/L 1 1/19/2012 6:52:12 AM Beralium ND 2.0 mg/Kg 1 1/10/2012 6:52:12 AM Beralium ND 2.0	EPA METHOD 6010B: TCLP METAL	_S			•	Analyst: ELS
Chromium ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 100 mg/L 5 1/19/2012 6:52:12 AM Barium ND 2.0 mg/Kg 1 1/10/2012 6:55:55 PM Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND	Arsenic	ND.	5.0	mg/L	1	1/19/2012 6:52:12 AM
Lead ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 100 mg/L 5 1/19/2012 6:57:42 AM EPA METHOD 8270C: SEMIVOLATILES Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 m	Cadmium	ND	1.0	mg/L	1.	1/19/2012 6:52:12 AM
Selenium ND 1.0 mg/L 1 1/19/2012 6:52:12 AM Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 100 mg/L 5 1/19/2012 6:57:42 AM EPA METHOD 8270C: SEMIVOLATILES Analyst: JDC Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(c)fluoranthene ND	Chromium	ND	5.0	mg/L	1	1/19/2012 6:52:12 AM
Silver ND 5.0 mg/L 1 1/19/2012 6:52:12 AM Barium ND 100 mg/L 5 1/19/2012 6:57:42 AM EPA METHOD 8270C: SEMIVOLATILES Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(c)k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 <t< td=""><td>Lead</td><td>ND</td><td>5.0</td><td>-</td><td>1</td><td>1/19/2012 6:52:12 AM</td></t<>	Lead	ND	5.0	-	1	1/19/2012 6:52:12 AM
Banium ND 100 mg/L 5 1/19/2012 6:57:42 AM EPA METHOD 8270C: SEMIVOLATILES Analyst: JDC Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Antline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(c) (h)fluoranthene ND 2.0 mg/Kg	Selenium	ND	1.0	mg/L	1	1/19/2012 6:52:12 AM
EPA METHOD 8270C: SEMIVOLATILES Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Antline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Silver	ND	5.0	mg/L	1 .	1/19/2012 6:52:12 AM
Acenaphthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Barium	, ND	100	mg/L	- 5	1/19/2012 6:57:42 AM
Acenaphthylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: JDC
Aniline ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Acenaphthene	ND	2.0	mg/Kg	. 1	1/10/2012 8:05:55 PM
Anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Acenaphthylene	ND	2.0	mg/Kg	1.4	1/10/2012 8:05:55 PM
Azobenzene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Aniline	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Benz(a)anthracene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Anthracene	· ND	2.0	mg/Kg	. 1	1/10/2012 8:05:55 PM
Benzo(a)pyrene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Azobenzene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Benzo(b)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Benz(a)anthracene	ND	2.0	mg/Kg	· 1	1/10/2012 8:05:55 PM
Benzo(g,h,i)perylene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM	Benzo(a)pyrene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Benzo(k)fluoranthene ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM		ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Benzoic acid ND 5.0 mg/Kg 1 1/10/2012 8:05:55 PM		ND		mg/Kg	1	
		ND	2.0	mg/Kg	1 .	1/10/2012 8:05:55 PM
Benzyl alcohol ND 2.0 mg/Kg 1 1/10/2012 8:05:55 PM	•	ND	5.0	mg/Kg	· 1	1/10/2012 8:05:55 PM
	Benzyl alcohol	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Matrix: SOIL

Date Reported: 1/24/2012

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-002

Client Sample ID: T-35-1

Collection Date: 1/5/2012 10:30:00 AM Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	P1 O	al Units	DF	Date Analyzed
	Acsult	KL Qu	ai Units	Dr	
EPA METHOD 8270C: SEMIVOLATILES	•	•			Analyst: JDC
Bis(2-chloroethoxy)methane	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Bis(2-ethylhexyl)phthalate	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
4-Bromophenyl phenyl ether	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Butyl benzyl phthalate	ND	2.0	mg/Kg	1 .	1/10/2012 8:05:55 PM
Carbazole	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
4-Chloro-3-methylphenol	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
4-Chloroaniline	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
2-Chloronaphthalene	ND .	2.5	mg/Kg	1	1/10/2012 8:05:55 PM
2-Chlorophenol	ΝD	2.0	. mg/Kg	1	1/10/2012 8:05:55 PM
4-Chlorophenyl phenyl ether	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Chrysene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Di-n-butyl phthalate	ND	5.0	mg/Kg	. 1	1/10/2012 8:05:55 PM
Di-n-octyl phthalate	ND	2.5	mg/Kg	1	1/10/2012 8:05:55 PM
Dibenz(a,h)anthracene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Dibenzofuran	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
1,2-Dichlorobenzene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
1,3-Dichlorobenzene	ND.	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
1,4-Dichlorobenzene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
3,3'-Dichlorobenzidine	ND	2.5	mg/Kg	1	1/10/2012 8:05:55 PM
Diethyl phthalate	ND	2.0	mg/Kg	1 .	1/10/2012 8:05:55 PM
Dimethyl phthalate	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,4-Dichlorophenol	ND	4.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,4-Dimethylphenol	ND	3.0	mg/Kg	1	1/10/2012 8:05:55 PM
4,6-Dinitro-2-methylphenol	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,4-Dinitrophenol	ND	4.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,4-Dinitrotoluene	. ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,6-Dinitrotoluene	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
Fluoranthene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Fluorene	ND	2.0	mg/Kg 、	1	1/10/2012 8:05:55 PM
Hexachlorobenzene	ND	2.0	mg/Kg	1 .	1/10/2012 8:05:55 PM
Hexachlorobutadiene	ND.	2.0	mg/Kg	1 .	1/10/2012 8:05:55 PM
Hexachlorocyclopentadiene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Hexachloroethane	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Indeno(1,2,3-cd)pyrene	ND	2.0	mg/Kg	·1	1/10/2012 8:05:55 PM
Isophorone	ND.	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
1-Methylnaphthalene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
2-Methylnaphthalene	. ND	2.0	mg/Kg	1	1/10/2012*8:05:55 PM
2-Methylphenol	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
3+4-Methylphenol	. ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
N-Nitrosodi-n-propylamine	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM

Qualifiers:

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Analytical Report Lab Order 1201183

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

Date Reported: 1/24/2012

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-002

Client Sample ID: T-35-1

Collection Date: 1/5/2012 10:30:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES				Analyst: JDC
N-Nitrosodiphenylamine	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Naphthalene	. ND	2.0	mg/Kg	1 .	1/10/2012 8:05:55 PM
2-Nitroaniline	, ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
3-Nitroaniline	ND	2.0	mg/Kg	. 1	1/10/2012 8:05:55 PM
4-Nitroaniline	ND	4.0	mg/Kg	1	1/10/2012 8:05:55 PM
Nitrobenzene	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
2-Nitrophenol	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
4-Nitrophenol	ND	2.5	mg/Kg	1	1/10/2012 8:05:55 PM
Pentachlorophenol	. ND	4.0	mg/Kg	1	1/10/2012 8:05:55 PM
Phenanthrene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Phenol	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Pyrene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Pyridine .	ND	5.0	mg/Kg	1	1/10/2012 8:05:55 PM
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,4,5-Trichlorophenol	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
2,4,6-Trichlorophenol	ND	2.0	mg/Kg	1	1/10/2012 8:05:55 PM
Surr: 2,4,6-Tribromophenol	42.4	24.9-115	%REC	1	1/10/2012 8:05:55 PM
Surr: 2-Fluorobiphenyl	65.3	26.2-108	%REC	1	1/10/2012 8:05:55 PM
Surr: 2-Fluorophenol	63.3	17.7-98	%REC	1	1/10/2012 8:05:55 PM
Surr: 4-Terphenyl-d14	50.3	33.8-108	%REC	1	1/10/2012 8:05:55 PM
Surr: Nitrobenzene-d5	47.1	23-109	%REC	1	1/10/2012 8:05:55 PM
Surr: Phenol-d5	57.2	22.1-103	%REC	1	1/10/2012 8:05:55 PM
EPA METHOD 8270C TCLP					Analyst: JDC
2,4-Dinitrotoluene	ND	0.13	mg/L	· 1	1/19/2012 11:47:03 AM
Hexachlorobenzene	ND	0.13	mg/L	1	1/19/2012 11:47:03 AM
Hexachlorobutadiene	, ND	0.50	mg/L	1	1/19/2012 11:47:03 AM
Hexachloroethane	ND.	3.0	mg/L	1	1/19/2012 11:47:03 AM
Nitrobenzene	ND .	2.0	mg/L	1	1/19/2012 11:47:03 AM
Pentachlorophenol	ND	100	mg/L	.1	1/19/2012 11:47:03 AM
Pyridine	ND	5.0	mg/L	1	1/19/2012 11:47:03 AM
2,4,5-Trichlorophenol	ND	400	mg/L	1	1/19/2012 11:47:03 AM
2,4,6-Trichlorophenol	ND	2.0	mg/L	1	1/19/2012 11:47:03 AM
Cresols, Total	ND	200	mg/L	1	1/19/2012 11:47:03 AM
2-Methylphenol	ND	200	mg/L	1	1/19/2012 11:47:03 AM
3+4-Methylphenol	ND	200 -	mg/L	1	1/19/2012 11:47:03 AM
Phenol	` ND	200	mg/L	· 1	1/19/2012 11:47:03 AM
Surr: 2,4,6-Tribromophenol	75.3	18.2-136	%REC	1 .	1/19/2012 11:47:03 AM
Surr: 2-Fluorobiphenyl	84.0	40.5-108	%REC	1	1/19/2012 11:47:03 AM
Surr: 2-Fluorophenol	54.6	23-101	%REC	1	1/19/2012 11:47:03 AM
Surr: 4-Terphenyl-d14	80.8	40.9-112	%REC	1.	1/19/2012 11:47:03 AM
Surr: Nitrobenzene-d5	93.9	41-115	%REC	1 .	1/19/2012 11:47:03 AM

Qualifiers:

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- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Analytical Report Lab Order 1201183

Date Reported: 1/24/2012

Hall Environmental Analysis Laboratory, Inc.

Matrix: SOIL

CLIENT: Western Refining Southwest, Gallup

Project: Tank 35 Cleanup

Lab ID: 1201183-002

Client Sample ID: T-35-1

Collection Date: 1/5/2012 10:30:00 AM

Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL Qı	ial Units	DF	Date Analyzed
EPA METHOD 8270C TCLP			,		Analyst: JDC
Surr: Phenol-d5	37.1	23.4-73.6	%REC	1	1/19/2012 11:47:03 AM
EPA METHOD 8260B: VOLATILES	•	-			Analyst: NSB
Benzene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Toluene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Ethylbenzene	ND	0.049	mg/Kg	. 1	1/11/2012 6:18:35 AM
Methyl tert-butyl ether (MTBE)	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,2,4-Trimethylbenzene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,3,5-Trimethylbenzene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,2-Dichloroethane (EDC)	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,2-Dibromoethane (EDB)	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Naphthalene	ND	0.099	mg/Kg	1	1/11/2012 6:18:35 AM
1-Methylnaphthalene	ND	0.20	mg/Kg	1	1/11/2012 6:18:35 AM
2-Methylnaphthalene	ND	0.20	mg/Kg	1	1/11/2012 6:18:35 AM
Acetone	ND	0.74	mg/Kg	1	1/11/2012 6:18:35 AM
Bromobenzene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Bromodichloromethane	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Bromoform	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Bromomethane	ND	0.15	mg/Kg	1	1/11/2012 6:18:35 AM
2-Butanone	ND	0.49	mg/Kg	1	1/11/2012 6:18:35 AM
Carbon disulfide	ND	0.49	mg/Kg	1	1/11/2012 6:18:35 AM
Carbon tetrachloride	ND	0.099	mg/Kg	1	- 1/11/2012 6:18:35 AM
Chlorobenzene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Chloroethane	ND	0.099	mg/Kg	1	1/11/2012 6:18:35 AM
Chloroform	, ND	0.049	mg/Kg	. 1	· 1/11/2012 6:18:35 AM
Chloromethane	ND	0.15	mg/Kg	1	1/11/2012 6:18:35 AM
2-Chlorotoluene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
4-Chlorotoluene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
cis-1,2-DCE	ND	0.049	mg/Ķg	1	1/11/2012 6:18:35 AM
cis-1,3-Dichloropropene	. ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,2-Dibromo-3-chloropropane	ND	0.099	mg/Kg	1	1/11/2012 6:18:35 AM
Dibromochloromethane	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
Dibromomethane	ND	0.099	mg/Kg	1	1/11/2012 6:18:35 AM
1,2-Dichlorobenzene	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,3-Dichlorobenzene	ND	0.049	. mg/Kg	1	1/11/2012 6:18:35 AM
1,4-Dichlorobenzene	ND	0.049	mg/Kg	1	·1/11/2012 6:18:35 AM
Dichlorodifluoromethane	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,1-Dichloroethane	ND	0.099	mg/Kg	1	1/11/2012 6:18:35 AM
1,1-Dichloroethene	, ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,2-Dichloropropane	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
1,3-Dichloropropane	ND	0.049	mg/Kg	1	1/11/2012 6:18:35 AM
2,2-Dichloropropane	· ND	0.099	mg/Kg	1	1/11/2012 6:18:35 AM

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Matrix: SOIL

Date Reported: 1/24/2012

CLIENT: Western Refining Southwest, Gallup

Tank 35 Cleanup

Lab ID: 1201183-002

Project:

Client Sample ID: T-35-1

Collection Date: 1/5/2012 10:30:00 AM **Received Date:** 1/9/2012 12:50:00 PM

Analyses	Result	RL	Qual Units	DF.	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: NSB
1,1-Dichloropropene	ND	0.099	mg/K	ġ 1 .	1/11/2012 6:18:35 AM
Hexachlorobutadiene	ND	0.099	-	•	1/11/2012 6:18:35 AM
2-Hexanone	ND	0.49	mg/K	g 1	1/11/2012 6:18:35 AM
Isopropylbenzene	ND	0.049	, mg/K		1/11/2012 6:18:35 AM
4-Isopropyltoluene	ND	0.049	mg/K	-	1/11/2012 6:18:35 AM
4-Methyl-2-pentanone	ND	. 0.49	mg/K	g 1	1/11/2012 6:18:35 AM
Methylene chloride	ND	0.15	mg/K	g 1	1/11/2012 6:18:35 AM
n-Butylbenzene	ND	0.049	mg/K	g 1	1/11/2012 6:18:35 AM
n-Propylbenzene	. ND	0.049	mg/K	g 1	1/11/2012 6:18:35 AM
sec-Butylbenzene	NÐ	0.049	mg/K	g 1	1/11/2012 6:18:35 AM
Styrene	ND	0.049	mg/K	g 1	1/11/2012 6:18:35 AM
tert-Butylbenzene ·	ND	0.049	mg/K	g 1	1/11/2012 6:18:35 AM
1,1,1,2-Tetrachloroethane	ND	0.049	mg/K	g 1	1/11/2012 6:18:35 AM
1,1,2,2-Tetrachloroethane	ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
Tetrachloroethene (PCE)	ND	0.049	mg/Kg	g 1 .	1/11/2012 6:18:35 AM
trans-1,2-DCE	ND	0.049	mg/Kg	g 1 -	1/11/2012 6:18:35 AM
trans-1,3-Dichloropropene	ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
1,2,3-Trichlorobenzene	ND	0.099	mg/Kg	g 1 [°]	1/11/2012 6:18:35 AM
1,2,4-Trichlorobenzene	ND	0.049	mg/Kg	g · 1	1/11/2012 6:18:35 AM
1,1,1-Trichloroethane	ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
1,1,2-Trichloroethane	· ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
Trichloroethene (TCE)	ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
Trichlorofluoromethane	ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
1,2,3-Trichloropropane	ND	0.099	mg/Kg	J 1	1/11/2012 6:18:35 AM
Vinyl chloride	ND	0.049	mg/Kg	g 1	1/11/2012 6:18:35 AM
Xylenes, Total	ND	0.099	mg/Kg] 1	1/11/2012 6:18:35 AM
Surr: 1,2-Dichloroethane-d4	90.9	70-130	%REC	1	1/11/2012 6:18:35 AM
Surr: 4-Bromofluorobenzene	91.0	70-130	%REC	1	1/11/2012 6:18:35 AM
Surr: Dibromofluoromethane	, 111	63.1-128	%REC	1	1/11/2012 6:18:35 AM
Şurr: Toluene-d8	91.2	70-130	%REC	1	1/11/2012 6:18:35 AM
VOLATILES BY 8260B/1311			,		Analyst: NSB
Benzene	· ND	0.50	mg/L	1	1/17/2012 5:07:21 PM
2-Butanone	ND	10	mg/L-	1	1/17/2012 5:07:21 PM
Carbon Tetrachloride	. ND	0.50	mg/L	1	1/17/2012 5:07:21 PM
Chlorobenzene	· ND	100	mg/L	1 .	1/17/2012 5:07:21 PM
Chloroform	ND.	. 6.0	mg/L	. 1	1/17/2012 5:07:21 PM
1,4-Dichlorobenzene	ND	7.5	mg/L	1	1/17/2012 5:07:21 PM
1,2-Dichloroethane (EDC)	, ND	0.50	mg/L	1	1/17/2012 5:07:21 PM
1,1-Dichloroethene	ND	0.70	mg/L	1	1/17/2012 5:07:21 PM
Hexachlorobutadiene	· ND	0.50	mg/L	· 1	1/17/2012 5:07:21 PM
Tetrachloroethene (PCE)	ND .	0.70	mg/L	1	1/17/2012 5:07:21 PM

Qualifiers:

- /X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Analytical Report

Lab Order 1201183

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 1/24/2012

CLIENT: Western Refining Southwest, Gallup

Client Sample ID: T-35-1

Project: Tank 35 Cleanup Collection Date: 1/5/2012 10:30:00 AM Matrix: SOIL **Lab ID:** 1201183-002 Received Date: 1/9/2012 12:50:00 PM

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
VOLATILES BY 8260B/1311					Analyst: NSB
Trichloroethene (TCE)	ND	0.50	mg/L	1	1/17/2012 5:07:21 PM
Vinyl chloride	. ND	0.20	mg/L	1	1/17/2012 5:07:21 PM
Surr: 1,2-Dichloroethane-d4	90.3	69.9-130	%REC	1	1/17/2012 5:07:21 PM
Surr: 4-Bromofluorobenzene	96.2	71.2-123	%REC	1 .	1/17/2012 5:07:21 PM
Surr: Dibromofluoromethane	109	73.9-134	%REC	1	1/17/2012 5:07:21 PM
Surr: Toluene-d8	95.6	81.9-122	%REC	1	1/17/2012 5:07:21 PM

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- */X Value exceeds Maximum Contaminant Level.
- Value above quantitation range
- Analyte detected below quantitation limits
- RPD outside accepted recovery limits
- Spike Recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Reporting Detection Limit

Page 14 of 33

Anatek Labs, Inc.

1282 Alturas Drive • Moscow, ID 83843 • (208) 883-2839 • Fax (208) 882-9246 • email moscow@anateklabs.com 504 E Sprague Ste. D • Spokane WA 99202 • (509) 838-3999 • Fax (509) 838-4433 • email spokane@anateklabs.com

Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

120117018

Address:

4901 HAWKINS NE SUITE D

Project Name:

1201183

ALBUQUERQUE, NM 87109

Attn:

ANDY FREEMAN

Analytical Results Report

Sample Number

120117018-001

Sampling Date

1/5/2012

Date/Time Received

1/17/2012 10:36 AM

Client Sample ID

1201183-001C / T-35-5

Sampling Time

10:15 AM

Matrix

Sample Location

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	1/19/2012	CRW	SW846 CH7	
Ignitability	Negative			1/18/2012	JWC	EPA 1030	
рH	8.96	ph Units		1/18/2012	KFG	EPA 9045	•
Reactive sulfide	ND	mg/kg	15	1/19/2012	.JTT	SW846 CH7	
%moisture	8.6	Percent		1/19/2012	KFG	%moisture	

Sample Number

120117018-002

Soil

Sampling Date

1/5/2012 Date/Time Received

1/17/2012 10:36 AM

Client Sample ID Matrix

1201183-002C / T-35-1

Sampling Time Sample Location

10:30 AM

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND.	mġ/Kg	10	1/19/2012	CRW	SW846 CH7	
Ignitability	Negative	•		1/18/2012	JWC	EPA 1030	
pH	9.16	ph Units		1/18/2012	KFG	EPA 9045	
Reactive sulfide	ND	· mg/kg	15	1/19/2012	JTT	SW846 CH7	
%moisture	12.9	Percent		1/19/2012	KFG	%moisture	

Authorized Signature

John Coddington, Lab Manager

MCL

EPA's Maximum Contaminant Level

ND)

Not Detected

PQL

Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory. The results reported relate only to the samples indicated. Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

Friday, January 20, 2012

Page 1 of 1

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Project: Talk 33	Cleanup			·	· · · · · · · · · · · · · · · · · · ·				
Sample ID MB-189	SampType: MB	LK	Tes	tCode: EF	PA Method	8015B: Diese	el Range (Organics	
Client ID: PBS	Batch ID: 189	•	F	RunNo: 2	79 [°]		. •		
Prep Date: 1/9/2012	Analysis Date: 1/1	0/2012	٠	SeqNo: 87	701	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND 10								-
Motor Oil Range Organics (MRO)	ND 50							•	
Surr: DNOP	8.9	10.00		89.3	77.4	131 · ————			
Sample ID LCS-189	SampType: LCS	3	Tes	tCode: EF	A Method	8015B: Diese	l Range (Organics	
Client ID: LCSS	Batch ID: 189		F	RunNo: 27	79				
Prep Date: 1/9/2012	Analysis Date: 1/1	0/2012	·	SeqNo: 87	765	Units: mg/K	g		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	38 10	50.00	0	75.2	62.7	139			
Surr: DNOP	4.5	5.000		90.3	77.4	131		<u> </u>	
Sample ID 1201046-011AMS	SampType: MS		Tes	Code: EF	A Method	8015B: Diese	l Range C	Organics	
Client ID: BatchQC	Batch ID: 189		· R	lunNo: 27	'9				
Prep Date: 1/9/2012	Analysis Date: 1/1	1/2012	S	eqNo: 96	552	Units: mg/K	g .		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	110 9.7	48.31	69.41	90.7	57.2	146			
Sur; DNOP	7.9	4.831		164	77.4	131			. S -
Sample ID 1201046-011AMS	SampType: MSI)	Test	Code: EP	A Method	8015B: Diese	I Range C	Organics	
Client ID: BatchQC	Batch ID: 189	-	R	unNo: 27	'9	•			·
Prep Date: 1/9/2012	Analysis Date: 1/1	1/2012	S	eqNo: 98	87	Units: mg/K	9		
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	130 10	49.80	69.41	119	57.2	146	12.6	26.7	
Surr: DNOP	8.4	4.980	•	168	77.4	131	0	0	S

Ouz	lif	iers

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Page 15 of 33

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Project:	Tank 35	Cleanup				·	·	·	<i>:.</i>	·	
Sample ID	MB-187	SampT	ype: Mi	BLK	Tes	stCode: E	PA Method	8015B: Gas	oline Rang		
Client ID:	PBS	·Batch	ı ID: 18	7		RunNo: 3	10				
Prep Date:	1/9/2012	Analysis D	ate: 1	/10/2012	;	SeqNo: 9	559	Units: mg/l	K g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range	e Organics (GRO)	ND	5.0								
Surr: BFB		960		1,000	<u> </u>	96.4	69.7	121			<u> </u>
Sample ID	LCS-187	SampT	ype: LC	s	Tes	tCode: E	PA Method	8015B: Gaso	oline Rang	je	- · · · · · · · · · · · · · · · · · · ·
Client ID:	LCSS	Batch	1D: 18	7	F	RunNo: 3	10				
Prep Date:	1/9/2012	Analysis D	ate: 1/	10/2012	5	SeqNo: 9	562	Units: mg/l	⟨ g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sasoline Range	Organics (GRO)	31	5.0	25.00	. 0	125	86.4	132			
Sun: BFB		1,100		1,000		107	69.7	121	<u>.</u>	· .	·
Sample ID	1201167-005AMS	SampT	ype: MS	3	Tes	tCode: El	PA Method	8015B: Gaso	line Rang	je	
Client ID:	BatchQC	Batch	ID: 18	7	. F	RunNo: 3	10				
Prep Date:	1/9/2012	Analysis D	ate: 1/	10/2012	5	SeqNo: 9	563	Units: mg/k	ίg		•
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
asoline Range	Organics (GRO)	34	5.0	24.75	1.958	130	72.4	149			
Surr: BFB	1	1,100		990.1	,	106	69.7	121			
Sample ID	1201167-005AMSI	SampT	ype: MS	D .	Tes	tCode: El	PA Method	8015B: Gaso	line Rang	e .	
Client ID: I	BatchQC	Batch	ID: 18	7	F	RunNo: 3	10 ·				
Prep Date:	1/9/2012	Analysis Da	ate: 1/	10/2012	S	SeqNo: 9	564	Units: mg/K	(g		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
_	Organics (GRO)	30	4.9	24.44	1.958	114	72.4	149	13.3	19.2	
Surr: BFB		950		977.5		97.3	69.7	121	0	0	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Page 16 of 33

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-187	SampT	ype: ME	3LK	Tes	tCode: El	PA Method	8260B: VOLA	ATILES		
Client ID: PBS	Batch	ID: 187	7	R	RunNo: 30	04			•	
Prep Date: 1/9/2012	Analysis D	ate: 1/	10/2012	S	SeqNo: 9:	303	Units: mg/K	g	•	•
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.050					•			
Toluene	ND	0.050					•			
Ethylbenzene	ND	0.050						•	•	
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	· ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050	•	•	• .					
1,2-Dichloroethane (EDC)	ND ·	0.050		•						
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10	,						•	
1-Methylnaphthalene	ND	0.20	•							
2-Methylnaphthalene	ND	0.20						•	*	
Acetone	ND	0.75						•	•	
Bromobenzene	ND	0.050				3	*			
Bromodichloròmethane	ND	0.050								
Bromoform	ND	0.050		,						
Bromomethane	ND	0.15								
2-Butanone	ND	0.50	•							
Carbon disulfide	ND	0.50								-
Carbon tetrachloride	ND	0.10								
Chiorobenzene	ND	0.050								
Chloroethane	ND	0.10				-		•	•	
Chloroform	ND	0.050				•				
Chloromethane	ND	0.15								
2-Chiorotoluene	ND	0.050	•					-		
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050	•	•					÷	
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10	,							
Dibromochloromethane	ND :	0.050								
Dibromomethane	ND	0.10	-							
1,2-Dichlorobenzene	ND	0.050				_				
1,3-Dichlorobenzene	ND	0.050			•	•				
1,4-Dichlorobenzene	ND	0.050						•		•
Dichlorodifluoromethane	ND	0.050								•
1,1-Dichloroethane	ND	0.10		•					•	
1,1-Dichloroethene		0.050								
1,2-Dichloropropane	ND	0.050					•			
1,3-Dichloropropane		0.050								
2,2-Dichloropropane	ND	0.10							•	
1,1-Dichloropropene	ND.	0.10			٠	•				•
Hexachlorobutadiene	ND	0.10			,					

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-187	Samp	Туре: МВ	LK	Tes	tCode: EF	A Method	8260B: VOLA	ATILES	***************************************	
Client ID: PBS	Bato	h ID: 187	•	F	RunNo: 30)4				
Prep Date: 1/9/2012	Analysis	Date: `1 <i>I*</i>	10/2012	. 8	SeqNo: 93	303	Units: mg/K	g	•	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit.	HighLimit	%RPD	RPDLimit	Qual
2-Hexanone	ND	0.50								
isopropylbenzene	ND	0.050								•
4-Isopropyltoluene	ND	0.050			,					
4-Methyl-2-pentanone	ND	0.50					•			
Methylene chloride	ND	0.15					*	•		
'n-Butylbenzene	· ND	0.050							/ .	
n-Propylbenzene	ND	0.050		•			•			
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050						•	•	
tert-Butylbenzene -	ND	0.050							•	
1,1,1,2-Tetrachloroethane	ND	0.050		•	*		•			
1,1,2,2-Tetrachloroethane	·ND	0.050		• .	٠					
Tetrachloroethene (PCE)	ND	0.050					•			*
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050		•						
1,2,3-Trichlorobenzene	ND	0.10		, .			•			
1,2,4-Trichlorobenzene	ND	0.050							•	. :
1,1,1-Trichloroethane	ND	0.050								-
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050							•	
Trichlorofluoromethane	ND	0.050	~							
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10		_			·			
Surr: 1,2-Dichloroethane-d4	0.45	*	0.5000		89.8	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		95.0	70	. 130			
Surr: Dibromofluoromethane	0.54		0.5000		107	63.1	128		•	
Sur: Toluene-d8	0.47		0.5000		93.8	70	130			
Sample ID Ics-187	Samp	ype: LCS	3	Test	Code: EP	A Method	8260B: VOLA	TILES		
Client ID: LCSS	Batcl	n ID: 187		R	unNo: 30 4	4				
Prep Date: 1/9/2012	Analysis E	ate: 1/1	0/2012	s	eqNo: 93 (04	Units: mg/Kg	3		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	L <u>ow</u> Limit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.050	. 1.000	0	104	70.7	123			

Qualifiers:

Toluene

Chlorobenzene

1,1-Dichloroethene

Trichloroethene (TCE)

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

*/X Value exceeds Maximum Contaminant Level.

0.050

0.050

0.050

0.050

1.000

1.000

1.000

1.000

0.5000

0.5000

1.0

1.0

0.98

0.96

0.46

0.48

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

80

70

63.1

63.2

70

70

120

130

148

114

130

130

ND Not Detected at the Reporting Limit

101

101

98.4

95.9

91.2

95.2

0

0

Page 18 of 33

RL Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID Ics-187	SampT	ype: LC	S	Tes	ATILES	,				
Client ID: LCSS	Batch ID: 187			RunNo: 304						
Prep Date: 1/9/2012	Analysis D	ate: 1/	10/2012	. 8	SeqNo: 9304		Units: mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.56		0.5000		112	63.1	128			
Surr: Toluene-d8	0.47		0.5000	•	94.1	70	130		•	

Samp	Type: IVI	> .	resicode: EPA Wethod 8260B; VOLATILES							
Bato	h ID: 18	7	· F	RunNo: 3	04				,	
Analysis I	Date: 1/	/11/2012	S	SeqNo: 9	305	Units: mg/Kg				
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
1.1	0.049	0.9881	0	111	60	126				
1.0	0.049	0.9881	0	106	68.7	132				
1.0	0.049	0.9881	0	106	71.8	134				
1.0	0.049	0.9881	. 0	106	34.5	155				
1.0	0.049	0.9881	0	105	47.2	121			•	
0.45		0.4941	÷ .	90.8	70	130				
0.45		0.4941	•	90.9	70	130			•	
0.55		0.4941		112	63.1	128				
0.45		0.4941		91.2	70	130			· · · · .	
	Result 1.1 1.0 1.0 1.0 1.0 0.45 0.45 0.55	Batch ID: 18 Analysis Date: 1 Result PQL 1.1 0.049 1.0 0.049 1.0 0.049 1.0 0.049 0.45 0.45 0.55	Batch ID: 187 Analysis Date: 1/11/2012 Result PQL SPK value 1.1 0.049 0.9881 1.0 0.049 0.9881 1.0 0.049 0.9881 1.0 0.049 0.9881 1.0 0.049 0.9881 0.45 0.4941 0.45 0.4941 0.55 0.4941	Batch ID: 187 FA Analysis Date: 1/11/2012 S Result PQL SPK value SPK Ref Val 1.1 0.049 0.9881 0 1.0 0.049 0.9881 0 1.0 0.049 0.9881 0 1.0 0.049 0.9881 0 1.0 0.049 0.9881 0 0.045 0.9881 0 0.45 0.4941 0.45 0.4941 0.55 0.4941	Batch ID: 187 RunNo: 3 Analysis Date: 1/11/2012 SeqNo: 9 Result PQL SPK value SPK Ref Val %REC 1.1 0.049 0.9881 0 111 1.0 0.049 0.9881 0 106 1.0 0.049 0.9881 0 106 1.0 0.049 0.9881 0 105 0.45 0.4941 90.8 0.45 0.4941 90.9 0.55 0.4941 112	Batch ID: 187 RunNo: 304 Analysis Date: 1/11/2012 SeqNo: 9305 Result PQL SPK value SPK Ref Val %REC LowLimit 1.1 0.049 0.9881 0 111 60 1.0 0.049 0.9881 0 106 68.7 1.0 0.049 0.9881 0 106 71.8 1.0 0.049 0.9881 0 106 34.5 1.0 0.049 0.9881 0 105 47.2 0.45 0.4941 90.8 70 0.45 0.4941 90.9 70 0.55 0.4941 112 63.1	Batch ID: 187 RunNo: 304 Analysis Date: 1/11/2012 SeqNo: 9305 Units: mg/R Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 1.1 0.049 0.9881 0 111 60 126 1.0 0.049 0.9881 0 106 68.7 132 1.0 0.049 0.9881 0 106 71.8 134 1.0 0.049 0.9881 0 106 34.5 155 1.0 0.049 0.9881 0 105 47.2 121 0.45 0.4941 90.8 70 130 0.45 0.4941 90.9 70 130 0.55 0.4941 112 63.1 128	Batch ID: 187 RunNo: 304 Analysis Date: 1/11/2012 SeqNo: 9305 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD 1.1 0.049 0.9881 0 111 60 126 1.0 0.049 0.9881 0 106 68.7 132 1.0 0.049 0.9881 0 106 71.8 134 1.0 0.049 0.9881 0 106 34.5 155 1.0 0.049 0.9881 0 105 47.2 121 0.45 0.4941 90.8 70 130 0.45 0.4941 90.9 70 130 0.55 0.4941 112 63.1 128	Batch ID: 187 RunNo: 304 Analysis Date: 1/11/2012 SeqNo: 9305 Units: mg/Kg Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit 1.1 0.049 0.9881 0 111 60 126 1.0 0.049 0.9881 0 106 68.7 132 1.0 0.049 0.9881 0 106 71.8 134 1.0 0.049 0.9881 0 106 34.5 155 1.0 0.049 0.9881 0 105 47.2 121 0.45 0.4941 90.8 70 130 0.45 0.4941 90.9 70 130 0.55 0.4941 112 63.1 128	

Sample ID 1201167-006AM	ISD Samp	SampType: MSD TestCode: EPA Method 8260B: VOLATILES								
Client ID: BatchQC	Batc	h ID: 18	7	F	RunNo: 3	04 -				
Prep Date: 1/9/2012	Analysis [Analysis Date: 1/11/2012			SeqNo: 9	306	Units: mg/l	(g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.048	0.9551	0	. 106	60	126	7.97	15.7	
Toluene	0.94	0.048	0.9551	0	98.8	68.7	132	10.4	16.2	
Chlorobenzene	0.93	0.048	0.9551	0	97.5	71.8	134	11.6	14.9	•
1,1-Dichloroethene	0.99	0.048	0.9551	0	104	34.5	155	5.66	31.8	
Trichloroethene (TCE)	0.92	0.048	0.9551	0	96.6	47.2	121	11.6	16.5	
Surr: 1,2-Dichloroethane-d4	0.44		0.4776		93.1	70	130	. 0	0	
Surr: 4-Bromofluorobenzene	0.44		0.4776		91.7	. 70	130	0	. 0	
Surr: Dibromofluoromethane	0.55		0.4776		115	63.1	128	0	. 0	
Surr: Toluene-d8	0.43		0.4776		90.8	70	130	. 0	. 0	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 19 of 33

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-294	SampT	уре: МВ	LK	Tes	tCode: V	olatiles by	8260B/1311			
Client ID: PBS	Batch	ID: 294	ı	·F	RunNo: 4	32				
Prep Date: 1/16/2012	Analysis D	ate: 1/1	7/2012		SeqNo: 1	2533 ·	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.50		-					,	-
2-Butanone	ND	10								
Carbon Tetrachloride	ND	0.50	•	. •						
Chlorobenzene	ND	100		•				•		
Chloroform	ND	6.0		•		•				
1.4-Dichlorobenzene	ND	7.5				•				
1,2-Dichloroethane (EDC)	ND	- 0.50								-
1,1-Dichloroethene	ND	0.70								
Hexachlorobutadiene	ND .	0.50								•
Tetrachloroethene (PCE)	ND	0.70	•		,					
Trichloroethene (TCE)	ND	0.50					<i>:</i>	."		
Vinyl chloride	ND `	0.20		i de la companya di seriesa di se						•
Surr: 1,2-Dichloroethane-d4	0.18		0.2000		92.2	69.9	130			
Surr: 4-Bromofluorobenzene	0.19		0.2000		93.5	71.2	123			
Surr: Dibromofluoromethane	0.22		0.2000		109	73.9	134			
Surr: Toluene-d8	0.19		0.2000		96.2	81.9	122		-	
Sample ID ics-294	SampTy	/pe: LCS	3	Tes	Code: Vo	latiles by 8	3260B/1311			
Client ID: LCSS	Batch	ID: 294		R	unNo: 43	32				

Sample ID ICS-294	Samp	Type: LC	55	ies	tCode: V	platiles by	8260B/1311			•
Client ID: LCSS	Bato	h ID: 29	4	, F	RunNo: 4	32				
Prep Date: 1/16/2012	Analysis [Date: 1/	17/2012	S	SeqNo: 1	2534	Units: mg/L			•
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.40	0.10	0.4000	0	101	51.1	171			
Chlorobenzene	0.39	0.10	0.4000	、 0 ·	96.4	36.1	191			
1,1-Dichloroethene	0.39	`0.10	0.4000	0.	. 98.5	49.1	162		-	•
Trichloroethene (TCE)	0.36	0.10	0.4000	0	89.4	41.2	166		•	
Surr: 1,2-Dichloroethane-d4	0.18		0.2000		90.4	69.9	130	1 .		
Surr: 4-Bromofluorobenzene	0.20		0.2000		100	71.2	123			
Surr: Dibromofluoromethane	0.21	•	0.2000		107	73.9	134			
Surr: Toluene-d8	0.19		0.2000		94.9	81.9	122			

Sample ID 1201183-002BMS	Samp	Гуре: МS	· .	Tes	tCode: V	olatiles by	8260B/1311			
Client ID: T-35-1	Batcl	n ID: 29	4	F	RunNo: 4	32				
Prep Date:	Analysis D	Date: 1/	17/2012		SeqNo: 1	2537	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.42	0.10	0.4000	0 .	105	51.1	. 171	•		
Chlorobenzene	0.38	0.10	. 0.4000	0	94.2	. 36.1	191		` '	, ,
1,1-Dichloroethene	0.40	0.10	0.4000	0	99.3	49.1	162			•
Trichloroethene (TCE)	0.37	0.10	0.4000	0	91.6	41.2	. 166			
Surr: 1,2-Dichloroethane-d4	0.19		0.2000		96.9	69.9	130		,	•
Surr: 4-Bromofluorobenzene	0.20		0.2000		98.0	71.2	123			

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting LimitRL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

SampType: MSD

Project:

Sample ID 1201183-002BMSD

Tank 35 Cleanup

Sample ID 1201183-002BMS	SampTy	pe: MS	5	Tes	tCode: V	olatiles by	8260B/1311			
Client ID: T-35-1	Batch	ID: 29	4	· · · F	RunNo: 4	32				
Prep Date:	Analysis Da	te: 1/	17/2012	s	SeqNo: 1	2537	Units: mg/L	• •		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	0.22		0.2000		112	73.9	134			
Surr: Toluene-d8	0.19		0.2000		93.8	81.9	122			•

TestCode: Volatiles by 8260B/1311

Client ID: T-35-1	Batc	Batch ID: 294			RunNo: 4	32				·
Prep Date:	Analysis [Analysis Date: 1/17/2012			SeqNo: 1	2538	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	. 0.40	0.10	0.4000	0	99.9	51.1	171	4.74	0	
Chlorobenzene	0.37	0.10	· 0.4000	0	93.5	36.1	191	0.772	. 0.	
1,1-Dichloroethene	0.39	0.10	0.4000	0	97.3	49.1	162	2.12	0	
Trichloroethene (TCE)	0.34	0.10	0.4000	. 0	85.8	41.2	166	6.53	0	
Surr: 1,2-Dichloroethane-d4	0.18		0.2000		92.2	69.9	130	0	0	
Surr: 4-Bromofluorobenzene	0.19		0.2000		93.2	71.2	123	0.	0	
Surr: Dibromofluoromethane	0.22		0.2000		111	73.9	134	. 0	0	
Surr: Toluene-d8	0.19		0.2000		94.6	81.9	122	0	0	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-194	Samp	Type: MBLK	Tes	tCode: EPA Meth	nod 8270C: Semive	olatiles	
Client ID: PBS	Bato	h ID: 194	F	RunNo: 290	•		
Prep Date: 1/9/2012	Analysis [Date: 1/10/2012	S	SeqNo: 9117	Units: mg/Kg		
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLin	nit HighLimit	%RPD RPDLi	imit Qual
Acenaphthene	ND	0.20					
Acenaphthylene	, ND	0.20			•		
Aniline	ND	0.20				· ·	
Anthracene	ND	0.20		. •			
Azobenzene	, ND	0.20				-	•
Benz(a)anthracene	ND	0.20				,	
Benzo(a)pyrene	ND	0.20					
Benzo(b)fluoranthene	ND	0.20					
Benzo(g,h,i)perylene	ND	0.20		,		·	
Benzo(k)fluoranthene	ND	0.20	•				- 4
Benzoic acid	ND	0.50	•				
Benzyl alcohol	ND	0.20	1				
Bis(2-chloroethoxy)methane	. ND	0.20		•	~		
Bis(2-chloroethyl)ether	ND	0.20					
Bis(2-chloroisopropyl)ether	ND	0.20			•		
Bis(2-ethylhexyl)phthalate	, ND	0.50	,			•	
4-Bromophenyl phenyl ether	ND	0.20					
Butyl benzyl phthalate	ND	0.20				•	
Carbazole	ND	0.20					
4-Chloro-3-methylphenol	ND	0.50					
1-Chloroaniline	ND	0.50	•		•		
2-Chloronaphthalene	ND	0.25					
2-Chlorophenol	, ND	0.20	•				•
4-Chlorophenyl phenyl ether	ND	0.20					-
Chrysene	ND	0.20			•		
Di-n-butyl phthalate	ND	0.50			•		•
Di-n-octyl phthalate	· ND	0.25					
Dibenz(a,h)anthracene	- ND	0.20	•				
Dibenzofuran	ND	0.20		•		-	
1,2-Dichlorobenzene	ND	0.20					
1,3-Dichlorobenzene	ND	0.20					
4-Dichlorobenzene	ND	0.20					
3.3'-Dichlorobenzidine	ND	0.25					
Diethyl phthalate	ND	0.20		•			•
Dimethyl phthalate	ND	0.20			•		
2,4-Dichlorophenol	ND	0.40					
2,4-Dimethylphenol	ND	0.30	•				
,6-Dinitro-2-methylphenol	ND	0.50	_				
2,4-Dinitrophenol	ND	0.40					-
,4-Dinitrotoluene	ND	0.50					
,6-Dinitrotoluene	ND	0.50					

Qualifiers:

- */X Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: 1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-194	SampType:	MBLK	Tes	stCode: EP	A Method	8270C: Semi	volatiles		
Client ID: PBS	Batch ID:			RunNo: 290					
Prep Date: 1/9/2012	Analysis Date:	1/10/2012		SeqNo: 91		Units: mg/K	ď		•
Analyte	•		SPK Ref Val	,			%RPD	DDDL:it	Ound
Fluoranthene	Result PQI		SPK Rei Vai	%KEC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluorene	ND 0.2								
Hexachlorobenzene	ND 0.2				:				
Hexachlorobutadiene	ND 0.2								
Hexachlorocyclopentadiene	ND 0.2								
Hexachloroethane	ND 0.2		•					*	
Indeno(1,2,3-cd)pyrene	ND 0.2								
Isophorone	ND 0.5	0	•						
1-Methylnaphthalene	ND 0.2	0			•	÷			
2-Methylnaphthalene	ND 0.2								• •
2-Methylphenol	ND 0.5	0		•					
3+4-Methylphenol	ND 0.2	0	•						
N-Nitrosodi-n-propylamine	ND 0.2	0		*				•	
N-Nitrosodiphenylamine	ND 0.2	0							
Naphthalene	ÑD 0.2	0 .				•			
2-Nitroaniline	ND 0.2	0	•						
3-Nitroaniline	ND 0.2	0							
4-Nitroaniline	ND 0.4	0							
Nitrobenzene	ND 0.5	0							
2-Nitrophenol	ND 0.2	0							, .
4-Nitrophenol	ND 0.2	5				•			*
Pentachlorophenol	ND 0.4	0			•				
Phenanthrene	ND 0.2	0	•						
Phenol	ND 0.2	o .							٠.
Pyrene	ND 0.2	0							
Pyridine	ND 0.5	ס			·				
1,2,4-Trichlorobenzene	ND 0.20								
2,4,5-Trichlorophenol	ND 0.20			•		•			
2,4,6-Trichlorophenol	ND 0.20								
Surr: 2,4,6-Tribromophenol	2.3	3.330		69.0	24.9	115			
Surr: 2-Fluorobiphenyl	. 1:0	1.670		62.4	26.2	108			,
Surr: 2-Fluorophenol	2.1	3.330		62.6	17.7	, 98	-		
Surr: 4-Terphenyl-d14	1.2	1.670		74.6	33.8	108			
Sum: Nitrobenzene-d5	1.2	1.670		71.9	23	109	. :		
Surr: Phenol-d5	2.2	3.330		64.7	22.1	103			
Sample ID Ics-194	SampType: L	cs	Test	Code: EPA	Method 8	3270C: Semiv	olatiles		
Client ID: LCSS	Batch ID: 1	94	R	unNo: 290			•	,	
Prep Date: 1/9/2012	Analysis Date:	I/10/2012	S	eqNo: 911 8	В	Units: mg/Kg	J.		

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

Result

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

LowLimit

HighLimit

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

SPK value SPK Ref Val %REC

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RPDLimit

Qual

%RPD

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID Ics-194	SampT	ype: LC	S	Tes	tCode: E	PA Method	8270C: Sem	ivolatiles		
Client ID: LCSS	Batch	1D: 19	4	F	RunNo: 2	90				•
Prep Date: 1/9/2012	Analysis D	ate: 1/	10/2012		SeqNo: 9	118	Units: mg/l	K g		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Acenaphthene	1.0	0.20	1.670	0	60.4	49.7	. 98.1			
4-Chloro-3-methylphenol	2.0	0.50	. 3.330	0	59.4	43.8	89.1	2		٠.
2-Chlorophenol	`2.1	0.20	3.330	0	63.5	41.1	96.9			
1,4-Dichlorobenzene	1.1	0.20	1.670	0	63.5	41	97.4			
2,4-Dinitrotoluene	1.0	0.50	1.670	. 0	60.0	44.4	104			
N-Nitrosodi-n-propylamine	0.92	0.20	1.670	. 0	55.4	·39.1	86.9			
4-Nitrophenol .	. 1.7	0.25	3.330	0.	51.0	44.2	107			
Pentachlorophenol	1.6	0.40	3.330	0	46.8	36.2	80	,		
Phenol	2.2	0.20	3.330	. 0	65.3	42.7	92.7			
Pyrene	0.93	0.20	1.670	0	55.8	34.7	98.8		•	
1,2,4-Trichlorobenzene	0.95	0.20	1.670	. 0	56.8	37.8	98.3			*
Surr: 2,4,6-Tribromophenol	2.6		3.330		78.1	24.9	115			
Surr: 2-Fluorobiphenyl	1.1		1.670		67.0	26.2	108			
Surr: 2-Fluorophenol	2.1		3.330		64.2	17.7	98			
Surr: 4-Terphenyl-d14	1.3		1.670		80.7	33.8	. 108			
Surr: Nitrobenzene-d5	1.2		1.670		72.1	23	109			
Surr: Phenol-d5	2.3		3.330		70.5	. 22.1	103			

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: `

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID mb-321	Samp	Type: Mi	BLK	TestCode: EPA Meti		PA Method	8270C TCLP			
Client ID: PBS	Batc	h ID: 32	:1 ,		RunNo: 4	163				
Prep Date: 1/18/2012	Analysis [Date: 1 .	/19/2012		SeqNo: 1	13368	Units: mg/L			
Analyte	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	ND.	0.13			-	· · · · · · · ·				
Hexachlorobenzene	ND	0.13		•						
Hexachlorobutadiene	ND	0.50						•		
Hexachloroethane	ND	3.0				,				
Nitrobenzene	ND	2.0					•			
Pentachlorophenol	, ND	100							•	
Pyridine	, ND	5.0				-		. ^		÷
2,4,5-Trichlorophenol	, ND	400								
2,4,6-Trichlorophenol	ND	2.0			•				•	٧
Cresots, Total	. ND	200					i			•
2-Methylphenol	. ND	200					•			
3+4-Methylphenol	ND	200								•
Phenol	'ND	200				•				
Surr: 2,4,6-Tribromophenol	0.17		0.2000	٠	85.4	18.2	136			•
Surr: 2-Fluorobiphenyl	0.11		0.1000		106	40.5	108			
Surr: 2-Fluorophenol	0.14		0.2000		72.2	23	101			
Surr: 4-Terphenyl-d14	0.092		0.1000		91.6	40.9	112			
Surr: Nitrobenzene-d5	0.11		0.1000		109	41	115			
Surr: Phenol-d5	0.11		0.2000		57.4	23.4	73.6			
Sample ID Ics-321	SampT	ype: LC	s	Tes	tCode: El	PA Method	8270C TCLP			
Client ID: LCSS	Batch	1D: 32	1 _	F	RunNo: 4	63		•		1
Prep Date: 1/18/2012	Analysis D	ate: 1/	19/2012	9	SeqNo: 1	3369	Units: mg/L			
Analyte.	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	0.083	0.010	0.1000	0 .	83.4	18.2	. 108			
Hexachlorobenzene	0.064	0.010	. 0.1000	0	63.6	34.2	74.5			•
Hexachiorobutadiene	0.069	0.010	0.1000	0	68.9	31.3	88.5			. ,
Hexachloroethane	0.068	0.010	0.1000	0	68.4	31.6	94.6			
Nitrobenzene	0.085	0.010	0.1000	0	85.3	39.7	107			
Pentachlorophenol '	0.040	0.010	0.1000	0	39.6	15.9	86.7			
Pyridine	0.051	0.010	0.1000	0 .	51.4	14.7	73.6		•	
2,4,5-Trichlorophenol	0.066	0.010	0.1000	0	65.6	18.9	102			•
2,4,6-Trichlorophenol	0.054	0.010	0.1000	0	53.5	12.3	103			
Cresols, Total	0.23	0.010	0.3000	0	77.5	25.9	99.2			
2-Methylphenol	0.074	0.010	0.1000	0	73.7	22	81.7			,
3+4-Methylphenol	0.16	0.010	0.2000	0	- 79.5	2.89	157			
Surr: 2,4,6-Tribromophenol	0.15		0.2000		74.2	18.2	136		,	
Surr: 2-Fluorobiphenyl	0.087		0.1000		87.0		108			*
Surr: 2-Fluorophenol	0.11		0.2000		54.3	23	- 101			,
		-								

Qualifiers:

Surr: 4-Terphenyl-d14

*/X Value exceeds Maximum Contaminant Level.

0.076

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

40.9

112

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

76.1

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RL Reporting Detection Limit

0.1000

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID Ics-321	SampType: L	cs	Tes	tCode: El	PA Method	8270C TCLP		,	
Client ID: LCSS	Batch ID: 3	21 .	R	RunNo: 4	63				
Prep Date: 1/18/2012	Analysis Date: 1	/19/2012	· S	SeqNo: 1	3369	Units: mg/L		•	
Analyte	Result PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.085	0.1000		85.0	41	115			
Surr: Phenol-d5	0.095	0.2000		47.7	23.4	73.6			

Sample ID 1201183-001Bms	Samp	Гуре: МЅ	3	Tes	tCode: E	PA Method	8270C TCLP			,
Client ID: T-35-5	Batcl	h ID: 32 '	1	F	RunNo: 4	63 .				
Prep Date: 1/18/2012	Analysis D	Date: 1/	19/2012	S	SeqNo: 1	3370	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	0.080	0.010	0.1000	0	. 79.6	9.57	- 115			
Hexachlorobenzene	0.064	0.010	0.1000	0	63.8	15.9	96.9			
Hexachlorobutadiene	0.064	0.010	0.1000	0	64.5	21.1	97.9			
Hexachloroethane	0.063	0.010	0.1000	. 0	63.2	18.1	105			•
Nitrobenzene	0.085	0.010	0.1000	0	84.7	23.3	123		•	• •
Pentachlorophenol	0.048	0.010	0.1000	0	48.2	10	150			
Pyridine	0.052	0.010	0.1000	0	52.1	9.15	86.2	*		
2,4,5-Trichlorophenol	0.071	0.010	0.1000	0	70.6	8.46	119		t .	
2,4,6-Trichlorophenol	0.065	0.010	0.1000	0	. 65.3	4.44	115	•		
Cresols, Total	0.21	0.010	0.3000	0	70.0	8.35	114			
2-Methylphenol	0.065	0.010	0.1000	^ 0	65.0	17.5	78.8	•	•	
3+4-Methylphenol	0.15	0.010	0.2000	0	72.6	17.5	78.8			
Surr: 2,4,6-Tribromophenol	0.17		0.2000		85.4	18.2	136	•		
Surr: 2-Fluorobiphenyl	0.090		0.1000		89.5	40.5	108			
Surr: 2-Fluorophenol	0.12		0.2000		59.7	23	101	•		
Surr: 4-Terphenyl-d14	0.081		0.1000		80.7	40.9	112			
Surr: Nitrobenzene-d5	0.084		0.1000	4	84.4	. 41	115		•	•
Surr: Phenol-d5	0.093		0.2000		46.6	23.4	73.6			

Sample ID 1201183-001Bms	d SampT	ype: MS	SD	Tes	tCode: E	PA Method	8270C TCLP	•		
Client ID: T-35-5	Batch	1D: 32	1	·F	RunNo: 4	63				
Prep Date: 1/18/2012	Analysis D	ate: 1/	19/2012	5	SeqNo: 1	3371	Units: mg/L			•
Analyte	Result	PQL	SPK value	SPK Ref Val	.%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2,4-Dinitrotoluene	0.081	0.010	0.1000	0	81.2	9.57	115	1.99	20	
Hexachlorobenzene	0.062	0.010,	0.1000	0	62.1	15.9	96.9	2.60	20	
Hexachlorobutadiene	0.061	0.010	0.1000	0	61.1	21.1	97.9	5.35	20	
Hexachloroethane	0.065	0.010	0.1000	0	64.9	18.1	105	2.72	20	
Nitrobenzene	0.082	0.010	0.1000	0	82.3	23.3	123	2.92	20	
Pentachlorophenol	0.050	0.010	0.1000	0	50.4	10	150	4.38	. 20	-
Pyridine	0.053	0.010	0.1000	. , 0	52.7	9.15	86.2	1.11	20	
2,4,5-Trichlorophenol	0.072	0.010	0.1000	0	72.3	8.46	119	2.41	20	
2,4,6-Trichlorophenol	0.064	0.010	0.1000	0	63.7	4.44	115	2.48	20	
Cresols, Total	0.21	0.010	. 0.3000	: 0	68.5	8.35	114	2.16	. 20	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Page 26 of 33

Reporting Detection Limit

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID 1201183-001Bm	sd Samp1	SampType: MSD TestCode: EPA Method 8				8270C TCLP				
Client ID: T-35-5	Batcl	h ID: 32	1 .	F	RunNo: 4	63				
Prep Date: 1/18/2012	Analysis D)ate: 1/	19/2012		SeqNo: 1	337 1	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.064	0.010	0.1000	. 0	63.5	17.5	78.8	0	20	
3+4-Methylphenol	0.14	0.010	0.2000	. 0	71.0	17.5	78.8	0	. 20	
Surr: 2,4,6-Tribromophenol	0.16		0.2000		79.7	18.2	136	0	` 0	
Surr: 2-Fluorobiphenyl	0.086		0.1000		85.6	40.5	108	0	0	
Surr: 2-Fluorophenol	0.12		0.2000	•	59:6	· 23	101	0	0	
Surr: 4-Terphenyl-d14	0.078		0.1000		78.3	40.9	112	0	ò	•
Surr: Nitrobenzene-d5	0.085		0.1000		84.5	41	115	` 0	. 0	•
Surr: Phenol-d5	0.094		0.2000		47.0	23.4	73.6	. 0	0	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 27 of 33

Hall Environmental Analysis Laboratory, Inc.

0.17

0.033

0.1656

0.01396

96.8

125

6.71

20

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID MB-220 SampType: MBLK TestCode: EPA Method 7471: Mercury Client ID: **PBS** Batch ID: 220 RunNo: 318 Prep Date: Units: mg/kg 1/11/2012 Analysis Date: 1/11/2012 SeqNo: 9633 Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Mercury ND 0.033 Sample ID LCS-220 SampType: LCS TestCode: EPA Method 7471: Mercury Client ID: LCSS Batch ID: 220 RunNo: 318 Prep Date: 1/11/2012 Analysis Date: 1/11/2012 SegNo: 9634 Units: mg/kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Mercury 0.17 0.033 0.1667 104 120 Sample ID 1201183-001AMS SampType: MS TestCode: EPA Method 7471: Mercury Client ID: T-35-5 Batch ID: 220 RunNo: 318 Prep Date: 1/11/2012 Analysis Date: 1/11/2012 SeqNo: 9636 Units: mg/kg %RPD **RPDLimit** Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit Qual 0.01396 Mercury 0.19 0.033 0.1658 104 125 Sample ID 1201183-001AMSD SampType: MSD TestCode: EPA Method 7471: Mercury Client ID: T-35-5 Batch ID: 220 RunNo: 318 Prep Date: 1/11/2012 Analysis Date: 1/11/2012 SeqNo: 9637 Units: mg/kg Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Ouali	fiers	

Mercury

Value exceeds Maximum Contaminant Level.

Value above quantitation range

Analyte detected below quantitation limits

R RPD outside accepted recovery limits В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded H

Not Detected at the Reporting Limit

Reporting Detection Limit

Page 28 of 33

Hall Environmental Analysis Laboratory, Inc.

ND

0.020

0.005000

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

1 alik 33	Cicanup		·							
MB-331	SampTy	pe: MI	3LK	Tes	tCode: M	ERCURY, T	CLP			
PBW	Batch	ID: 33	1	F	RunNo: 4	43 .				
1/18/2012	Analysis Da	ite: 1 /	18/2012	5	SeqNo: 1 :	2847	Units: mg/L			•
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimiţ	%RPD	RPDLimit	Qual
	ND	0.020			·					
LCS-331	SampTy	pe: LC	 :S	Tes	tCode: M	ERCURY, 1	CLP			
LCSW	Batch	ID: 33	1	·	RunNo: 44	43				
1/18/2012	Analysis Da	ite: 1/	18/2012	5	SeqNo: 12	2848	Units: mg/L			·
•	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	ND	0.020	0.005000	. 0	101	80	120			
1201183-002AMS	SampTy	pe: MS	 3	Tes	tCode: MI	ERCURY, T	CLP			
T-35-1	Batch I	(D: 33	1	· F	≀unNo: 4 4	1 3		*		
1/18/2012	Analysis Da	te: 1/	18/2012	į	SeqNo: 12	2851	Units: mg/L			
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	ND	0.020	0.005000		.000	75	125			
	140	0.020	0.003000	0	00.0	75	125			
1201183-002AMSE						ERCURY, T				
1201183-002AMSE T-35-1		pe: MS	SD	Tes		ERCURY, T				<u> </u>
	SampTy	pe: MS	SD 1	Tes	tCode: ME	ERCURY, T				
	MB-331 PBW 1/18/2012 LCS-331 LCSW 1/18/2012 1201183-002AMS T-35-1	MB-331 SampTy PBW Batch 1/18/2012 Analysis Da Result ND LCS-331 SampTy LCSW Batch 1/18/2012 Analysis Da Result ND 1201183-002AMS SampTy T-35-1 Batch I 1/18/2012 Analysis Da Result	PBW Batch ID: 33 1/18/2012 Analysis Date: 1/Result PQL ND 0.020 LCS-331 SampType: LC LCSW Batch ID: 33 1/18/2012 Analysis Date: 1/Result PQL ND 0.020 1/201183-002AMS SampType: MS T-35-1 Batch ID: 33 1/18/2012 Analysis Date: 1/Result PQL Result Result PQL Result PQL	MB-331 SampType: MBLK PBW Batch ID: 331 1/18/2012 Analysis Date: 1/18/2012 Result PQL SPK value ND 0.020 LCS-331 SampType: LCS LCSW Batch ID: 331 1/18/2012 Analysis Date: 1/18/2012 Result PQL SPK value ND 0.020 0.005000 1201183-002AMS SampType: MS T-35-1 Batch ID: 331 1/18/2012 Analysis Date: 1/18/2012 Result PQL SPK value PQL SPK value	MB-331 SampType: MBLK Test PBW Batch ID: 331 F 1/18/2012 Analysis Date: 1/18/2012 S Result PQL SPK value SPK Ref Val ND 0.020 SPK value SPK Ref Val LCSW Batch ID: 331 F 1/18/2012 Analysis Date: 1/18/2012 SPK Ref Val ND 0.020 0.005000 0 1201183-002AMS SampType: MS Test T-35-1 Batch ID: 331 F 1/18/2012 Analysis Date: 1/18/2012 S Result PQL SPK value SPK Ref Val	MB-331 SampType: MBLK TestCode: M PBW Batch ID: 331 RunNo: 4 1/18/2012 Analysis Date: 1/18/2012 SeqNo: 1; Result PQL SPK value SPK Ref Val %REC ND 0.020 TestCode: MI LCS-331 SampType: LCS TestCode: MI LCSW Batch ID: 331 RunNo: 44 1/18/2012 Analysis Date: 1/18/2012 SPK Ref Val %REC ND 0.020 0.005000 0 101 1201183-002AMS SampType: MS TestCode: MI T-35-1 Batch ID: 331 RunNo: 44 1/18/2012 Analysis Date: 1/18/2012 SeqNo: 12 Result PQL SPK value SPK Ref Val %REC	MB-331 SampType: MBLK TestCode: MERCURY, TestCode:	MB-331 SampType: MBLK TestCode: MERCURY, TCLP PBW Batch ID: 331 RunNo: 443 1/18/2012 SeqNo: 12847 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit LCSW Batch ID: 331 Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 1/18/2012 SPK Ref Val %REC LowLimit HighLimit 1/18/2012 SPK Ref Val %REC LowLimit HighLimit 1/18/2012 SeqNo: 12851 Units: mg/L 1/18/2012 SeqNo: 12851 Units: mg/L 1/18/2012 SeqNo: 12851 Units: mg/L	MB-331 SampType: MBLK TestCode: MERCURY, TCLP PBW Batch ID: 331	MB-331 SampType: MBLK TestCode: MERCURY, TCLP PBW Batch ID: 331 RunNo: 443 1/18/2012 SeqNo: 12847 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit LCS-331 SampType: LCS TestCode: MERCURY, TCLP LCSW Batch ID: 331 RunNo: 443 Units: mg/L 1/18/2012 SeqNo: 12848 Units: mg/L ***********************************

Qualifiers:

Мегсигу

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

88.9

75

125

0

20

RL Reporting Detection Limit

Page 29 of 33

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID	MB-206	SampT	ype: Mi	BLK ·	Tes	tCode: E	PA Method	6010B: Soil	Metals	•	
Client ID:	PBS	Batch	n ID: 20	6	; F	RunNo: 3	08				
Prep Date:	1/10/2012	Analysis D	ate: 1/	11/2012	5	SeqNo: 9	471	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	2.5								
Barium		ND	0.10	, .			•				
Cadmium		ND	0.10		•						
Chromium		ND	0.30								
Lead		ND	0.25						•		
Selenium		· ND	2.5		•					-	
Silver		ND	0.25		•						

Sample ID LCS-206	SampT	ype: LC	S .	Tes	tCode: El	PA Method	6010B: Soil i	Metals		
Client ID: LCSS	Batch	ID: 20	6	. F	RunNo: 3	08	٠			
Prep Date: 1/10/2012	Analysis D	ate: 1/	11/2012	5	SeqNo: 9	472	Units: mg/L			•
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	24	2.5	25.00	0	96.7	80	120			
Barium	23	0.10	25.00	0.03950	90.2	80	120			
Cadmium	23	0.10	25.00	0	91.3	80	120			
Chromium	23	0.30	25.00	0.05350	92.0	. 80	120			
Lead	23	0.25	25.00	0 -	90.9	80	· 120			•
Selenium	. 22	2.5	25.00	0.5060	87.1	80	120			_
Silver	4.5	0.25	5.000	0	89.7	80,	120			

Sample ID 1201171-001AMS	SampT	ype: M	S	Tes	tCode: E	PA Method	6010B: Soil	Metals		
Client ID: BatchQC	Batch	n ID: 20	6	F	RunNo: 3	808				
Prep Date: 1/10/2012	Analysis D)ate: 1/	/11/2012	5	SeqNo: 9	500	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	26	2.5	24.35	0	106	.75	125		-	
Barium	24	0.10	24.35	0.5107	98.4	75	125			
Cadmium	. 24	0.10	24.35	0 -	98.8	. 75	125			•
Chromium	26	0.30	24.35	3.458	91.2	75	125		•	
ead	26	0.25	24.35	3.571	92.3	75	125			
Selenium	24	2.5	24.35	0	98.3	· 75	125	:		

1201171-001AMSE) SampT	ype: MS	SD	Tes	tCode: E	PA Method	6010B: Soil N	Vietals		
BatchQC	Batch	ı ID: _, 20	6	· F	RunNo: 3	08				
1/10/2012	Analysis D	ate: 1/	11/2012	. 5	SeqNo: 9	501	Units: mg/L			
	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	26	2.5	24.56	0	107	. 75	125	1.80	20	
	25	0.10	24.56	0.5107	97.7	75	125	0.178	20	
	24	0.10	24.56	. 0	99.7	75	125	1.86	20	
	30	0.30	24.56	3.458	106	75	125	14.0	20	•
	BatchQC	BatchQC Batch 1/10/2012 Analysis D Result 26 25 24	BatchQC Batch ID: 20 1/10/2012 Analysis Date: 1/ Result PQL 26 2.5 25 0.10 24 0.10	BatchQC Batch ID: 206 1/10/2012 Analysis Date: 1/11/2012 Result PQL SPK value 26 2.5 24.56 25 0.10 24.56 24 0.10 24.56	BatchQC Batch ID: 206 F 1/10/2012 Analysis Date: 1/11/2012 S Result PQL SPK value SPK Ref Val 26 2.5 24.56 0 25 0.10 24.56 0.5107 24 0.10 24.56 0	BatchQC Batch ID: 206 RunNo: 3 1/10/2012 Analysis Date: 1/11/2012 SeqNo: 9 Result PQL SPK value SPK Ref Val %REC 26 2.5 24.56 0 107 25 0.10 24.56 0.5107 97.7 24 0.10 24.56 0 99.7	BatchQC Batch ID: 206 RunNo: 308 1/10/2012 Analysis Date: 1/11/2012 SeqNo: 9501 Result PQL SPK value SPK Ref Val %REC LowLimit 26 2.5 24.56 0.5107 97.7 75 25 0.10 24.56 0.5107 97.7 75 24 0.10 24.56 0 99.7 75	BatchQC Batch ID: 206 RunNo: 308 1/10/2012 SeqNo: 9501 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit 26 2.5 24.56 0.5107 97.7 75 125 25 0.10 24.56 0.5107 97.7 75 125 24 0.10 24.56 0 99.7 75 125	BatchQC BatchQC Batch ID: 206	BatchQC Batch ID: 206

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting LimitRL Reporting Detection Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID	1201171-001AMSD	SampTy	/pe: M \$	SD	Test	Code: El	PA Method	6010B: Soil	Metals		
Client ID:	BatchQC	Batch	ID: 20	6 '	R	unNo: 3	08				
Prep Date:	1/10/2012	Analysis Da	ate: 1/	11/2012	· S	eqNo: 9	501	Units: mg/L	• .		
Analyte	·	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit .	HighLimit	%RPD	RPDLimit	Qual
Lead		25	0.25	24.56	3.571	89.0	75	125	2.38	20	
Selenium	•	25	2.5	24.56	0.	100	75	125	2.68	20	

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

· H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 31 of 33

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

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	116	חי	ıT	•

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID	LCS-322	SampT	ype: LC	S	Tes	tCode: E	PA Method	6010B: TCL	P Metals		
Client ID:	LCSW	Batch	1D: 32	2	· F	RunNo: 4	47				
Prep Date:	1/18/2012	Analysis D	ate: 1	19/2012		SeqNo: 1	2908	Units: mg/L	•		
Analyte _		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	5.0	0.5000	0	103	80	120			
Barium		ND ⁻	100	0.5000	0 .	91.0	80	120		•	
Cadmium	•	, ND	1.0	0.5000	. 0	97.5	80	120		. •	
Chromium		ND	5.0	0.5000	0	93.4	. 80	120		1	•
Lead		ND	5.0	0.5000	0	89.6	80	120			
Selenium		ŅD	1.0	0.5000	. 0	99.8	80	120			
Silver	· · · · · · · · · · · · · · · · · · ·	ND	5.0	0.1000	. 0	100	80	120	<u>-</u>		
Sample ID	1201183-001AMS	SampT	уре: М	3	Tes	tCode: El	PA Method	6010B: TCL	P Metals		
Client ID:	T-35-5	Batch	ID: 32	2	F	RùnNo: 4	47				
Prep Date:	1/18/2012	Analysis D	ate: 1/	19/2012	S	SeqNo: 1	2910	Units: mg/L	-		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	5.0	0.5000	0.007170	104	75	125			
Cadmium		ND	1.0	0.5000	. 0	99.3	· 75	125	٠.		
Chromium		ND	5.0	0.5000	0.001020	90.9	75	125	•		
Lead	•	ND	. 5.0	0.5000	0	86.4	75	. 125			
Selenium		ND	1.0	0.5000	. 0	97.1	75	125			
Silver		ND	5.0	0.1000	0	101	.75	. 125			
Sample ID	1201183-001AMSI	D SampT	ype: MS	D .	Test	Code: EF	A Method	6010B: TCLF	Metals		
Client ID:	T-35-5	Batch	ID: 32	2	R	unNo: 44	17				
Prep Date:	1/18/2012	Analysis D	ate: 1/	19/2012	S	eqNo: 12	2911	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic		ND	5.0	0.5000	0.007170	101	75	125	0	20	•
Cadmium		, ND	1.0	0.5000	. 0	95.4	75	125	0	20	•
Chromium		ND	5.0	0.5000	0.001020	88.1	. 75	125	0	20	
Lead		ND	5.0	0.5000	0	83.6	75	125	0	20	
Selenium		ND	1.0	0.5000	0	93.4	75	125	0	. 20	
Silver		ND	5.0	0.1000	0.	97.5	75	125	0	20	
Sample ID	MB-322	SampTy	pe: MB	LK	Test	Code: EP	A Method	010B: TCLF	Metals		
Client ID:	PBW	Batch	ID:: 322	· ·	R	unNo: 44	7				
Prep Date:	1/18/2012	Analysis Da	ate: 1/1	19/2012	. s	eqNo: 12	922	Units: ma/L			

Qualifiers:

Analyte

Arsenic Barium

Cadmium

Chromium

Lead

*/X Value exceeds Maximum Contaminant Level.

PQL

5.0

100

1.0

5.0

5.0

Result

ND

ND

ND

ND

ND

SPK value SPK Ref Val

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H , Holding times for preparation or analysis exceeded

LowLimit

HighLimit

ND Not Detected at the Reporting Limit

%REC

RL Reporting Detection Limit

Page 32 of 33

RPDLimit

Qual

%RPD

Hall Environmental Analysis Laboratory, Inc.

WO#:

1201183

24-Jan-12

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Cleanup

Sample ID MB-322	SampT	ype: M £	3LK	Tes	tCode: E	PA Method	6010B: TCL	P Metals		
Client ID: PBW	Batch	ID: 32	2	. F	RunNo: 4	47				
Prep Date: 1/18/2012	Analysis D	ate: 1/	19/2012	·	SeqNo: 1	2922	Units: mg/L	•		• .
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	1.0	٠.							
Silver	ND	5.0		•			•			•

Qualifiers:

*/X Value exceeds Maximum Contaminant Level.

E Value above quantitation range

J Analyte detected below quantitation limits

RPD outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

RL Reporting Detection Limit

Page 33 of 33

	ANALYSIS I ABORATORY	www hallenvironmental com	4901 Hawkins NE - Albuquerque, NM 87109		Analysis	sel)	sas or	5), I se50	191 (1.8 (1.4) (1.4) (1.808 (1.6) (1	40V 40V 40V 40V 40V 40V 40V 40V	thod ethod ethod odfe Met Met Stloid AOV	BTEX + BTEX + BTEX + BTEX +	XXXX	XXXXX						Remarks: 116/12 BL Requested TCLP Rent 8.	72LP 8240,72LP 3270 & KCI on a Kest	edited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	☐ Standard Kush	(LANK SUCLEBNOD	Project #: N/	Į.	Project Manager:	RECK I AFSEN		Sampler: H. Dorsey 5.150	Sample Temperature Management		Container Preservative HEAL No. Type Type Type Type Type Type	3-802 N/A -1	3-802 NA -2						Received by Date Fine	Dat	ntracted to other accredited laboratories. This serves as notice of thi
0	Ment VVESTEIN REFINING		<u>[</u>	VM 87301	hone # 505 722 3833	505 722 0210	JA/QC Package:	Standard Level 4 (Full Validation)	□ Other	1 EDD (Type)		Date Time Matrix Sample Request ID	5-12 10:15soil T-35-5	512 10:30501 T-35-1					: :	(2 Z; S) How The State of St		If necessary, samples submitted to Hall Environmental maybe subcontracted to other accr



(Revised)

COVER LETTER

Friday, January 06, 2012

Beck Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: Tank 35 Clean Up

Dear Beck Larsen:

Order No.: 1112721

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 12/16/2011 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901

AZ license # AZ0682

Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-1

Lab Order:

1112721

Collection Date: 12/15/2011 10:45:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011 Matrix SOII

Lab ID:	1112721-01		•		Ma	atrix: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8	015B: DIESEL RANG	E ORGANICS					Analyst: JB
Diesel Range Or	rganics (DRO)	21000	, 510		mg/Kg	50	12/19/2011 12:30:15 PM
Motor Oil Range	Organics (MRO)	3800	2500		mg/Kg	50	12/19/2011 12:30:15 PM
Surr: DNOP	•	0	77.4-131	S	%REC	50	12/19/2011 12:30:15 PM
EPÀ METHOD 8	8015B: GASOLINE RA	NGE					Analyst: RAA
Gasoline Range	Organics (GRO)	ND	49		mg/Kg	10	12/20/2011 1:46:45 PM
Surr: BFB		95.2	69.7-121		%REC	10	12/20/2011 1:46:45 PM
EPA METHOD 7	471: MERCURY						Analyst: JLF
Mercury		ND	0.033		mg/Kg	. 1	12/19/2011 1:54:28 PM
MERCURY, TCL	_P	* **					Analyst: JLF
Mercury		ND	0.020	•	mg/L	. 1	12/30/2011 1:32:41 PM
EPA METHOD 6	010B: SOIL METALS	•					Analyst: RAGS
Arsenic		ND	13		mg/Kg	. 5	12/19/2011 12:43:25 PM
Barium	•	220	0.50		mg/Kg	. 5	12/19/2011 12:43:25 PM
Cadmium		ND	0.50		mg/Kg	. 5	12/19/2011 12:43:25 PM
Chromium		12	1.5		mg/Kg	5	12/19/2011 12:43:25 PM
Lead		5.5	1.3		mg/Kg	5.	12/19/2011 12:43:25 PM
Selenium		ND	13		mg/Kg	5	12/19/2011 12:43:25 PM
Silver		ND	1.3	•	mg/Kg	5	12/19/2011 12:43:25 PM
EPA METHOD 6	010B: TCLP METALS	; }			. •	•	Analyst: ELS
Arsenic		. ND	5.0		mg/L	4 . 1	1/3/2012 8:35:20 AM
Barium		ND	100		mg/L	5	1/3/2012 9:38:39 AM
Cadmium	•	ND .	1.0		mg/L	1	1/3/2012 8:35:20 AM
Chromium	-	ND	5.0		mg/L	1	1/3/2012 8:35:20 AM
Lead		ND	5.0		mg/L	1	1/3/2012 8:35:20 AM
Selenium		ND .	1.0		mg/L	1	1/3/2012 8:35:20 AM
Silver		ND ND	5.0		mg/L	[.] 1	1/3/2012 8:35:20 AM
EPA METHOD 82	270C: SEMIVOLATILE	S					Analyst: JDC
Acenaphthene	•	ND	2.0		mg/Kg	1	12/21/2011 12:22:12 AM
Acenaphthylene		ND	2.0		mg/Kg	.1	12/21/2011 12:22:12 AM
Aniline		ND	2.0		mg/Kg	1	12/21/2011 12:22:12 AM
Anthracene		ND	2.0	•	mg/Kg .	. 1	12/21/2011 12:22:12 AM
Azobenzene	•	ND	2.0		mg/Kg	1	12/21/2011 12:22:12 AM
Benz(a)anthracen	ne	ND	2.0		mg/Kg	1	12/21/2011 12:22:12 AM
Benzo(a)pyrene		ND	2.0		mg/Kg	1	12/21/2011 12:22:12 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- Maximum Contaminant Level
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 1 of 30

Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-1

Lab Order:

1112721

Project:

Collection Date: 12/15/2011 10:45:00 AM

Lab ID:

Tank 35 Clean Up

Date Received: 12/16/2011

Matrix: SOIL 1112721-01

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES	3				Analyst: JDC
Benzo(b)fluoranthene	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Benzo(g,h,i)perylene	ND	2.0	mg/Kg -	1	12/21/2011 12:22:12 AM
Benzo(k)fluoranthene	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Benzoic acid	ND	4.9	mg/Kg	1	12/21/2011 12:22:12 AM
Benzyl alcohol	ND	2.0	mg/Kg .	. 1	12/21/2011 12:22:12 AM
Bis(2-chloroethoxy)methane	. ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Bis(2-chloroethyl)ether	. ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg	1 '	12/21/2011 12:22:12 AM
Bis(2-ethylhexyl)phthalate	ND	4.9	mg/Kg	1	12/21/2011 12:22:12 AM
4-Bromophenyl phenyl ether	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Butyl benzyl phthalate	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Carbazole	ND	2.0	mg/Kg	. 1	12/21/2011 12:22:12 AM
4-Chloro-3-methylphenol	ND -	4.9	mg/Kg	1	12/21/2011 12:22:12 AM
4-Chloroaniline	ND ·	. 4.9	mg/Kg	1	12/21/2011 12:22:12 AM
2-Chloronaphthalene	ND	2.5	mg/Kg	1 ·	12/21/2011 12:22:12 AM
2-Chlorophenol	ND `	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
4-Chlorophenyl phenyl ether	ND	2.0	mg/Kg	· . 1	12/21/2011 12:22:12 AM
Chrysene	4.6	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Di-n-butyl phthalate	ND	4.9	mg/Kg	1.	12/21/2011 12:22:12 AM
Di-n-octyl phthalate	ND	2.5	mg/Kg	1	12/21/2011 12:22:12 AM
Dibenz(a,h)anthracene	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Dibenzofuran	, ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
1,2-Dichlorobenzene	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
1,3-Dichlorobenzene	, ND	2.0	mg/Kg	, 1	12/21/2011 12:22:12 AM
1,4-Dichlorobenzene	ND	2.0	mg/Kg	1 .	12/21/2011 12:22:12 AM
3,3 -Dichlorobenzidine	ND	2.5	mg/Kg	1	12/21/2011 12:22:12 AM
Diethyl phthalate	ND.	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
Dimethyl phthalate	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM
2,4-Dichlorophenol	ND	3.9	mg/Kg	1	12/21/2011 12:22:12 AM
2,4-Dimethylphenol	ND	3.0	mg/Kg	1	12/21/2011 12:22:12 AM
4,6-Dinitro-2-methylphenol	ND	4.9	mg/Kg	1 .	12/21/2011 12:22:12 AM
2,4-Dinitrophenol	ND	3.9	mg/Kg	1	12/21/2011 12:22:12 AM
2,4-Dinitrotoluene	ND	4.9	mg/Kg	· 1	12/21/2011 12:22:12 AM
2,6-Dinitrotoluene	ND	4.9	mg/Kg	. 1	12/21/2011 12:22:12 AM
Fluoranthene	ND .	2.0	mg/Kg	1 ·	12/21/2011 12:22:12 AM
Fluorene	5.9	2.0	· mg/Kg	. 1	12/21/2011 12:22:12 AM
Hexachlorobenzene	, ND	2.0	mg/Kg	· 1	12/21/2011 12:22:12 AM
Hexachlorobutadiene	ND	2.0 ·	mg/Kg	1	12/21/2011 12:22:12 AM
Hexachlorocyclopentadiene	ND	2.0	mg/Kg	1 -	12/21/2011 12:22:12 AM
Hexachloroethane	ND	, 2.0	mg/Kg	1	12/21/2011 12:22:12 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value Ε
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35=1

Lab Order:

1112721

Project:

Collection Date: 12/15/2011 10:45:00 AM

Lab ID:

Tank 35 Clean Up 1112721-01

Date Received: 12/16/2011 Matrix: SOIL

Lab ID: 1112/21-01	IVIALITA: SOIL						
Analyses	Result	PQL	Qual Units	DF	Date Analyzed		
EPA METHOD 8270C: SEMIVOLATILES					Analyst: JDC		
Indeno(1,2,3-cd)pyrene	ND	2.0	mg/Kg	1 '	12/21/2011 12:22:12 AM		
Isophorone	ND	. 4.9	mg/Kg	1	12/21/2011 12:22:12 AM		
2-Methylnaphthalene	ND	2.0	mg/Kg	1 .	12/21/2011 12:22:12 AM		
1-Methylnaphthalene	2.9	` 2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
2-Methylphenol	ND	4.9	mg/Kg	1	12/21/2011 12:22:12 AM		
3+4-Methylphenol	ND	2.0	mg/Kg	1 .	12/21/2011 12:22:12 AM		
N-Nitrosodi-n-propylamine	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
N-Nitrosodiphenylamine	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
Naphthalene	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
2-Nitroaniline	· ND	2.0	mg/Kg	· 1	12/21/2011 12:22:12 AM		
3-Nitroaniline	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
4-Nitroaniline	, NĐ	3.9	mg/Kg	1	12/21/2011 12:22:12 AM		
Nitrobenzene	ND	4.9	mg/Kg	1	12/21/2011 12:22:12 AM		
2-Nitrophenol	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
4-Nitrophenol	ND	2.5	mg/Kg	· 1	12/21/2011 12:22:12 AM		
Pentachlorophenol	ND	3.9	mg/Kg	. 1	12/21/2011 12:22:12 AM		
Phenanthrene	36	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
Phenol	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
Pyrene	6.6	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
Pyridine	ND	4.9	mg/Kg	1	12/21/2011 12:22:12 AM		
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
2,4,5-Trichlorophenol	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
2,4,6-Trichlorophenol	ND	2.0	mg/Kg	1	12/21/2011 12:22:12 AM		
Surr: 2,4,6-Tribromophenol	. 0	-24.9-115	S %REC	- 1	12/21/2011 12:22:12 AM		
Surr: 2-Fluorobiphenyl	95.4	26.2-108	'%REC	1 .	12/21/2011 12:22:12 AM		
Surr: 2-Fluorophenol	83.9	17.7-98	%REC	1	12/21/2011 12:22:12 AM		
Surr: 4-Terphenyl-d14	. 0	33.8-108	S %REC	1	12/21/2011 12:22:12 AM		
Surr: Nitrobenzene-d5	82.0	23-109	%REC	1	12/21/2011 12:22:12 AM		
Surr: Phenol-d5	80.5	22.1-103	%REC	, 1	12/21/2011 12:22:12 AM		
EPA METHOD 8270C TCLP	:				Analyst: JDC		
2,4-Dinitrotoluene	ND	0.13	mg/L	· 1 ·	1/3/2012 1:06:10 PM		
Hexachlorobenzene	ND	0.13	mg/L	1.	1/3/2012 1:06:10 PM		
Hexachlorobutadiene	ND	0.50	mg/L	1~ .	1/3/2012 1:06:10 PM		
Hexachloroethane	ND.	3.0	mg/L	1	1/3/2012 1:06:10 PM		
Nitrobenzene	ND	2.0	mg/L	1.	1/3/2012 1:06:10 PM		
Pentachlorophenol	ND	100	mg/L	1	1/3/2012 1:06:10 PM		
Pyridine	ND	5.0	mg/L	1	1/3/2012 1:06:10 PM		
2,4,5-Trichlorophenol	ND	400	mg/L	1	1/3/2012 1:06:10 PM		
2,4,6-Trichlorophenol	ND	2.0	mg/L	. 1	1/3/2012 1:06:10 PM		

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- Maximum Contaminant Level MCL
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-1

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 10:45:00 AM Date Received: 12/16/2011

Lab ID:

1112721-01

Matrix: SOIL

1112/21-01	Matrix, Soil						
Analyses	Result	PQL	Qual Units	DF	Date Analyzed		
EPA METHOD 8270C TCLP			-		Analyst: JDC		
Cresols, Total	ND	200	mg/L	1	1/3/2012 1:06:10 PM		
Surr: 2,4,6-Tribromophenol	76.5	18.2-136	%REC	1	1/3/2012 1:06:10 PM		
Surr: 2-Fluorobiphenyl	, 72.5	40.5-108	%REC	1	1/3/2012 1:06:10 PM		
Surr: 2-Fluorophenòl	47.6	23-101	%REC`	· 1	1/3/2012 1:06:10 PM		
Surr: 4-Terphenyl-d14	80.0	40.9-112	%REC	1	1/3/2012 1:06:10 PM		
Surr: Nitrobenzene-d5	75.6	41-115	%REC	1	1/3/2012 1:06:10 PM		
Surr: Phenol-d5	35.9	23.4-73.6	%REC	1	1/3/2012 1:06:10 PM		
EPA METHOD 8260B: VOLATILES		. % -			Analyst: MMS		
Benzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Toluene	NĎ	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Ethylbenzene	. ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Methyl tert-butyl ether (MTBE)	ND	. 0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
1,2,4-Trimethylbenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
1,3,5-Trimethylbenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
1,2-Dichloroethane (EDC)	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
1,2-Dibromoethane (EDB)	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Naphthalene	ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM		
1-Methylnaphthalene	2.1	2.0	mg/Kg	10	12/19/2011 12:31:32 PM		
2-Methylnaphthalene	ND	2.0	mg/Kg	. 10	12/19/2011 12:31:32 PM		
Acetone	ND	7.4	mg/Kg	10	12/19/2011 12:31:32 PM		
Bromobenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Bromodichloromethane	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Bromoform	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Bromomethane	ND	1.5	· mg/Kg	10	12/19/2011 12:31:32 PM		
2-Butanone	ND	4.9	mg/Kg	10	12/19/2011 12:31:32 PM		
Carbon disulfide	ND	4.9	mg/Kg	10	12/19/2011 12:31:32 PM		
Carbon tetrachloride	ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM		
Chlorobenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Chloroethane	ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM		
Chloroform	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Chloromethane	ND	1.5	mg/Kg	10	12/19/2011 12:31:32 PM		
2-Chlorotoluene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
4-Chlorotoluene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
cis-1,2-DCE	, ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
cis-1,3-Dichloropropene	ND	0.49	mg/Kg	· 10	12/19/2011 12:31:32 PM		
1,2-Dibromo-3-chloropropane	ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM		
Dibromochloromethane	, ND	. 0.49	mg/Kg	10	12/19/2011 12:31:32 PM		
Dibromomethane	ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM		
1,2-Dichlorobenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM		

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value Е
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- Maximum Contaminant Level
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest,-Gallup

Client Sample ID: T-35-1

Lab Order:

1112721

Project:

Collection Date: 12/15/2011 10:45:00 AM

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-01

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLAT	ILES				Analyst: MMS
1,3-Dichlorobenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,4-Dichlorobenzene	ND.	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
Dichlorodifluoromethane	. ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,1-Dichloroethane	. ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM
1,1-Dichloroethene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,2-Dichloropropane	ND.	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,3-Dichloropropane	ND	0:49	mg/Kg	10	12/19/2011 12:31:32 PM
2,2-Dichloropropane	ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM
1,1-Dichloropropene	ND	0.99	mg/Kg	.10	12/19/2011 12:31:32 PM
Hexachlorobutadiene	. ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM
2-Hexanone	ND	4.9	mg/Kg	10	12/19/2011 12:31:32 PM
Isopropylbenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
4-Isopropyltoluene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
4-Methyl-2-pentanone	ND	4.9	mg/Kg	10	12/19/2011 12:31:32 PM
Methylene chloride	ND	1.5	mg/Kg	10	12/19/2011 12:31:32 PM
n-Butylbenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
n-Propylbenzene	ND	0.49		10	12/19/2011 12:31:32 PM
sec-Butylbenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
Styrene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
tert-Butylbenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,1,1,2-Tetrachloroethane	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,1,2,2-Tetrachloroethane	. ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
Tetrachloroethene (PCE)	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
trans-1,2-DCE	· ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
trans-1,3-Dichloropropene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,2,3-Trichlorobenzene	. ND	0.99	mg/Kg	- 10	12/19/2011 12:31:32 PM
1,2,4-Trichlorobenzene	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,1,1-Trichloroethane	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,1,2-Trichloroethane	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
Trichloroethene (TCE)	ND	0.49	mg/Kg	. 10	12/19/2011 12:31:32 PM
Trichlorofluoromethane	ND	0.49	mg/Kg	10	12/19/2011 12:31:32 PM
1,2,3-Trichloropropane	" ND	0.99	mg/Kg	10	12/19/2011 12:31:32 PM
Vinyl chloride	ND	0.49	mg/Kg	/- 10	12/19/2011 12:31:32 PM
Xylenes, Total	ND	0.99	mg/Kg	- 10	12/19/2011 12:31:32 PM
Surr: 1,2-Dichloroethane-d4	94.6	70-130	%REC	10	12/19/2011 12:31:32 PM
Surr: 4-Bromofluorobenzene	88.3	· 70-130	%REC	10	12/19/2011 12:31:32 PM
Surr: Dibromofluoromethane	94.8	63.1-128	%REC	. 10	12/19/2011 12:31:32 PM
Surr: Toluene-d8	104	70-130	%REC	10	12/19/2011 12:31:32 PM

VOLATILES BY 8260B/1311

Analyst: MMS

Qualifiers:

- Value exceeds Maximum Contaminant Level-
- Е Estimated value
- Analyte detected below quantitation limits J
- Non-Chlorinated
- Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- Maximum Contaminant Level MCL
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT: Lab Order: Western Refining Southwest, Gallup

1112721

Tank 35 Clean Up

Project: Lab ID:

1112721-01

Client Sample ID: T-35-1

Collection Date: 12/15/2011 10:45:00 AM

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
VOLATILES BY 8260B/1311					Analyst: MMS
Benzene	ND	0.50	mg/L	1	12/29/2011 4:00:15 PM
2-Butanone	ND	10	mg/L	1	12/29/2011 4:00:15 PM
Carbon Tetrachloride	ND	0.50	mg/L	1	12/29/2011 4:00:15 PM
Chlorobenzene	ND .	100	mg/L	1	12/29/2011 4:00:15 PM
Chloroform	, ND	6.0	mg/L	1	12/29/2011 4:00:15 PM
1,4-Dichlorobenzene	ND	7.5	mg/L	1	12/29/2011 4:00:15 PM
1,2-Dichloroethane (EDC)	ND	0.50	mg/L	1	12/29/2011 4:00:15 PM
1,1-Dichloroethene	ND	0.70	mg/L	[,] 1	12/29/2011 4:00:15 PM
Hexachlorobutadiene	ND	0.50	mg/L	1 .	12/29/2011 4:00:15 PM
Tetrachloroethene (PCE)	· ND	0.70	mg/L	1.	12/29/2011 4:00:15 PM
Trichloroethene (TCE)	ND	0.50	mg/L	1	12/29/2011 4:00:15 PM
Vinyl chloride	ND .	0.20	mg/L ·	1	12/29/2011 4:00:15 PM
Surr: 1;2-Dichloroethane-d4	83.8	69.9-130	%REC	1	12/29/2011 4:00:15 PM
Surr: 4-Bromofluorobenzene	86.2	71.2-123	%REC	1	12/29/2011 4:00:15 PM
Surr: Dibromofluoromethane	85.3	73.9-134	%REC	1	12/29/2011 4:00:15 PM
Surr: Toluene-d8	89.7	81.9-122	%REC	1	12/29/2011 4:00:15 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- NDNot Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 6 of 30

Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample-ID: T-35-2

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 10:55:00 AM

Lab ID:

1112721-02

Date Received: 12/16/2011 Matrix: SOIL

Analyses	Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS	•				Analyst: JB
Diesel Range Organics (DRO)	ND	10	m	g/Kg	1	12/19/2011 8:16:11 AM
Motor Oil Range Organics (MRO)	ND	51	m	g/Kg	1	12/19/2011 8:16:11 AM
Surr: DNOP	109	77.4-131	%	REC	. 1	12/19/2011 8:16:11 AM
EPA METHOD 8015B: GASOLINE RANGE	· ·					Analyst DAA
Gasoline Range Organics (GRO)	ND ND	47		-//-	1 ·	Analyst: RAA 12/20/2011 4:18:38 AM
Surr: BFB	•	4.7 69.7-121		g/Kg ·	1	12/20/2011 4:18:38 AM
Suit DFB	97.1	09.7-121	70	REC		12/20/2011 4: 16:36 AW
EPA METHOD 7471: MERCURY						Analyst: JLF
Mercury	ND	0.033	m	g/Kg	·1	12/19/2011 1:59:51 PM
•	٠	•	;			
MERCURY, TCLP						Analyst: JLF
Mercury	ND	0.020	mg	g/L·	1	12/30/2011 1:34:28 PM
EPA METHOD 6010B: SOIL METALS						Analyst: RAGS
Arsenic	ND	5.0	m	g/Kg	. 2	12/20/2011 9:54:41 AM
Barium	280	1.0		g/Kg	- 10	12/20/2011 10:02:32 AM
Cadmium	ND	0.20		g/Kg	2	12/20/2011 9:54:41 AM
Chromium	11	0.60		g/Kg	2	12/20/2011 9:54:41 AM
Lead	3.3	0.50		g/Kġ	2	12/20/2011 9:54:41 AM
Selenium	ND	5.0		g/Kg	2	12/20/2011 9:54:41 AM
Silver	ND	0.50	-	g/Kg	2	12/20/2011 9:54:41 AM
EPA METHOD 6010B: TCLP METALS						Analyst: ELS
Arsenic	ND	5.0	mg	•/1	1	1/3/2012 8:37:31 AM
Barium	ND .	100	mg		5	1/3/2012 9:40:37 AM
Cadmium	ND	1.0	mg		. 1	1/3/2012 8:37:31 AM
Chromium	ND	5.0	mg		1	1/3/2012 8:37:31 AM
Lead	ND	5.0	mg		1	1/3/2012 8:37:31 AM
Selenium	ND	1.0	mg		. 1	1/3/2012 8:37:31 AM
Silver	ND	5.0	mg		1	1/3/2012 8:37:31 AM
			1118	, _	•	7,0,2012 0.01.01744
EPA METHOD 8270C: SEMIVOLATILES			• .	,		Analyst: JDC
Acenaphthene	ND	0.20	mg	/Kg	1	12/20/2011 10:26:42 PM
Acenaphthylene	ND	0.20		/Kg	1.	12/20/2011 10:26:42 PM
Aniline	ND	0.20		/Kg	. 1	12/20/2011 10:26:42 PM
Anthracene	ND	0.20		/Kg .	· 1	12/20/2011 10:26:42 PM
Azobenzene	ND ·	0.20	_	/Kg	1	12/20/2011 10:26:42 PM
Benz(a)anthracene	ND	0.20		/Kg	1	12/20/2011 10:26:42 PM
Benzo(a)pyrene	ND	0.20	_	/Kg	1 ·	12/20/2011 10:26:42 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value Ε
- Analyte detected below quantitation limits
- Non-Chlorinated NC
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 7 of 30

Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest,-Gallup

Client-Sample-ID: T-35-2

Lab Order:

1112721

cat Sample 12. 1 33 2

Project:

1112/21

Collection Date: 12/15/2011 10:55:00 AM

Lab ID:

Tank 35 Clean Up 1112721-02 **Date Received:** 12/16/2011

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLA	TILES				Analyst: JDC
Benzo(b)fluoranthene	· ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Benzo(g,h,i)perylene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1.	12/20/2011 10:26:42 PM
Benzoic acid	ND	0.49	mg/Kg	1 ·	12/20/2011 10:26:42 PM
Benzyl alcohol	ND	0.20	mg/Kg 。	1	12/20/2011 10:26:42 PM
Bis(2-chloroethoxy)methane	ND	0.20	. mg/Kg	1	12/20/2011 10:26:42 PM
Bis(2-chloroethyl)ether	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Bis(2-ethylhexyl)phthalate	ND	0.49	mg/Kg	1 .	12/20/2011 10:26:42 PM
4-Bromophenyl phenyl ether	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Butyl benzyl phthalate	· ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Carbazole	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
4-Chloro-3-methylphenol	ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
4-Chloroaniline	· ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
2-Chloronaphthalene	ND	0.25	· mg/Kg	. 1	12/20/2011 10:26:42 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Chrysene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Di-n-butyl phthalate	ND	0.49	mg/Kg	1	12/20/2011-10:26:42 PM
Di-n-octyl phthalate	ND	0.25	mg/Kg	1	12/20/2011 10:26:42 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Dibenzofuran	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	i	12/20/2011 10:26:42 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
3,3'-Dichtorobenzidine	ND	0.25	mg/Kg	1	12/20/2011 10:26:42 PM
Diethyl phthalate	ND	0.20	mg/Kg	1 .	12/20/2011 10:26:42 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
2,4-Dichlorophenol	ND	0.39	mg/Kg	1	12/20/2011 10:26:42 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	12/20/2011 10:26:42 PM
4,6-Dinitro-2-methylphenol	ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
2,4-Dinitrophenol	ND	0.39	mg/Kg	1	12/20/2011 10:26:42 PM
2,4-Dinitrotoluene	ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
2,6-Dinitrotoluene	. ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
Fluoranthene	. ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Fluorene	ND ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Hexachlorobenzene	. ND	0.20	mg/Kg	. 1	12/20/2011 10:26:42 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1.	12/20/2011 10:26:42 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg .	1	12/20/2011 10:26:42 PM
Hexachloroethane	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Glient-Sample ID: -T-35-2

Lab Order:

1112721

-nent-sample-not: -1-55-2

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 10:55:00 AM **Date Received:** 12/16/2011

Lab ID:

1112721-02

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATIL	ES		· · · · · · · · · · · · · · · · · · ·		Analyst: JDC
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg .	1	12/20/2011 10:26:42 PM
Isophorone	ND	0.49	mg/Kg	1 .	12/20/2011 10:26:42 PM
2-Methylnaphthalene	· ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
1-Methylnaphthalene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
2-Methylphenol	· ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
N-Nitrosodiphenylamine	ND.	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Naphthalene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
2-Nitroaniline	N D	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
4-Nitroaniline	ND	0.39	mg/Kg	1	12/20/2011 10:26:42 PM
Nitrobenzene	· ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
2-Nitrophenol	ND	0.20	mg/Kg	1 -	12/20/2011 10:26:42 PM
4-Nitrophenol	ND	0.25	mg/Kg	1	12/20/2011 10:26:42 PM
Pentachlorophenol	ND	0.39	mg/Kg	1	12/20/2011 10:26:42 PM
Phenanthrene	ND ,	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Phenol	, ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Pyrene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Pyridine	ND	0.49	mg/Kg	1	12/20/2011 10:26:42 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	12/20/2011 10:26:42 PM
Surr: 2,4,6-Tribromophenol	88.8	24.9-115	%REC	1	12/20/2011 10:26:42 PM
Surr: 2-Fluorobiphenyl	60.6	26.2-108	%REC	1	12/20/2011 10:26:42 PM
Surr: 2-Fluorophenol	89.1	17.7-98	%REC	1	12/20/2011 10:26:42 PM
Surr: 4-Terphenyl-d14	86.5	33.8-108	%REC	1	12/20/2011 10:26:42 PM
Surr: Nitrobenzene-d5	81.5	23-109	%REC	1 .	12/20/2011 10:26:42 PM
Surr: Phenol-d5	86.4	22.1-103	%REC	. 1	12/20/2011 10:26:42 PM
EPA METHOD 8270C TCLP	•,	•	•	•	Analyst: JDC
2,4-Dinitrotoluene	ND	0.13	mg/L	1	1/3/2012 2:33:13 PM
Hexachlorobenzene	ND	0.13	mg/L	.1	1/3/2012 2:33:13 PM
Hexachlorobutadiene	ND	0.50	mg/L	1	1/3/2012 2:33:13 PM
Hexachloroethane	. ND	3.0	mg/L	1	1/3/2012 2:33:13 PM
Nitrobenzene	ND	2.0	mg/L	1	1/3/2012 2:33:13 PM
Pentachlorophenol	ND	100	mg/L	1	1/3/2012 2:33:13 PM
Pyridine	ND	5.0	mg/L	1.	1/3/2012 2:33:13 PM
2,4,5-Trichlorophenol	` ND	400	mg/L	1	1/3/2012 2:33:13 PM
2,4,6-Trichlorophenol	ND	2.0	mg/L	. 1	1/3/2012 2:33:13 PM
					•

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12

Analytical Report

CLIENT:

Western-Refining Southwest, Gallup

Client Sample-ID: T-35-2

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 10:55:00 AM

Date Received: 12/16/2011

Lab ID:

1112721-02

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C TCLP					Analyst: JDC
Cresols, Total	. ND	200	mg/L	1 .	1/3/2012 2:33:13 PM
Surr: 2,4,6-Tribromophenol	75.7	18.2-136	%REC	1	1/3/2012 2:33:13 PM
Surr: 2-Fluorobiphenyl	69.8	40.5-108	%REC	1	1/3/2012 2:33:13 PM
Surr: 2-Fluorophenol	48.8	23-101	%REC	1	1/3/2012 2:33:13 PM
Surr: 4-Terphenyl-d14	7,0.9	40.9-112	%REC	1	1/3/2012 2:33:13 PM
Surr: Nitrobenzene-d5	78.3	41-115	. %REC	1	1/3/2012 2:33:13 PM
Surr: Phenol-d5	35.2	23.4-73.6	%REC	1	1/3/2012 2:33:13 PM
EPA METHOD 8260B: VOLATILES	•		· · · · · · · · · · · · · · · · · · ·		Analyst: MMS
Benzene	. ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Toluene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Ethylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Methyl tert-butyl ether (MTBE)	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,2,4-Trimethylbenzene	, ND	Ò.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,3,5-Trimethylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,2-Dichloroethane (EDC)	ND	0.047	. mg/Kg	1	12/19/2011 1:27:33 PM
1,2-Dibromoethane (EDB)	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Naphthalene	·ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
1-Methylnaphthalene	·ND	0.19	:mg/Kg	1	12/19/2011 1:27:33 PM
2-Methylnaphthalene	ND	0.19	mg/Kg	1	12/19/2011 1:27:33 PM
Acetone	· ND	0.71	mg/Kg	1	12/19/2011 1:27:33 PM
Bromobenzene	ND	0.047	mg/Kg	1 .	12/19/2011 1:27:33 PM
Bromodichloromethane	ND	0.047	mg/Kġ	1	12/19/2011 1:27:33 PM
Bromoform	ND	0.047	mg/Kg	. 1	12/19/2011 1:27:33 PM
Bromomethane	ND	0.14	mg/Kg	1	12/19/2011 1:27:33 PM
2-Butanone	ND	0.47	mg/Kg	. 1	12/19/2011 1:27:33 PM
Carbon disulfide	ND	0.47	mg/Kg	1	12/19/2011 1:27:33 PM
Carbon tetrachloride	ND	0.095	mg/Kg	. 1	12/19/2011 1:27:33 PM
Chlorobenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Chloroethane	ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
Chloroform	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Chloromethane	ND	0.14	mg/Kg	1 -	12/19/2011 1:27:33 PM
2-Chlorotoluene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
4-Chlorotoluene	→ ND	0.047	mg/Kg	1 .	12/19/2011 1:27:33 PM
cis-1,2-DCE	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
cis-1,3-Dichloropropene	ND	0.047	mg/Kg	· 1	12/19/2011 1:27:33 PM
1,2-Dibromo-3-chloropropane	ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
Dibromochloromethane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Dibromomethane	ND	0.095	mg/Kg	· 1	12/19/2011 1:27:33 PM
1,2-Dichlorobenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 10 of 30

Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample ID: T-35-2

Lab Order:

1112721

Project:

Collection Date: 12/15/2011 10:55:00 AM

Lab ID:

Tank 35 Clean Up 1112721-02

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: MMS
1,3-Dichlorobenzene	ND	0.047	mg/Kg	1.	12/19/2011 1:27:33 PM
1,4-Dichlorobenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Dichlorodifluoromethane	. ND	0.047	mg/Kg	· 1	12/19/2011 1:27:33 PM
1,1-Dichloroethane	ND	0.095	mg/Kg	1	12/19/2011 1.27:33 PM
1,1-Dichloroethene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,2-Dichloropropane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,3-Dichloropropane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
2,2-Dichloropropane	ND	0.095	mg/Kg	1 1	12/19/2011 1:27:33 PM
1,1-Dichloropropene	ND .	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
Hexachlorobutadiene	. ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
2-Hexanone	ND	0.47	mg/Kg	· 1	12/19/2011 1:27:33 PM
Isopropylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
4-Isopropyltoluene	. ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
4-Methyl-2-pentanone	ND	0.47	mg/Kg	1	12/19/2011 1:27:33 PM
Methylene chloride	ND	0.14	mg/Kg	1	12/19/2011 1:27:33 PM
n-Butylbenzene	ND	0.047	mg/Kg	. 1	12/19/2011 1:27:33 PM
n-Propylbenzene	ND	0.047	·· mg/Kg	1 .	12/19/2011 1:27:33 PM
sec-Butylbenzene	ND	0.047	mg/Kg	. 1	12/19/2011 1:27:33 PM
Styrene	ND	0.047	mg/Kg	¹ 1	12/19/2011 1:27:33 PM
tert-Butylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,1,1,2-Tetrachloroethane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,1,2,2-Tetrachloroethane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Tetrachloroethene (PCE)	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
trans-1,2-DCE	NĎ	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
trans-1,3-Dichloropropene	ND >	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,2,3-Trichlorobenzene	ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
1,2,4-Trichlorobenzene	ND	0.047	mg/Kg	_. 1	12/19/2011 1:27:33 PM
1,1,1-Trichloroethane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,1,2-Trichloroethane	ND	0.047	mg/Kg	1	12/19/2011 1.27:33 PM
Trichloroethene (TCE)	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Trichlorofluoromethane	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
1,2,3-Trichloropropane	ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
Vinyl chloride	ND	0.047	mg/Kg	1	12/19/2011 1:27:33 PM
Xylenes, Total	ND	0.095	mg/Kg	1	12/19/2011 1:27:33 PM
Surr: 1,2-Dichloroethane-d4	94.4	70-130	%REC	1	12/19/2011 1:27:33 PM
Surr: 4-Bromofluorobenzene	86.4	70-130	%REC	. 1	12/19/2011 1:27:33 PM
Surr: Dibromofluoromethane	102	63.1-128	%REC	1	12/19/2011 1:27:33 PM
Surr: Toluene-d8	97.4	70-130	%REC	1	12/19/2011 1:27:33 PM

VOLATILES BY 8260B/1311

Analyst: MMS

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value Ε·
- Analyte detected below quantitation limits
- Non-Chlorinated NC
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Not Detected at the Reporting Limit ND
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample-ID: -T-35-2

Lab Order:

1112721

nent-Sample-in. --1-35-2

Project:

1112/21

Collection Date: 12/15/2011 10:55:00 AM

Lab ID:

Tank 35 Clean Up 1112721-02

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
VOLATILES BY 8260B/1311					Analyst: MMS
Benzene	ND	0.50	mg/L	1 .	12/29/2011 5:23:31 PM
2-Butanone	ND	10	mg/L	1	12/29/2011 5:23:31 PM
Carbon Tetrachloride	ND	0.50	mg/L	1	12/29/2011 5:23:31 PM
Chlorobenzene	ND	100	mg/L	. 1	12/29/2011 5:23:31 PM
Chloroform	ND	6.0	mg/L	1	12/29/2011 5:23:31 PM
1,4-Dichlorobenzene	ND	7.5	mg/L	· 1	12/29/2011 5:23:31 PM
1,2-Dichloroethane (EDC)	ND [*]	0.50	mg/L	1,	12/29/2011 5:23:31 PM
1,1-Dichloroethene	ND	0.70	mg/L	1	12/29/2011 5:23:31 PM
Hexachlorobutadiene	ND	0.50	mg/L	1	12/29/2011 5:23:31 PM
Tetrachloroethene (PCE)	ND	0.70	mg/L	1	12/29/2011 5:23:31 PM
Trichloroethene (TCE)	ND	0.50	mg/L	1 .	12/29/2011 5:23:31 PM
Vinyl chloride	ND	. 0.20	mg/L	1	12/29/2011 5:23:31 PM
Surr: 1,2-Dichloroethane-d4	74.6	69.9-130	%REC	1	12/29/2011 5:23:31 PM
Surr: 4-Bromofluorobenzene	. 78.7	71.2-123	%REC	1	12/29/2011 5:23:31 PM
Surr: Dibromofluoromethane	80.9	73.9-134	%REC	1	12/29/2011 5:23:31 PM
Surr: Toluene-d8	85.7	81.9-122	%REC	1	12/29/2011 5:23:31 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

Page 12 of 30

Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-3

Lab Order:

1112721

Project:

Collection Date: 12/15/2011 11:10:00 AM

Lab ID:

Tank 35 Clean Up 1112721-03

Date Received: 12/16/2011.

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RAN	IGE ORGANICS			· · · · · · · · · · · · · · · · · · ·	Analyst: JB
Diesel Range Organics (DRO)	100	10	mg/Kg	1	12/19/2011 8:45:58 AM
Motor Oil Range Organics (MRO)	. ND	52	mg/Kg	1	12/19/2011 8:45:58 AM
Surr: DNOP	121	77.4-131	%REC	1	12/19/2011 8:45:58 AM
EDA METUOD COAFD, CASOLINE A		•			A
EPA METHOD 8015B: GASOLINE F				4	Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.7	mg/Kg	1	12/20/2011 4:47:22 AM
Surr: BFB	95.3	69.7-121	%REC	1	12/20/2011 4:47:22 AM
EPA METHOD 7471: MERCURY				•	Analyst: JLF
Mercury	ND	0.033	mg/Kg	. 1	12/19/2011 2:01:36 PM
MERCURY, TCLP	-				Analyst: JLF
Mercury	ND	0.020	mg/L	1	12/30/2011 1:36:15 PM
EPA METHOD 6010B; SOIL METAL	· ·				Analyst: RAGS
Arsenic	.S ND	13	mg/Kg	5	12/19/2011 12:51:30 PM
Barium	140	0.50		. 5	12/19/2011 12:51:30 PM
Cadmium		•	mg/Kg		
	N D 6.7	0.50	mg/Kg	5 5	12/19/2011 12:51:30 PM 12/19/2011 12:51:30 PM
Chromium	3.2	1.5 1.3	mg/Kg	5 _. 5	12/19/2011 12:51:30 PM
Lead			mg/Kg	5 (12/19/2011 12:51:30 PM
Selenium	ND	13	mg/Kg		
Silver	ND	1.3	mg/Kg	5	12/19/2011 12:51:30 PM
EPA METHOD 6010B: TCLP META	LS	•			Analyst: ELS
Arsenic	ND	. 5.0	mg/L	1	1/3/2012 8:39:39 AM
Barium	ND	100	mg/L	5	1/3/2012 9:44:16 AM
Cadmium	ND	1.0	mg/L	1	1/3/2012 8:39:39 AM
Chromium	ND	5.0	mg/L	1	1/3/2012 8:39:39 AM
Lead	ND	5.0	mg/L	`1	1/3/2012 8:39:39 AM
Selenium	ND	1.0	mg/L	1	1/3/2012 8:39:39 AM
Silver	ND	5.0	mg/L	.1′	1/3/2012 8:39:39 AM
EPA METHOD 8270C: SEMIVOLATI	LES				Analyst: JDC
Acenaphthene	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Acenaphthylene	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Aniline	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Anthracene	ND	0.40	/ mg/Kg	1	12/20/2011 10:55:37 PM
Azobenzene	ND.	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Benz(a)anthracene	. ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Benzo(a)pyrene	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ē Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Η
- Maximum Contaminant Level MCL
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining-Southwest, Gallup

Client-Sample ID: T-35-3

Lab Order:

1112721

Collection Date: 12/15/2011 11:10:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-03

Matrix: SOIL

Analyses	Result	PQL	Qual U	nits		DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES	-	······································					Analyst: JDC
Benzo(b)fluoranthene	ND	0.40	m	g/Kg		1	12/20/2011 10:55:37 PM
Benzo(g,h,i)perylene	ND	0.40	· m	g/Kg		1	12/20/2011 10:55:37 PM
Benzo(k)fluoranthene	ND	0.40	· m	g/Kg		1	12/20/2011 10:55:37 PM
Benzoic acid	ND	0.99	m	g/Kg		1	12/20/2011 10:55:37 PM
Benzyl alcohol	ND	0.40	m	g/Kg		1	12/20/2011 10:55:37 PM
Bis(2-chloroethoxy)methane	ND	0.40	m	g/Kg		1	12/20/2011 10:55:37 PM
Bis(2-chloroethyl)ether	ND	0.40	m	g/Kg		1	12/20/2011 10:55:37 PM
Bis(2-chloroisopropyl)ether	ND ·	0.40	m	g/Kg		1	12/20/2011 10:55:37 PM
Bis(2-ethylhexyl)phthalate	ND	0.99	m	g/Kg		1	12/20/2011 10:55:37 PM
4-Bromophenyl phenyl ether	ND	0.40	m,	g/Kg		· 1	12/20/2011 10:55:37 PM
Butyl benzyl phthalate	· ND	0.40	m	g/Kg	-	1	12/20/2011 10:55:37 PM
Carbazole	ND	0.40	m	g/Kg		1	12/20/2011 10:55:37 PM
4-Chloro-3-methylphenol	ND	0.99	m	g/Kg		1	12/20/2011 10:55:37 PM
4-Chloroaniline	ND	. 0.99	· m	g/Kg	-	1	12/20/2011 10:55:37 PM
2-Chloronaphthalene	ND	0.50		g/Kg		1	12/20/2011 10:55:37 PM
2-Chlorophenol	NĎ	0.40		g/Kg		1 .	12/20/2011 10:55:37 PM
4-Chlorophenyl phenyl ether	ND	. 0.40		g/Kg		1	12/20/2011 10:55:37 PN
Chrysene	ND	0.40		g/Kg		1	12/20/2011 10:55:37 PM
Di-n-butyl phthalate	ND	0.99		g/Kg		1	12/20/2011,10:55:37 PM
Di-n-octyl phthalate	ND	0.50		g/Kg	•	1	12/20/2011 10:55:37 PM
Dibenz(a,h)anthracene	ND -	0.40		g/Kg		1	12/20/2011 10:55:37 PM
Dibenzofuran	ND	0.40		g/Kg		1	12/20/2011 10:55:37 PM
1,2-Dichlorobenzene	ND	0.40	mg	g/Kg		1	12/20/2011 10:55:37 PM
1,3-Dichlorobenzene	ND	0.40		g/Kg		1	12/20/2011 10:55:37 PM
1,4-Dichlorobenzene	ND	0.40		g/Kg	-	1	12/20/2011 10:55:37 PM
3,3'-Dichlorobenzidine	ND	. 0.50		g/Kg		1	12/20/2011 10:55:37 PM
Diethyl phthalate	ND	0.40	_	j/Kg		1	12/20/2011 10:55:37 PM
Dimethyl phthalate	ND	0.40		J/Kg		1	12/20/2011 10:55:37 PM
2,4-Dichlorophenol	ND .	0.79	-	J/Kg		1	12/20/2011 10:55:37 PM
2,4-Dimethylphenol	ND	0.59		ı/Kg		1	12/20/2011 10:55:37 PM
4,6-Dinitro-2-methylphenol	ND	0.99		J/Kg		1 .	12/20/2011 10:55:37 PM
2,4-Dinitrophenol	ND	0.79	mg	/Kg		1 .	12/20/2011 10:55:37 PM
2,4-Dinitrotoluene	ND	0.99	mg	/Kg		1 .	12/20/2011 10:55:37 PM
2,6-Dinitrotoluene	ND	0.99	mg	/Kg		1	12/20/2011 10:55:37 PM
Fluoranthene	ND	0.40		/Kg	•	1	12/20/2011 10:55:37 PM
Fluorene	ND	0.40	mg	/Kg		1 .	12/20/2011 10:55:37 PM
Hexachlorobenzene	ND	0.40	mg	/Kg	•	1	12/20/2011 10:55:37 PM
Hexachlorobutadiene	ND	0.40	mg	/Kg		• 1	12/20/2011 10:55:37 PM
Hexachlorocyclopentadiene	ND	0.40	mg	/Kg		1	12/20/2011 10:55:37 PM
Hexachloroethane	ND	0.40		/Kg		1	12/20/2011 10:55:37 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample ID: T-35-3

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:10:00 AM Date Received: 12/16/2011

Lab ID:

1112721-03

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES					Analyst: JDC
Indeno(1,2,3-cd)pyrene	· ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Isophorone	ND ·	0.99	mg/Kg	1	12/20/2011 10:55:37 PM
2-Methylnaphthalene	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
1-Methylnaphthalene	ND	. 0.40	mg/Kg	1	12/20/2011 10:55:37 PM
2-Methylphenol	ND	0.99	mg/Kg	1	12/20/2011 10:55:37 PM
3+4-Methylphenol	ND	0.40	mg/Kg	1 .	12/20/2011 10:55:37 PM
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
N-Nitrosodiphenylamine	ND	0.40	mg/Kg	1	. 12/20/2011 10:55:37 PM
Naphthalene	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
2-Nitroaniline	ND	0.40	mg/Kg	.1	12/20/2011 10:55:37 PM
3-Nitroaniline	ND	.0.40	mg/Kg	1	12/20/2011 10:55:37 PM
4-Nitroaniline	ND	0.79	mg/Kg	1 .	,12/20/2011 10:55:37 PM
Nitrobenzene	ND	0.99	mg/Kg	1	12/20/2011 10:55:37 PM
2-Nitrophenol	ND	0.40	mg/Kg 👶	1	12/20/2011 10:55:37 PM
4-Nitrophenol	ND	0.50	. mg/Kg	1	12/20/2011 10:55:37 PM
Pentachlorophenol	ND	0.79	mg/Kg	1	12/20/2011 10:55:37 PM
Phenanthrene	ND ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Phenol	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Pyrene	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Pyridine	ND	0.99	mg/Kg	1	12/20/2011 10:55:37 PM
1,2,4-Trichlorobenzene	ND ·	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
2,4,5-Trichlorophenol	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
2,4,6-Trichlorophenol	ND	0.40	mg/Kg	1	12/20/2011 10:55:37 PM
Surr: 2,4,6-Tribromophenol	113	24.9-115	%REC	1	12/20/2011 10:55:37 PM
Surr: 2-Fluorobiphenyl	103	26.2-108	%REC	.1	12/20/2011 10:55:37 PM
Surr: 2-Fluorophenol	97.3	17.7-98	%REC	1	12/20/2011 10:55:37 PM
Surr: 4-Terphenyl-d14	117	33.8-108	S %REC	1	12/20/2011 10:55:37 PM
Surr: Nitrobenzene-d5	110	23-109	S %REC	· 1	12/20/2011 10:55:37 PM
Surr: Phenol-d5	99.5	22.1-103	%REC	1	12/20/2011 10:55:37 PM
EPA METHOD 8270C TCLP		^			Analyst: JDC
2,4-Dinitrotoluene	ND	0.13	mg/L	1	1/3/2012 3:02:05 PM
Hexachlorobenzene	ND	0.13	.mg/L	1	1/3/2012 3:02:05 PM
Hexachlorobutadiene	ND	0.13	mg/L	1	1/3/2012 3:02:05 PM
Hexachloroethane	ND	3.0	mg/L	1	1/3/2012 3:02:05 PM
Nitrobenzene	ND	2.0	mg/L	1 .	1/3/2012 3:02:05 PM
Pentachlorophenol	ND	100	mg/L	1	1/3/2012 3:02:05 PM
Pyridine	ND	5.0	mg/L	· 1	1/3/2012 3:02:05 PM
2,4,5-Trichlorophenol	ND	400	mg/L	1	1/3/2012 3:02:05 PM
	110	- 50	· · · · · · · · · · · · · · · · · · ·		1.0,2012 0.02.001 10

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value Е
- Analyte detected below quantitation limits
- Non-Chlorinated NC
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
 - Н Holding times for preparation or analysis exceeded
 - MCL Maximum Contaminant Level
 - Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits

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Date: 06-Jan-12

Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample-ID: T-35-3

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:10:00 AM

Lab ID:

1112721-03

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 8270C TCLP							Analyst: JDC
Cresols, Total	ND	200	٠ .	mg/L		1	1/3/2012 3:02:05 PM
Surr: 2,4,6-Tribromophenol	66.7	18.2-136	. 6	%REC		1	1/3/2012 3:02:05 PM
Surr: 2-Fluorobiphenyl	. 62.2	40.5-108		%REC		1	1/3/2012 3:02:05 PM
Surr: 2-Fluorophenol	50.1	23-101	· ·	%REC		1	1/3/2012 3:02:05 PM
Surr: 4-Terphenyl-d14	66.8	40.9-112	•	%REC		1	1/3/2012 3:02:05 PM
Surr: Nitrobenzene-d5	68.8	41-115	ď	%REC		1	1/3/2012 3:02:05 PM
Surr: Phenol-d5	37.2	23.4-73.6	¢	%REC		1	1/3/2012 3:02:05 PM
EPA METHOD 8260B: VOLATILES				•			Analyst: MMS
Benzene 1	ND	0.047	г	ng/Kg		1	12/19/2011 1:55:34 PM
Toluene	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
Ethylbenzene	ND	0.047		nġ/Kg		1.	12/19/2011 1:55:34 PM
Methyl tert-butyl ether (MTBE)	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
1,2,4-Trimethylbenzene	. ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
1,3,5-Trimethylbenzene	ND	0.047		ng/Kg	•	1	12/19/2011 1:55:34 PM
1,2-Dichloroethane (EDC)	ND	0.047		ng/Kg	,	1	12/19/2011 1:55:34 PM
1,2-Dibromoethane (EDB)	ND	0.047		ng/Kg		1 .	12/19/2011 1:55:34 PM
Naphthalene	ND	0.095		ng/Kg		1	12/19/2011 1:55:34 PM
1-Methylnaphthalene	ND	0.19		ng/Kg		1	12/19/2011 1:55:34 PM
2-Methylnaphthalene	ND	0.19		ng/Kg		1	12/19/2011 1:55:34 PM
Acetone	ND ND	0.71		ng/Kg		1	12/19/2011 1:55:34 PM
Bromobenzene	ND	Ó.047		ng/Kg	· ·	1	12/19/2011 1:55:34 PM
Bromodichloromethane	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
Bromoform	. ND	." 0.047		ng/Kg		1	12/19/2011 1:55:34 PM
Bromomethane	ND	0.14		ng/Kg		1 :	12/19/2011 1:55:34 PM
2-Butanone	ND	0.47		ng/Kg	•	1	12/19/2011 1:55:34 PM
Carbon disulfide	ND	0.47		ng/Kg		1	12/19/2011 1:55:34 PM
Carbon tetrachloride	ND	0.095		ng/Kg		1 .	12/19/2011 1:55:34 PM
Chlorobenzene	· ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
Chloroethane	ND	0.095	• .	ng/Kg		1	12/19/2011 1:55:34 PM
Chloroform	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
Chloromethane	ND	0.14		ng/Kg		1 .	12/19/2011 1:55:34 PM
2-Chlorotoluene	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
4-Chlorotoluene	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
cis-1,2-DCE	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
cis-1,3-Dichloropropene	ND	0.047		ng/Kg	•	1 ·	12/19/2011 1:55:34 PM
1,2-Dibromo-3-chloropropane	, ND	0.095		ng/Kg		1	12/19/2011 1:55:34 PM
Dibromochloromethane	ND	0.047		ng/Kg		1	12/19/2011 1:55:34 PM
Dibromomethane	ND	0.095		ng/Kg	*	1	12/19/2011 1:55:34 PM
1,2-Dichlorobenzene	ND ND	0.047		ig/Kg		1	12/19/2011 1:55:34 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup.

Client Sample ID: T-35-3

Lab Order:

1112721

F-----

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:10:00 AM

Lab ID:

1112721-03

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: MMS
1,3-Dichlorobenzene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,4-Dichlorobenzene	ND	0.047	·mg/Kg	. 1	12/19/2011 1:55:34 PM
Dichlorodifluoromethane	, · ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,1-Dichloroethane	ND	0.095	mg/Kg	1	12/19/2011 1:55:34 PM
1,1-Dichloroethene	ND	0.047	mg/Kg	1 .	12/19/2011 1:55:34 PM
1,2-Dichloropropane	, ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,3-Dichloropropane	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
2,2-Dichloropropane	ND	0.095	mg/Kg	.1	12/19/2011 1:55:34 PM
1,1-Dichloropropene	ND	0.095	mg/Kg	1	12/19/2011 1:55:34 PM
Hexachlorobutadiene	ND	0.095	mg/Kg	1	12/19/2011 1:55:34 PM
2-Hexanone	, ND	0.47	mg/Kg	1	12/19/2011 1:55:34 PM
Isopropylbenzene	ND .	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
4-Isopropyltoluene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
4-Methyl-2-pentanone	ND	0.47	mg/Kg	1 .	12/19/2011 1:55:34 PM
Methylene chloride	ND	0.14	mg/Kg	-1	12/19/2011 1:55:34 PM
n-Butylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
n-Propylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
sec-Butylbenzene	^. · ND	0.047	mg/Kg	1	. 12/19/2011 1:55:34 PM
Styrene	ND	0.047	mg/Kg `	· 1	12/19/2011 1:55:34 PM
tert-Butylbenzene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,1,1,2-Tetrachloroethane	· ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,1,2,2-Tetrachloroethane	ND	0.047	mg/Kg	. 1	12/19/2011 1:55:34 PM
Tetrachloroethene (PCE)	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
trans-1,2-DCE	ND	. 0.047	mg/Kg	. 1	12/19/2011 1:55:34 PM
trans-1,3-Dichloropropene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,2,3-Trichlorobenzene	ND	0.095	mg/Kg	i ·	12/19/2011 1:55:34 PM
1,2,4-Trichlorobenzene	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
1,1,1-Trichloroethane	ND	0.047	mg/Kg	1 -	12/19/2011 1:55:34 PM
1,1,2-Trichloroethane	. ND	0.047	mg/Kg	: 1	12/19/2011 1:55:34 PM
Trichloroethene (TCE)	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
Trichlorofluoromethane	ND	0.047	mg/Kg	. 1	12/19/2011 1:55:34 PM
1,2,3-Trichloropropane	ND	0.095	mg/Kg	1	12/19/2011 1:55:34 PM
Vinyl chloride	ND	0.047	mg/Kg	1	12/19/2011 1:55:34 PM
Xylenes, Total	ND	0.095	mg/Kg	1	12/19/2011 1:55:34 PM
Surr: 1,2-Dichloroethane-d4	92.3	70-130	%REC	1	12/19/2011 1:55:34 PM
Surr: 4-Bromofluorobenzene	92.5	70-130	%REC	· 1	12/19/2011 1:55:34 PM
Surr: Dibromofluoromethane	95.5	63.1-128	%REC	1	12/19/2011 1:55:34 PM
Surr: Toluene-d8	103	70-130	%REC	1	12/19/2011 1:55:34 PM

VOLATILES BY 8260B/1311

Analyst: MMS

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-3

Lab Order:

1112721

Collection Date: 12/15/2011 11:10:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-03

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
VOLATILES BY 8260B/1311					Analyst: MMS
Benzene	ND	0.50	mg/L	1	12/29/2011 5:51:09 PM
2-Butanone	ND .	10	mg/L	· 1	12/29/2011 5:51:09 PM
Carbon Tetrachloride	ND	0.50	mg/L	· 1	12/29/2011 5:51:09 PM
Chlorobenzene	ND	100	mg/L	1,	12/29/2011 5:51:09 PM
Chloroform	ND	6.0	mg/L	1	12/29/2011 5:51:09 PM
1,4-Dichlorobenzene	. ND	7.5	mg/L '	. 1	12/29/2011 5:51:09 PM
1,2-Dichloroethane (EDC)	. ND	0.50	mg/L	1	12/29/2011 5:51:09 PM
1,1-Dichloroethene	. ND	0.70	mg/L .	1	12/29/2011 5:51:09 PM
Hexachlorobutadiene	ND	0.50	mg/L	1	12/29/2011 5:51:09 PM
Tetrachloroethene (PCE)	ND	0.70	mg/L	1	12/29/2011 5:51:09 PM ·
Trichloroethene (TCE)	ND	0.50	mg/L	1	12/29/2011 5:51:09 PM
Vinyl chloride	ND	0.20	mg/L	1	12/29/2011 5:51:09 PM
Surr: 1,2-Dichloroethane-d4	76.9	69.9-130	%REC	1	12/29/2011 5:51:09 PM
Surr: 4-Bromofluorobenzene	81.0	71.2-123	%REC	· 1	12/29/2011 5:51:09 PM
Surr: Dibromofluoromethane	82.4	73.9-134	%REC	1	12/29/2011 5:51:09 PM
Surr: Toluene-d8 `	89.7	81.9-122	%REC	1 .	12/29/2011 5:51:09 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-4

Lab Order:

1112721

nent Sample 13. 1.33.4

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:37:00 AM **Date Received:** 12/16/2011

Lab ID:

1112721-04

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS					Analyst: JB
Diesel Range Organics (DRO)	120	9.9	•	mg/Kg	1 %	12/19/2011 2:04:09 PM
Motor Oil Range Organics (MRO)	` 160	49		mg/Kg	· 1 :	12/19/2011 2:04:09 PM
Surr: DNOP	111	77.4-131		%REC	1	12/19/2011 2:04:09 PM
EPA METHOD 8015B: GASOLINE RAN	IGE .			•		Analyst: RAA
Gasoline Range Organics (GRO)	24	4.8		mg/Kg	. 1	12/20/2011 5:16:03 AM
Surr: BFB	174	69.7-121	S	%REC	1	12/20/2011 5:16:03 AM
EPA METHOD 7471: MERCURY	•	-				Analyst: JLF
Mercury	ND	0.033		mg/Kg	1	12/19/2011 2:03:23 PM
MERCURY, TCLP	• • .			,		Analyst: JLF
Mercury	ND	0.020		mg/L	1,	12/30/2011 1:38:03 PM
EPA METHOD 6010B: SOIL METALS				,		Analyst: RAGS
Arsenic	ND	25		mg/Kg	10	12/20/2011 10:06:43 AM
Barium	290	1.0		mg/Kg	. 10	12/20/2011 10:06:43 AM
Cadmium	∵⊝ND	1.0		mg/Kg	10	12/20/2011 10:06:43 AM
Chromium	12	3.0		mg/Kg	10	12/20/2011 10:06:43 AM
Lead	10	2.5		mg/Kg	1Ö	12/20/2011 10:06:43 AM
Selenium	ND	25	, w	mg/Kg	10	12/20/2011 10:06:43 AM
Silver	ND	2.5		mg/Kg	10	12/20/2011 10:06:43 AM
EPA METHOD 6010B: TCLP METALS				,	•	Analyst: ELS
Arsenic	ND	5.0		mg/L	1	1/3/2012 8:41:45 AM
Barium	∽ND	. 100	-,	mg/L	5	1/3/2012 9:46:25 AM
Cadmium	ND	1.0		mg/L	·.1	1/3/2012 8:41:45 AM
Chromium	ND	5.0		mg/L	1	1/3/2012 8:41:45 AM
Lead	ND	5.0	ŕ	mg/L	1	1/3/2012 8:41:45 AM
Selenium	ND	1.0		mg/L	• 1	1/3/2012 8:41:45 AM
Silver	ND	5.0	•	mg/L	1 -	1/3/2012 8:41:45 AM
EPA METHOD 8270C: SEMIVOLATILES	3			•		Analyst: JDC
Acenaphthene	ND	2.0		mg/Kg	1	12/20/2011 11:24:29 PM
Acenaphthylene	ND	, 2.0		mg/Kg	1	12/20/2011 11:24:29 PM
Aniline	ЙD	2.0		mg/Kg	′ 1	12/20/2011 11:24:29 PM
Anthracene	ND	2.0		mg/Kg	1	12/20/2011 11:24:29 PM
Azobenzene	ND	2.0		mg/Kg	1	12/20/2011 11:24:29 PM
Benz(a)anthracene	ND	2.0		mg/Kg	1	12/20/2011 11:24:29 PM
Benzo(a)pyrene	ND	2.0		mg/Kg	1	12/20/2011 11:24:29 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit-

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-4

Lab Order:

1112721

Collection Date: 12/15/2011 11:37:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-04

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: JDC
Benzo(b)fluoranthene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Benzo(g,h,i)perylene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Benzo(k)fluoranthene	ND ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Benzoic acid	ND	4.9	mg/Kg	:1	12/20/2011 11:24:29 PM
Benzyl alcohol	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Bis(2-chloroethoxy)methane	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg	· 1	12/20/2011 11:24:29 PM
Bis(2-chloroisopropyl)ether	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Bis(2-ethylhexyl)phthalate	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
4-Bromophenyl phenyl ether	. ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Butyl benzyl phthalate	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Carbazole	ND ·	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
4-Chloro-3-methylphenol	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
4-Chloroaniline	ND	4.9	mg/Kg	. 1	12/20/2011 11:24:29 PM
2-Chloronaphthalene	ND	2.5	mg/Kg	1	12/20/2011 11:24:29 PM
2-Chlorophenoi	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
4-Chlorophenyl phenyl ether	.ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Chrysene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Di-n-butyl phthalate	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
Di-n-octyl phthalate	ND	2.5	mg/Kg	1	12/20/2011 11:24:29 PM
Dibenz(a,h)anthracene	ND	2.0	mg/Kg	· 1	12/20/2011 11:24:29 PM
Dibenzofuran	- ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
1,2-Dichlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
1,3-Dichlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
1,4-Dichlorobenzene	ND	2.0	mg/Kg	1 .	12/20/2011 11:24:29 PM
3,3'-Dichlorobenzidine	ND	2.5	mg/Kg	. 1	12/20/2011 11:24:29 PM
Diethyl phthalate	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Dimethyl phthalate	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
2,4-Dichlorophenol	ND	3.9	mg/Kg	1 ·	12/20/2011 11:24:29 PM
2,4-Dimethylphenol	ND	3.0	mg/Kg	1	12/20/2011 11:24:29 PM
4,6-Dinitro-2-methylphenol	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
2,4-Dinitrophenol	ND	3.9	mg/Kg	1.	12/20/2011 11:24:29 PM
2,4-Dinitrotoluene	· ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
2,6-Dinitrotoluene	ND	4.9	mg/Kg	. 1	12/20/2011 11:24:29 PM
Fluoranthene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Fluorene	, ND	` 2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Hexachlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Hexachlorobutadiene	ND	2.0	mg/Kg	1 .	12/20/2011 11:24:29 PM
Hexachlorocyclopentadiene	ND	2.0	mg/Kg	- 1	12/20/2011 11:24:29 PM
Hexachloroethane	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

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Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-4

Lab Order:

1112721

Project:

Collection Date: 12/15/2011 11:37:00 AM

Lab ID:

Tank 35 Clean Up 1112721-04

Date Received: 12/16/2011 Matrix: SOIL

Eab ID: 1112/21-04					<u> </u>
Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: JDC
Indeno(1,2,3-cd)pyrene	ND	2.0	mg/Kg ´	. 1	12/20/2011 11:24:29 PM
Isophorone	, ND	4.9	. mg/Kg	. 1	12/20/2011 11:24:29 PM
2-Methylnaphthalene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
1-Methylnaphthalene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
2-Methylphenol	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
3+4-Methylphenol	ND	2.0	mg/Kg	1 .	12/20/2011 11:24:29 PM
N-Nitrosodi-n-propylamine	NĎ	2.0	mg/Kg	1 -	12/20/2011 11:24:29 PM
N-Nitrosodiphenylamine	, ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Naphthalene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
2-Nitroaniline	ND .	2.0	mg/Kg ·	1	12/20/2011 11:24:29 PM
3-Nitroaniline	. ND	2.0	mg/Kg	. 1 ·	12/20/2011 11:24:29 PM
4-Nitroaniline	·ND	3.9	mg/Kg	1	12/20/2011 11:24:29 PM
Nitrobenzene	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
2-Nitrophenol	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
4-Nitrophenol	ND	2.5	mg/Kg	1	12/20/2011 11:24:29 PM
Pentachlorophenol	ND	3.9	mg/Kg	1	12/20/2011 11:24:29 PM
Phenanthrene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Phenol	ND	2.0	mg/Kg	· 1	12/20/2011 11:24:29 PM
Pyrene	ND '	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
Pyridine	ND	4.9	mg/Kg	1	12/20/2011 11:24:29 PM
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:24:29 PM
2,4,5-Trichlorophenol	ND	2.0	mg/Kg	1 .	12/20/2011 11:24:29 PM
2,4,6-Trichlorophenol	ND	2.0.	mg/Kg	1	12/20/2011 11:24:29 PM
Surr: 2,4,6-Tribromophenol	72.6	24.9-115	%REC	1	12/20/2011 11:24:29 PM
Surr: 2-Fluorobiphenyl	89.0	26.2-108	%REC	. 1	12/20/2011 11:24:29 PM
Surr: 2-Fluorophenol	70.5	17.7-98	%REC	1	12/20/2011 11:24:29 PM
Surr: 4-Terphenyl-d14	` : 83.6	33.8-108	%REC	1	12/20/2011 11:24:29 PM
Surr: Nitrobenzene-d5	69.7	23-109	%REC	1	12/20/2011 11:24:29 PM
Surr. Phenol-d5	68.9	22.1-103	%REC	1	12/20/2011 11:24:29 PM
EPA METHOD 8270C TCLP					Analyst: JDC
2,4-Dinitrotoluene	ND	0.13	mg/L	1	1/3/2012 3:31:01 PM
Hexachlorobenzene	ND	0.13	mg/L	1	1/3/2012 3:31:01 PM
Hexachlorobutadiene	ND	0.50	mg/L	1	1/3/2012 3:31:01 PM
Hexachloroethane	ND	3.0	mg/L	1	1/3/2012 3:31:01 PM
Nitrobenzene	ND	2.0	mg/L	1	1/3/2012 3:31:01 PM
Pentachlorophenol .	ND	100	mg/L	1	1/3/2012 3:31:01 PM
Pyridine	ND	5.0	mg/L	1	1/3/2012 3:31:01 PM
2,4,5-Trichlorophenol	ND	400	mg/L	_. 1	1/3/2012 3:31:01 PM
2,4,6-Trichlorophenol	ND .	2.0	mg/L	1	1/3/2012 3:31:01 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 06-Jan-12

Analytical Report

CLIENT:

Western Refining Southwest, Gallup

-Client-Sample-ID: T-35-4

Lab Order:

1112721

nenegampie II. II. II.

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:37:00 AM

Lab ID:

1112721-04

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C TCLP	'			-	Analyst: JDC
Cresols, Total	ND	200	mg/L	1	1/3/2012 3:31:01 PM
Surr: 2,4,6-Tribromophenol	76.4	18.2-136	%REC	1	1/3/2012 3:31:01 PM
Surr: 2-Fluorobiphenyl	65.0	40.5-108	%REC	1	1/3/2012 3:31:01 PM
Surr: 2-Fluorophenol	49.2	23-101	%REC	1	1/3/2012 3:31:01 PM
Surr: 4-Terphenyl-d14	78.7	40.9-112	%REC	1	1/3/2012 3:31:01 PM
Surr: Nitrobenzene-d5	77.6	41-115	%REC	1	1/3/2012 3:31:01 PM
Surr: Phenol-d5	38.3	23.4-73.6	%REC	1	1/3/2012 3:31:01 PM
EPA METHOD 8260B: VOLATILES	•		,		Analyst: MMS
Benzene	ND	0.048	mg/Kg	· 1	12/19/2011 2:23:38 PM
Tolueñe	0.062	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Ethylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Methyl tert-butyl ether (MTBE)	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,2,4-Trimethylbenzene	0.39	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,3,5-Trimethylbenzene	0.44	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,2-Dichloroethane (EDC)	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,2-Dibromoethane (EDB)	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Naphthalene	ND	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
1-Methylnaphthalene	0.25	0.19	mg/Kg	1	12/19/2011 2:23:38 PM
2-Methylnaphthalene	0.43	0.19		1	12/19/2011 2:23:38 PM
Acetone	ND	0.72	mg/Kg	1	12/19/2011 2:23:38 PM
Bromobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Bromodichloromethane	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Bromoform	ND	0.048	mg/Kg	· 1	12/19/2011 2:23:38 PM
Bromomethane	ND.	0.14	mg/Kg	· 1	12/19/2011 2:23:38 PM
2-Butanone	, ND	0.48	mg/Kg	1	12/19/2011 2:23:38 PM
Carbon disulfide	ŅD	0.48	mg/Kg	1	12/19/2011 2:23:38 PM
Carbon tetrachloride	ND	. 0.097	mg/Kg	1	12/19/2011 2:23:38 PM
Chlorobenzene	. ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Chloroethane	ND	. 0.097	mg/Kg	1	12/19/2011 2:23:38 PM
Chloroform	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Chloromethane	ND	0.14	mg/Kg	1 .	12/19/2011 2:23:38 PM
2-Chlorotoluene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
4-Chlorotoluene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
cis-1,2-DCE	ND	0.048	. mg/Kg	1 .	12/19/2011 2:23:38 PM
cis-1,3-Dichloropropene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,2-Dibromo-3-chloropropane	ND	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
Dibromochloromethane	ND	0.048	mg/Kg	1 .	12/19/2011 2:23:38 PM
Dibromomethane	ИĎ	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
1,2-Dichlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-4

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:37:00 AM

Lab ID:

1112721-04

Date Received: 12/16/2011 Matrix: SOIL

Analyses	Reșult	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: MMS
1,3-Dichlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,4-Dichlorobenzene	ND	0.048	mg/Kg	1 .	12/19/2011 2:23:38 PM
Dichlorodifluoromethane	. ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,1-Dichloroethane	ND)	0.097	mg/Kg	1 .	12/19/2011 2:23:38 PM
1,1-Dichloroethene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,2-Dichloropropane	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,3-Dichloropropane	. ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
2,2-Dichloropropane	· ND	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
1,1-Dichloropropene	ND	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
Hexachlorobutadiene	ND.	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
2-Hexanone	ND	0.48	mg/Kg	1	12/19/2011 2:23:38 PM
Isopropylbenzene	. ND	0.048	mg/Kg	· 1	12/19/2011 2:23:38 PM
4-Isopropyltoluene	0.056	0.048	mg/Kg	* 1	12/19/2011 2:23:38 PM
4-Methyl-2-pentanone	ND	0.48	mg/Kg	1	12/19/2011 2:23:38 PM
Methylene chloride	ND	0.14	mg/Kg	1	12/19/2011 2:23:38 PM
n-Butylbenzene	0.072	0.048	mg/Kg	· 1	12/19/2011 2:23:38 PM
n-Propylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
sec-Butylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Styrene .	. ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
tert-Butylbenzene	ND	. 0.048	mg/Kg	- 1	12/19/2011 2:23:38 PM
1,1,1,2-Tetrachloroethane	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,1,2,2-Tetrachloroethane	ND	0.048,	mg/Kg	· / i	12/19/2011 2:23:38 PM
Tetrachloroethene (PCE)	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
trans-1,2-DCE	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
trans-1,3-Dichloropropene	, ND	0.048	mg/Kg	· 1	12/19/2011 2:23:38 PM
1,2,3-Trichlorobenzene	ND	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
1,2,4-Trichlorobenzene	ND	0.048	mg/Kg	1 .	12/19/2011 2:23:38 PM
1,1,1-Trichloroethane	ND	0.048	mg/Kg	. 1	12/19/2011 2:23:38 PM
1,1,2-Trichloroethane	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM.
Trichloroethene (TCE)	ND	0.048	mg/Kg	.1	12/19/2011 2:23:38 PM
Trichlorofluoromethane	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
1,2,3-Trichloropropane	ND	0.097	mg/Kg	1	12/19/2011 2:23:38 PM
Vinyl chloride	ND	0.048	mg/Kg	1	12/19/2011 2:23:38 PM
Xylenes, Total	1.0	0.097	mg/Kg	1 `	12/19/2011 2:23:38 PM
Surr: 1,2-Dichloroethane-d4	92.7	70-130	%REC	1	12/19/2011 2:23:38 PM
Surr: 4-Bromofluorobenzene	93.8	70-130	%REC	1	12/19/2011 2:23:38 PM
Surr: Dibromofluoromethane	94.1	63.1-128	%REC	1	12/19/2011 2:23:38 PM
Surr: Toluene-d8	95.2	70-130	%REC	1	12/19/2011 2:23:38 PM

VOLATILES BY 8260B/1311

Analyst: MMS

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 06-Jan-12 Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-4

Lab Order:

1112721

Collection Date: 12/15/2011 11:37:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-04

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
OLATILES BY 8260B/1311					Analyst: MMS
Benzene	ND	0.50	mg/L	1	12/29/2011 6:18:54 PM
2-Butanone	· ND	10	mg/L	1	12/29/2011 6:18:54 PM
Carbon Tetrachloride	ND	0.50	mg/L	1	12/29/2011 6:18:54 PM
Chlorobenzene	ND	100	mg/L	1	12/29/2011 6:18:54 PM
Chloroform	ND	6.0	mg/L	1.	12/29/2011 6:18:54 PM
1,4-Dichlorobenzene	ND	· 7.5	mg/L	1	12/29/2011 6:18:54 PM
1,2-Dichloroethane (EDC)	ND	0.50	mg/L	1	12/29/2011 6:18:54 PM
1,1-Dichloroethene	, ND	0.70	, mg/L	1	12/29/2011 6:18:54 PM
Hexachlorobutadiene	ND	0.50	mg/L	1	12/29/2011 6:18:54 PM
Tetrachloroethene (PCE)	ND	0.70	mg/L	. 1	12/29/2011 6:18:54 PM
Trichloroethene (TCE)	ND	0.50	mg/L	1	12/29/2011 6:18:54 PM
Vinyl chloride	ND	0.20	mg/L	1 `	12/29/2011 6:18:54 PM
Surr: 1,2-Dichloroethane-d4	76.4	69.9-130	%REC	1	12/29/2011 6:18:54 PM
Surr: 4-Bromofluorobenzene	81.4	71.2-123	%REC	1	12/29/2011 6:18:54 PM
Surr: Dibromofluoromethane	80.6	73.9-134	%REC	1	12/29/2011 6:18:54 PM
Surr: Toluene-d8	93.8	81.9-122	%REC	1	12/29/2011 6:18:54 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- Maximum Contaminant Level MCL
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 24 of 30

Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-5

Lab Order:

1112721

Collection Date: 12/15/2011 11:30:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-05

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE O	RGANICS				Analyst: JB
Diesel Range Organics (DRO)	160	10	mg/Kg	1	12/19/2011 2:33:50 PM
Motor Oil Range Organics (MRO)	` 230	51	mg/Kg	1	12/19/2011 2:33:50 PM
Surr: DNOP	. 114	77.4-131	%REC	· 1	12/19/2011 2:33:50 PM
		•			
EPA METHOD 8015B: GASOLINE RANGI	Ε .	•	,		Analyst: RAA
Gasoline Range Organics (GRO)	ND	4.8	mg/Kg	. 1	12/20/2011 5:44:48 AM
Surr: BFB	108	69.7-121	%REC	1	12/20/2011 5:44:48 AM
EPA METHOD 7471: MERCURY				• . '	Analyst: JLF
Mercury	ND	0.033	mg/Kg	. 1	12/19/2011 2:05:08 PM
Wichouty	ND	0.033	mg/Ng		12/13/2011 2.00.00 1 W
MERCURY, TCLP					Analyst: JLF
Mercury	ND	0.020	mg/L	1	12/30/2011 1:43:18 PM
		0.020		,	12.00.2011 11.00.1011
EPA METHOD 6010B: SOIL METALS				•	Analyst: RAGS
Arsenic	ND	25	mg/Kg	10	12/20/2011 10:08:35 AM
Barium	280	1.0	mg/Kg	10	12/20/2011 10:08:35 AM
Cadmium	ND	1.0	mg/Kg	10	12/20/2011 10:08:35 AM
Chromium	9.2	3.0	mg/Kg	· · 10	12/20/2011 10:08:35 AM
Lead	9.4	2.5	mg/Kg	10	12/20/2011 10:08:35 AM
Selenium	ND	25	mg/Kg	. 10	12/20/2011 10:08:35 AM
Silver	ND	2.5	· mg/Kg	10	12/20/2011 10:08:35 AM
EPA METHOD 6010B: TCLP METALS			•	•	Analyst: ELS
Arsenic	ND	5.0	mg/L	·1,	1/3/2012 8:43:52 AM
Barium	ND	/ 100	mg/L	5	1/3/2012 9:48:26 AM
Cadmium	ND	1.0	mg/L	1	1/3/2012 8:43:52 AM
Chromium	ND	5.0	mg/L	1	1/3/2012 8:43:52 AM
Lead	ND	5.0	mg/L	1	1/3/2012 8:43:52 AM
Selenium	ND	1.0	mg/L	. 1	1/3/2012 8:43:52 AM
Silver	ND	5.0	mg/L	1	1/3/2012 8:43:52 AM
		•	1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
EPA METHOD 8270C: SEMIVOLATILES					Analyst: JDC
Acenaphthene	. ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Acenaphthylene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Aniline	ND	2.0	mg/Kg	.1	12/20/2011 11:53:20 PM
Anthracene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Azobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Benz(a)anthracene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Benzo(a)pyrene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample-ID: T-35-5

Lab Order:

1112721

Collection Date: 12/15/2011 11:30:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-05

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	ES .				Analyst: JDC
Benzo(b)fluoranthene	.ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Benzo(g,h,i)perylene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Benzo(k)fluoranthene	ND	2.0	mg/Kg	, 1	12/20/2011 11:53:20 PM
Benzoic acid	ND	5.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
Benzyl alcohol	. ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Bis(2-chloroethoxy)methane	· ND	2.0	mg/Kg	· 1	12/20/2011 11:53:20 PM
Bis(2-chloroethyl)ether	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Bis(2-chloroisopropyl)ether	ND 1	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Bis(2-ethylhexyl)phthalate	ND	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
4-Bromophenyl phenyl ether	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Butyl benzyl phthalate	ND :	2.0	mg/Kg	1 -	12/20/2011 11:53:20 PM
Carbazole	ND .	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
4-Chloro-3-methylphenol	ND	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
4-Chloroaniline	ND.	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
2-Chloronaphthalene	ND	2.5	mg/Kg	• 1	12/20/2011 11:53:20 PM
2-Chlorophenol	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
4-Chlorophenyl phenyl ether	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Chrysene	. ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Di-n-butyl phthalate	ND	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
Di-n-octyl phthalate	ND	2.5	. mg/Kg	1 .	. 12/20/2011 11:53:20 PM
Dibenz(a,h)anthracene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Dibenzofuran	ND ·	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
1,2-Dichlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
1,3-Dichlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
1,4-Dichlorobenzene	ND	2.0	mg/Kg	1 .	12/20/2011 11:53:20 PM
3,3'-Dichlorobenzidine	ND	2.5	mg/Kg	1	12/20/2011 11:53:20 PM
Diethyl phthalate	ND ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Dimethyl phthalate	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
2,4-Dichlorophenol	· ND	4.0	mg/Kg	1	12/20/2011 11:53:20 PM
2,4-Dimethylphenol	: ND	3.0	mg/Kg	1	12/20/2011 11:53:20 PM
4,6-Dinitro-2-methylphenol	.ND	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
2,4-Dinitrophenol	ND.	4.0	mg/Kg	1	12/20/2011 11:53:20 PM
2,4-Dinitrotoluene	ND.	5.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
2,6-Dinitrotoluene	ND	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
Fluoranthene	ND	2.0	mg/Kg	, 1	12/20/2011 11:53:20 PM
Fluorene	ND ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Hexachlorobenzene	N D	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Hexachiorobutadiene	, ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Hexachlorocyclopentadiene	ND	△2.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
Hexachloroethane	ND	2.0	mg/Kg	. 1	12/20/2011 11:53:20 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12

Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-35-5

Lab Order:

1112721

nent sample is. 1 33 3

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:30:00 AM

Lab ID:

1112721-05

Date Received: 12/16/2011

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATI	LES				Analyst: JDC
Indeno(1,2,3-cd)pyrene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Isophorone	ND	5.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
2-Methylnaphthalene	. ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
1-Methylnaphthalene	ND	2.0	mg/Kg	1	.12/20/2011 11:53:20 PM
2-Methylphenol	ND	5.0	_ mg/Kg	· 1	12/20/2011 11:53:20 PM
3+4-Methylphenol	ND	2.0	mg/Kg	1 .	12/20/2011 11:53:20 PM
N-Nitrosodi-n-propylamine	. ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
N-Nitrosodiphenylamine	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Naphthalene	. ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
2-Nitroaniline	ND	2.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
3-Nitroaniline	ND	. 2.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
4-Nitroaniline	ND	4.0	mg/Kg	1	12/20/2011 11:53:20 PM
Nitrobenzene	ND	5.0	mg/Kg	1	12/20/2011 11:53:20 PM
2-Nitrophenol	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
4-Nitrophenol	ND	2.5	mg/Kg	1	12/20/2011 11:53:20 PM
Pentachlorophenol	ND	4.0	mg/Kg	1	12/20/2011 11:53:20 PM
Phenanthrene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Phenol	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Pyrene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
Pyridine	ND	5.0	mg/Kg	1 .	12/20/2011 11:53:20 PM
1,2,4-Trichlorobenzene	ND	2.0	mg/Kg	1	12/20/2011 11:53:20 PM
2,4,5-Trichlorophenol	.ND	2.0	. mg/Kg	1	12/20/2011 11:53:20 PM
2,4,6-Trichlorophenol	ND	. 2.0	mg/Kg	. 1	12/20/2011 11:53:20 PM
Surr: 2,4,6-Tribromophenol	74.5	24.9-115	%REC	1	12/20/2011 11:53:20 PM
Surr: 2-Fluorobiphenyl	, 92.4	26.2-108	%REC	. 1	12/20/2011 11:53:20 PM
Surr: 2-Fluorophenol	80.9	17.7-98	%REC	1	12/20/2011 11:53:20 PM
Surr: 4-Terphenyl-d14	90.8	33.8-108	%REC	1	12/20/2011 11:53:20 PM
Surr: Nitrobenzene-d5	77.6	23-109	%REC	1	12/20/2011 11:53:20 PM
Surr: Phenol-d5	74.9	22.1-103	%REC	1	12/20/2011 11:53:20 PM
		•••••			
EPA METHOD 8270C TCLP	, ND	0.40	#		Analyst: JDC
2,4-Dinitrotoluene	ND	0.13	mg/L	1	1/3/2012 4:00:05 PM
Hexachlorobenzene	ND	0.13	mg/L	1	1/3/2012 4:00:05 PM
Hexachlorobutadiene	ND	0.50	mg/L	1	1/3/2012 4:00:05 PM
Hexachloroethane	ND	3.0	mg/L	1	1/3/2012 4:00:05 PM
Nitrobenzene	ND	2.0	mg/L	1	1/3/2012 4:00:05 PM
Pentachlorophenol	ND	100	mg/L	1	1/3/2012 4:00:05 PM
Pyridine	ND	5.0	mg/L	1	1/3/2012 4:00:05 PM
2,4,5-Trichlorophenol	· ND	400	mg/L	1	1/3/2012 4:00:05 PM
2,4,6-Trichlorophenol	ND	2.0	mg/L	· 1 · ·	1/3/2012 4:00:05 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining-Southwest, Gallup

Client-Sample-ID: T-35-5

Lab Order:

1112721

Project:

1112/21

Collection Date: 12/15/2011 11:30:00 AM

- 1 m

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-05

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C TCLP				··· ··· ···	Analyst: JDC
Cresols, Total	, ND	200	mg/L	1	1/3/2012 4:00:05 PM
Surr: 2,4,6-Tribromophenol	78.0	18.2-136	%REC	· . 1	. 1/3/2012 4:00:05 PM
Surr: 2-Fluorobiphenyl	74.5	40.5-108	%REC	· 1	1/3/2012 4:00:05 PM
Surr: 2-Fluorophenol	57.2	23-101	%REC	1	1/3/2012 4:00:05 PM
Surr: 4-Terphenyl-d14	78.9	40.9-112	%REC	1	1/3/2012 4:00:05 PM
Surr: Nitrobenzene-d5	87.1	41-115	%REC	1	1/3/2012 4:00:05 PM
Surr: Phenol-d5	41.7	23.4-73.6	%REC	. 1	1/3/2012 4:00:05 PM
EPA METHOD 8260B: VOLATILES		•	,		Analyst: MMS
Benzene	ND	0.048	mg/Kg	. 1	12/19/2011 2:51:39 PM
Toluene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Ethylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,2,4-Trimethylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,3,5-Trimethylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,2-Dichloroethane (EDC)	ND	0.048	mg/Kg	1 -	12/19/2011 2:51:39 PM
1,2-Dibromoethane (EDB)	ND	0.048	mg/Kg	1 .	12/19/2011 2:51:39 PM
Naphthalene	ND	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
1-Methylnaphthalene	. ND	0.19	mg/Kg	. 1	12/19/2011 2:51:39 PM
2-Methylnaphthalene	ND	0.19	mg/Kg	1	12/19/2011 2:51:39 PM
Acetone	ND	0.72	mg/Kg	1	12/19/2011 2:51:39 PM
Bromobenzene	ND	0.048	mg/Kg	. 1	12/19/2011 2:51:39 PM
Bromodichloromethane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Bromoform	ND	0.048	mg/Kg	· 1	12/19/2011 2:51:39 PM
Bromomethane	ND 1	0.14	mg/Kg	· 1	12/19/2011 2:51:39 PM
2-Butanone	ND	0.48	mg/Kg	1	12/19/2011 2:51:39 PM
Carbon disulfide	ND	0.48	mg/Kg	1	12/19/2011 2:51:39 PM
Carbon tetrachloride	ND.	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
Chlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Chloroethane	ND .	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
Chloroform	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Chloromethane	ND	0.14	mg/Kg	1	12/19/2011 2:51:39 PM
2-Chlorotoluene	ND	0.048	mg/Kg	, 1	12/19/2011 2:51:39 PM
4-Chlorotoluene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
cis-1,2-DCE	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
cis-1,3-Dichloropropene	ND	0.048	mg/Kg	. 1	12/19/2011 2:51:39 PM
1,2-Dibromo-3-chloropropane	ND	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
Dibromochloromethane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Dibromomethane	ND	ọ. 09 7	mg/Kg	1	12/19/2011 2:51:39 PM
1,2-Dichlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 28 of 30

Date: 06-Jan-12

Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Glient-Sample ID: T-35-5

Lab Order:

1112721

Project:

Tank 35 Clean Up

Collection Date: 12/15/2011 11:30:00 AM

Lab ID:

1112721-05

Date Received: 12/16/2011 Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: MMS
1,3-Dichlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,4-Dichlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Dichlorodifluoromethane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,1-Dichloroethane	ND	0.097	mg/Kg	1 .	12/19/2011 2:51:39 PM
1,1-Dichloroethene	ND .	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,2-Dichloropropane	- ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,3-Dichloropropane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
2,2-Dichloropropane	, ND	0.097	mg/Kg	. 1	12/19/2011 2:51:39 PM
1,1-Dichloropropeпе	ND	0.097	mg/Kg	·1	12/19/2011 2:51:39 PM
Hexachlorobutadiene	ND	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
2-Hexanone	. ND	0.48	mg/Kg	1	12/19/2011 2:51:39 PM
Isopropylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
4-Isopropyltoluene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
4-Methyl-2-pentanone	ND	0.48	mg/Kg	1	- 12/19/2011 2:51:39 PM
Methylene chloride	ND	0.14	mg/Kg .	1	12/19/2011 2:51:39 PM
n-Butylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
n-Propylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
sec-Butylbenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Styrene	ND.	0.048	mg/Kg	.1	12/19/2011 2:51:39 PM
tert-Butylbenzene	ND ND	0.048	mg/Kg	1 .	12/19/2011 2:51:39 PM
1,1,1,2-Tetrachloroethane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,1,2,2-Tetrachloroethane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Tetrachloroethene (PCE)	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
trans-1,2-DCE	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
trans-1,3-Dichloropropene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,2,3-Trichlorobenzene	ND	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
1,2,4-Trichlorobenzene	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
1,1,1-Trichloroethane	ND.	0.048	mg/Kg	. 1	12/19/2011 2:51:39 PM
1,1,2-Trichloroethane	ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Trichloroethene (TCE)	. ND	0.048	mg/Kg	, 1	12/19/2011 2:51:39 PM
Trichlorofluoromethane	ND	0.048	mg/Kg	1 1	12/19/2011 2:51:39 PM
1,2,3-Trichloropropane	ND ND	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
Vinyl chloride	, ND	0.048	mg/Kg	1	12/19/2011 2:51:39 PM
Xylenes, Total	ND	0.097	mg/Kg	1	12/19/2011 2:51:39 PM
Surr: 1,2-Dichloroethane-d4	. 90.6	70-130	%REC	· 1	12/19/2011 2:51:39 PM
Surr: 4-Bromofluorobenzene	84.7	70-130	%REC	1	12/19/2011 2:51:39 PM
Surr: Dibromofluoromethane	95.8	63.1-128	%REC	1 .	12/19/2011 2:51:39 PM
Surr: Toluene-d8	98.0	70-130	%REC	1	12/19/2011 2:51:39 PM

VOLATILES BY 8260B/1311

Analyst: MMS

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 29 of 30

Date: 06-Jan-12
Analytical Report

CLIENT:

Western Refining Southwest, Gallup

Client-Sample ID: T-35-5

Lab Order:

1112721

Collection Date: 12/15/2011 11:30:00 AM

Project:

Tank 35 Clean Up

Date Received: 12/16/2011

Lab ID:

1112721-05

Matrix: SOIL

Analyses	Result	PQL	Qual [Units	DF	Date Analyzed
VOLATILES BY 8260B/1311						Analyst: MMS
Benzene	ND	0.50	n	ng/L	1	12/29/2011 6:46:39 PM
2-Butanone	ND	10		ng/L	1	12/29/2011 6:46:39 PM
Carbon Tetrachloride	ND	0.50	n	ng/L	1	12/29/2011 6:46:39 PM
Chlorobenzene	ND	100	n	ng/L	1	12/29/2011 6:46:39 PM
Chloroform	ND	6.0	n	ng/L	1	12/29/2011 6:46:39 PM
1,4-Dichlorobenzene	ND	7.5		ng/L	. 1	12/29/2011 6:46:39 PM
1,2-Dichloroethane (EDC)	ND	0.50	m	ng/L	1	12/29/2011 6:46:39 PM
1,1-Dichloroethene	ND	0.70	m	ng/L	1	12/29/2011 6:46:39 PM
Hexachlorobutadiene	ND	0.50	· m	ng/L	1	12/29/2011 6:46:39 PM
Tetrachloroethene (PCE)	ND	0.70	m	ng/L	1	12/29/2011 6:46:39 PM
Trichloroethene (TCE)	ND	0.50	n	ng/L	1	12/29/2011 6:46:39 PM
Vinyl chloride	ND	0.20	π	ng/L	1	12/29/2011 6:46:39 PM
Surr: 1,2-Dichloroethane-d4	77.3	69.9-130	%	REC	1	12/29/2011 6:46:39 PM
Surr: 4-Bromofluorobenzene	83.7	71.2-123	. %	%REC	1	12/29/2011 6:46:39 PM
Surr: Dibromofluoromethane	. 87.5	73.9-134	%	6REC	1	12/29/2011 6:46:39 PM
Surr: Toluene-d8	98.8	81.9-122	%	6REC	1	12/29/2011 6:46:39 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- · S Spike recovery outside accepted recovery limits

Page 30 of 30

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

111229020

Address:

4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109 **Project Name:**

1112721

Attn:

ANDY FREEMAN

Analytical Results Report

Sample Number

111229020-001

Sampling Date

12/15/2011 Date/Time Received

12/29/2011 11:43 AM

Client Sample ID Matrix 1112721-01A / T-35-1

Sampling Time

10:45 AM

Sample Location

Comments

Parameter	Result		PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	12/30/2011	CRW	SW846 CH7	
Ignitability	Negative			1/3/2012	JWC	EPA 1030	•
рН	8.27	ph Units		12/30/2011	KFG	EPA 9045	
Reactive sulfide	203	mg/kg	30	. 1/5/2012	J∏∘.	SW846 CH7	•
%moisture	16.4	Percent		12/30/2011	CRW	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C595; MT:Cert0095

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

12/15/2011

10:55 AM

111229020

Address:

4901 HAWKINS NE SUITE D ALBUQUERQUE, NM 87109

Project Name:

1112721

Attn:

ANDY FREEMAN

Analytical Results Report

Sample Number

111229020-002

Sampling Date

Date/Time Received

12/29/2011 11:43 AM

Client Sample ID Matrix

1112721-02A / T-35-2 Soil

Sampling Time

Sample Location

Comments

Result Units		PQL	Analysis Date	Analyst	Method	Qualifier	
ND	mg/Kg	10	12/30/2011	CRW	SW846 CH7		
Negative			1/3/2012	JWC	EPA 1030		
9.01	ph Units		12/30/2011	KFG	EPA 9045		
· ND	mg/kg	30	1/5/2012	JTT	SW846 CH7		
· 21.2	Percent		12/30/2011	CRW	%moisture		
	ND Negative 9.01 ND	ND mg/Kg Negative 9.01 ph Units ND mg/kg	ND mg/Kg 10 Negative 9.01 ph Units ND mg/kg 30	ND mg/Kg 10 12/30/2011 Negative 1/3/2012 9.01 ph Units 12/30/2011 ND mg/kg 30 1/5/2012	ND mg/Kg 10 12/30/2011 CRW Negative 1/3/2012 JWC 9.01 ph Units 12/30/2011 KFG ND mg/kg 30 1/5/2012 JTT	ND mg/Kg 10 12/30/2011 CRW SW846 CH7 Negative 1/3/2012 JWC EPA 1030 9.01 ph Units 12/30/2011 KFG EPA 9045 ND mg/kg 30 1/5/2012 JTT SW846 CH7	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

111229020

Address:

4901 HAWKINS NE SUITE D

Project Name:

1112721

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

Analytical Results Report

Sample Number

111229020-003

Sampling Date

12/15/2011 Date/Time Received

12/29/2011, 11:43 AM

Client Sample ID Matrix 1112721-03A / T-35-3 Soil Sampling Time 11:10 AM

Sample Location

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	12/30/2011	CRW	SW846 CH7	
Ignitability	Negative			1/3/2012	JWC	EPA 1030	
pH	9.00	ph Units		12/30/2011	KFG	EPA 9045	
Reactive sulfide	ND	mg/kg	30	1/5/2012	JTT	SW846 CH7	
%moisture	11.1	Percent		12/30/2011	CRW	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

12/15/2011

11:37 AM

111229020

Address:

4901 HAWKINS NE SUITE D

Project Name:

1112721

ALBUQUERQUE, NM 87109

Attn:

ANDY FREEMAN

Analytical Results Report

Sample Number

111229020-004

Sampling Date Sampling Time

Date/Time Received

12/29/2011 11:43 AM

Client Sample ID Matrix

1112721-04A / T-35-4 Soil

Sample Location

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifie
Cyanide (reactive)	ND	mg/Kg	10	12/30/2011	CRW	SW846 CH7	
Ignitability	Negative			1/3/2012	JWC	EPA 1030	
pH ·	8.54	ph Units		12/30/2011	KFG	EPA 9045	
Reactive sulfide	ND	mg/kg	30	1/5/2012	JTT	SW846 CH7	•
%moisture	6.2	Percent		12/30/2011	CRW	%moisture	

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C595, MT:Cert0095

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Client:

HALL ENVIRONMENTAL ANALYSIS LAB

Batch #:

111229020

Address:

4901 HAWKINS NE SUITE D

Project Name:

1112721

Attn:

ALBUQUERQUE, NM 87109 ANDY FREEMAN

Analytical Results Report

Sample Number

111229020-005

Sampling Date

12/15/2011

Date/Time Received 12/29/2011 11:43 AM

Client Sample ID

1112721-05A / T-35-5

Sampling Time

11:30 AM

Matrix

Soil

Sample Location

Comments

Parameter	Result	Units	PQL	Analysis Date	Analyst	Method	Qualifier
Cyanide (reactive)	ND	mg/Kg	10	12/30/2011	CRW	SW846 CH7	
Ignitability	Negative			1/3/2012	JWC	EPA 1030	
pH .	8.86	ph Units		12/30/2011	KFG	EPA 9045	
Reactive sulfide	'ND .	mg/kg	30	1/5/2012	JTT	SW846 CH7	•
%moisture	12.4	Percent		12/30/2011	CRW	%moisture	

Authorized Signature

John Coddington, Lab Manager

MCL

EPA's Maximum Contaminant Level

ND PQL

ND Not Detected

Practical Quantitation Limit

This report shall not be reproduced except in full, without the written approval of the laboratory. The results reported relate only to the samples indicated.

Soil/solid results are reported on a dry-weight basis unless otherwise noted.

Certifications held by Anatek Labs ID: EPA:ID00013; AZ:0701; CO:ID00013; FL(NELAP):E87893; ID:ID00013; IN:C-ID-01; KY:90142; MT:CERT0028; NM: ID00013; OR:ID200001-002; WA:C595 Certifications held by Anatek Labs WA: EPA:WA00169; CA:Cert2632; ID:WA00169; WA:C585; MT:Cert0095

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

ì112721

Analyte	Result	Units .	PQL	SPK Va SP	K ref	%Rec L	owLimit Hi	ghLimit %RP[D RPDLimit Qual
Method: EPA Method 8015B; D	iesel Range	Organics				,			
Sample ID: MB-29798		MBLK				Batch ID:	29798	Analysis Date:	12/18/2011 2:59:58 PN
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50				•		
Sample ID: LCS-29798		LÇS				Batch ID:	29798	Analysis Date:	12/18/2011 3:29:56 PN
Diesel Range Organics (DRO)	51.15	mg/Kg	10	50	0	102	62.7	139	
Method: EPA Method 8015B: G	asoline Ran	ige							
Sample ID: MB-29797	•	MBLK	-			Batch ID:	29797	Analysis Date:	12/19/2011 12:23:44 PN
Gasoline Range Organics (GRO)	ND .	mg/Kg	5.0						
Sample ID: LCS-29797		LCS				Batch ID:	29797	Analysis Date:	12/19/2011 11:54:58 AN
Gasoline Range Organics (GRO)	25.04	mg/Kg	5.0	25	0	100	86.4	132	• •

Ona	lifie	rs:

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec LowLimit HighLimit %RPD RPDLimit Qual
Method: EPA Method 8260B:	VOLATILES				
Sample ID: mb-29797	•	MBLK			Batch ID: 29797 Analysis Date: 12/19/2011 11:35:58 A
Benzene	ND	mg/Kg	0.050		
Toluene	ND	mg/Kg	0.050		•
Ethylbenzene	ND	mg/Kg	0.050		
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050		
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050		
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050		
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050		
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050		
Naphthalene	ND	mg/Kg	0.10		
1-Methylnaphthalene	ND	mg/Kg	0.20	•	
2-Methylnaphthalene	ND	mg/Kg	0.20		
Acetone	· ND	mg/Kg	0.75	•	
Bromobenzene .	ND	mg/Kg	0.050	•	
Bromodichloromethane	ND	mg/Kg	0.050		
Bromoform	ND	mg/Kg	0.050	•	
Bromomethane	ND	mg/Kg	0.15		
2-Butanone	ND	mg/Kg	0.50		
Carbon disulfide	ND	mg/Kg	0.50		•
Carbon tetrachloride	· ND	mg/Kg	0.10		
Chlorobenzene	ND	mg/Kg	0.050		
Chloroethane	ND	mg/Kg	0.10		
Chloroform	ND	mg/Kg	0.050	•	
Chloromethane	ND -	mg/Kg	0.15		
2-Chlorotoluene	ND .	mg/Kg	0.050		
4-Chlorotoluene	ND	mg/Kg	0.050	•	
cis-1,2-DCE	ND	mg/Kg	0.050		
cis-1,3-Dichloropropene	ND	mg/Kg	0.050	•	
1,2-Dibromo-3-chloropropane	ND .	mg/Kg	0.10		
Dibromochloromethane	ND	mg/Kg	0.050		
Dibromomethane	ND	mg/Kg	0.10		
1,2-Dichlorobenzene	ND .	mg/Kg	0.050		
1,3-Dichlorobenzene	ND ·	mg/Kg	0.050		
1,4-Dichlorobenzene	ND	mg/Kg	0.050	•	· .
Dichlorodifluoromethane	ND	mg/Kg	0.050		
1,1-Dichloroethane	ND	mg/Kg	0.10		
1,1-Dichloroethene	ND	mg/Kg	0.050	٠	
1,2-Dichloropropane	ND	mg/Kg	0.050		
1,3-Dichloropropane	.ND	mg/Kg	0.050	•	
2,2-Dichloropropane	ND	mg/Kg	0.10		
1,1-Dichloropropene	ND	mg/Kg	0.10	•	
Hexachlorobutadiene	ND	mg/Kg	0.10	•	
2-Hexanone	ND	mg/Kg .	0.50		
Isopropylbenzene	· ND	mg/Kg	0.050		
4-Isopropyltoluene	ND	mg/Kg	0.050		
		9,9	٥.000		·

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

Analyte	Result	Units	PQL	SPK Va SPK r	ef %Re	c LowLimit H	ighLimit %RPI	D RPDLimit Qual
Method: EPA Method 8260B	: VOLATILES		<u> </u>				<u> </u>	
Sample ID: mb-29797	;	MBLK		•	Batch I	D: 29797	Analysis Date:	12/19/2011 11:35:58 AM
4-Methyl-2-pentanone	ND	mg/Kg	0.50					
Methylene chloride.	ND ·	mg/Kg	0.15				• • •	
n-Butylbenzene	ND	mg/Kg	0.050					
n-Propylbenzene	ND	mg/Kg	0.050	•		. 1		
sec-Butylbenzene	ND	mg/Kg	0.050	•				
Styrene	ND	mg/Kg	0.050	•				
tert-Butylbenzene	ND	mg/Kg	0.050		•			
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050		*			
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050			٠		
Tetrachloroethene (PCE)	ND	mg/Kg	0.050	•				
trans-1,2-DCE	ND	mg/Kg	0.050					
trans-1,3-Dichloropropene	ND	mg/Kg	0.050					
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10					
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050				•	•
1,1,1-Trichloroethane	ND	mg/Kg	0.050					
1,1,2-Trichloroethane	ND	mg/Kg	0.050	4				•
Trichloroethene (TCE)	ND	mg/Kg	0.050		•			
Trichlorofluoromethane	ND	mg/Kg	0.050				÷	÷
1,2,3-Trichloropropane	ND	mg/Kg	0.10					
Vinyl chloride	ND	mg/Kg	0.050					
Xylenes, Total	ND	mg/Kg	0.10	•				
Sample ID: Ics-29797		· LCS			Batch II	D: 29797	Analysis Date:	12/19/2011 12:03:53 PM
Benzene	1.092	mg/Kg	0.050	. 1 0	109	70.7	123	
Toluene	1.002	mg/Kg	0.050	1 0	100	- 80	120	
Chlorobenzene	1.089	mg/Kg	0.050	1 0	109	70	130	1
1,1-Dichloroethene	1.100	mg/Kg	0.050	1 0	110	63.1	148	•
Trichloroethene (TCE)	1.013	mg/Kg	0.050	1 0	101	63.2	114	

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E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

111272

Analyte	Result	Units	PQL	SPK Va S	PK ref	%Rec L	owLimit Hi	ghLimit %RF	D RPDLimit Qual
Method: Volatiles by 8260B/13	311								
Sample ID: 1112721-01AMSD		MSD				Batch ID:	29900	Analysis Date	: 12/29/2011 4:55:52 PM
Benzene	0.4054	mg/L	0.10	0.4	0	101	51.1	171 2.6	9 0
Chlorobenzene	0.4119	mg/L	0.10	0.4	0	103	36.1	191 2.7	3 . 0
1,1-Dichloroethene	0.3894	mg/L	0.10	0.4	, 0	97.3	49.1	162 5.4	6 . 0
Trichloroethene (TCE)	0.3582	mg/L	0.10	0.4	0	89.6	41.2	166 3.0	1 0
Sample ID: mb-29900		MBLK				Batch ID:	29900	Analysis Date	: 12/29/2011 3:04:18 PM
Benzene	ND	mg/L	0.50	•					•
2-Butanone	ND	mg/L	10						
Carbon Tetrachloride	ND .	mg/L	0.50						•
Chlorobenzene	ND	mg/L	100	· ,					•
Chloroform	ND	mg/L	6.0					•	t
1,4-Dichlorobenzene	· ND	mg/L	7.5						
1,2-Dichloroethane (EDC)	ND	mg/L	0.50			•			
1,1-Dichloroethene	ND	mg/L	0.70			÷			
Hexachlorobutadiene	ND	mg/L	0.50						
Tetrachloroethene (PCE)	ND	mg/L	0.70						
Trichloroethene (TCE)	ND	mg/L	0.50				•		,
Vinyl chloride	ND ·	mg/L	0.20						
Sample ID: lcs-29900		LCS	•			Batch ID:	29900	Analysis Date:	12/29/2011 3:32:18 PM
Benzene	0.4022	mg/L	0.10	0.4	0	101	51.1	171	• • •
Chlorobenzene	0.4188	mg/L	0.10	0.4	0	105	36.1	191	
1,1-Dichloroethene	0:3931	mg/L	0.10	0.4	0	98.3	49.1	162	
Trichloroethene (TCE)	0.3806	mg/L `	0.10	0.4	0	95.2	41.2	166	•
Sample ID: 1112721-01AMS		MS				Batch ID:	29900	Analysis Date:	12/29/2011 4:27:56 PM
Benzene	0.4164	mg/L	0.10	0.4	0	104	51.1	171	
Chlorobenzene	0.4233	mg/L	0.10	0.4	0	106	36.1	191	
1,1-Dichloroethene	0.4112	mg/L	0.10	0.4	0	103	49.1	162	
Trichloroethene (TCE)	0.3692	mg/L	0.10	0.4	0 '	92.3	41.2	166	

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E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec LowLimit HighLimit %R	PD RPDLimit Qual
Method: EPA Method 82700	: Semivolatiles		٠,			
Sample ID: mb-29816		MBLK			Batch ID: 29816 Analysis Date	e: 12/20/2011 8:09:06 P
Acenaphthene	ND	mg/Kg	0.20	•		
Acenaphthylene	ND -	mg/Kg	0.20			
Aniline	ND	mg/Kg	0.20	بر		
Anthracene	ND	mg/Kg	0.20			
Azobenzene	ND	mg/Kg	0.20			•
Benz(a)anthracene	ND	.mg/Kg	0.20	•		
Benzo(a)pyrene .	ND	mg/Kg	0.20			
Benzo(b)fluoranthene	ND	mg/Kg	0.20		•	
Benzo(g,h,i)perylene	ND	mg/Kg	0.20			
Benzo(k)fluoranthene	ND	mg/Kg	0.20	•		
Benzoic acid	ND	mg/Kg	0.50			
Benzyl alcohol	ND	mg/Kg	0.20			
Bis(2-chloroethoxy)methane	ND	mg/Kg	. 0.20			
Bis(2-chloroethyl)ether	ND	mg/Kg	0.20		•	
Bis(2-chloroisopropyl)ether	ND.	mg/Kg	0.20			
Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.50	•	·	
4-Bromophenyl phenyl ether	ND	mg/Kg	0.20			
Butyl benzyl phthalate	ND	mg/Kg	0.20	•		•
Carbazole	, ND	mg/Kg	0.20			
4-Chloro-3-methylphenol	ND	mg/Kg	0.50			,
4-Chloroaniline	ND	mg/Kg	0.50			
2-Chloronaphthalene	ND	mg/Kg	0.25			•
2-Chlorophenol	ND	mg/Kg	0.20	•		, .
4-Chlorophenyl phenyl ether	ND	mg/Kg	0.20		· ·	
Chrysene	ND	mg/Kg	0.20			
Di-n-butyl phthalate	ND .	mg/Kg	0.50			
Di-n-octyl phthalate	ND	mg/Kg	0.25			
Dibenz(a,h)anthracene	. ND	mg/Kg	0.20			•
Dibenzofuran	ND	mg/Kg	0.20			•
1,2-Dichlorobenzene	ND	mg/Kg	0.20		•	-
1,3-Dichlorobenzene	ND	mg/Kg	0.20			
1,4-Dichlorobenzene	ND .	mg/Kg	0.20			
3,3'-Dichlorobenzidine		.mg/Kg	0.25	•		
Diethyl phthalate	ND	mg/Kg	0.20			
Dimethyl phthalate	ND	mg/Kg	0.20			
2,4-Dichlorophenol	ND	mg/Kg	0.40	,		•
2,4-Dimethylphenol	ND	mg/Kg	0.30			* ·
4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.50		-	•
2,4-Dinitrophenol	ND	mg/Kg	0.40			
2,4-Dinitrotoluene	ND	mg/Kg	0.50		*	
2,6-Dinitrotoluene	ND	mg/Kg	0.50			•
Fluoranthene	ND	mg/Kg	0.20	•	·	
Fluorene	ND	mg/Kg	0.20			
Hexachiorobenzene	ND	mg/Kg	0.20			

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Date: 06-Jan-12

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

Analyte	Result	Units	PQL	SPK Va SPK r	ef %	6Rec Lov	vLimit Hi	ghLimit	%RPD	RPDLim	it Qual
Method: EPA Method 8270C:	Semivolatiles	5		_		·					
Sample ID: mb-29816		MBLK		-	, Ba	tch ID:	29816	Analysi	s Date:	12/20/201	1 8:09:06 PN
Hexachlorobutadiene	ND	mg/Kg	0.20								•
Hexachlorocyclopentadiene	ND	mg/Kg	0.20					-			
Hexachloroethane	ND	mg/Kg	0.20								
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.20	•							
Isophorone	ND	mg/Kg	0.50								•
2-Methylnaphthalene	ND	mg/Kg	0.20					•			·
1-Methylnaphthalene	ND	mg/Kg	0.20					· ·			
2-Methylphenol	ND	mg/Kg	0.50								
3+4-Methylphenol	ND	mg/Kg	0.20								
N-Nitrosodi-n-propylamine	ND	mg/Kg	0.20			•				•	
N-Nitrosodiphenylamine	ND	mg/Kg	0.20			•					
Naphthalene	ND	mg/Kg	0.20								
2-Nitroaniline	ND	mg/Kg	0.20	•							. •
3-Nitroaniline	ND	mg/Kg	0.20				•				
4-Nitroaniline	. ND	mg/Kg	0.40								
Nitrobenzene	ND	mg/Kg	0.50			•					
2-Nitrophenol	ND	mg/Kg	0.20			•					
4-Nitrophenol	ND	mg/Kg	0.25						٠, ,.	,	
Pentachlorophenol	ND	mg/Kg	0.40	•				•			
Phenanthrene	ND	mg/Kg	0.20				4				
Phenol	ND	mg/Kg	0.20				•				
Pyrene	ND	mg/Kg	0.20								•
Pyridine	ND	mg/Kg	0.50								
1,2,4-Trichlorobenzene	ND	mg/Kg	0.20	٠						•	
2,4,5-Trichlorophenol	'ND	mg/Kg	0.20								
2,4,6-Trichlorophenol	ND .	mg/Kg	0.20	• •							
Sample ID: lcs-29816		LCS		•	Bat	ch ID:	29816	Analysis	Date:	12/20/201	1 8:38:08 PM
Acenaphthene	1.216	mg/Kg	0.20	1.67 0	72	.8 4	9.7	98.1	•		•
4-Chloro-3-methylphenol	2.332	mg/Kg	0.50	3.33 0	70		3.8	89.1			
2-Chlorophenol	2.338	mg/Kg	0.20	3.33 0	70		1.1	96.9			
1,4-Dichlorobenzene	1.212	mg/Kg	0.20	1.67 0	72	.6	41	97.4	•		
2,4-Dinitrotoluene	1.345	mg/Kg	0.50	1.67 0	80	.6 4	4.4	104			
N-Nitrosodi-n-propylamine	0.9913	mg/Kg	0.20	1.67 0	59		9.1	86.9	•	•	
4-Nitrophenol	2.253	mg/Kg	0.25	3.33 0	67	.7 4	4.2	107			
Pentachlorophenol	1.685	mg/Kg	0.40	3.33 . 0	50		6.2	80		•	
Phenol	2:445	mg/Kg	0.20	3.33 0	73			92.7	•	•	
Pyrene	1.114	mg/Kg	0.20	1.67 0	66	.7 3	4.7	98.8			
1,2,4-Trichlorobenzene	1.068	mg/Kg	0.20	1.67 0	64			98.3			

Qualif	liers:
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E Estimated value

J Analyte detected below quantitation limits.

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Page 6

Hall Environmental Analysis Laboratory, Inc. Date: 06-Jan-12

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

							·				112721
Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit H	ighLimit ———	%RPD	RPDLimit	Qual
Method: EPA Method 8270C	TCLP		•			<u>.</u>			:		
Sample ID: 1112721-01Amsd	. "	MSD	-			Batch ID:	29917	Analys	sis Date:	1/3/2012 2	2:04:13 PI
2,4-Dinitrotoluene	0.09830	mg/L	.0.010	0.1	0	98.3	9.57	115	14.0	20	•
Hexachlorobenzene	0.06686	mg/L	0.010	0.1	0	66.9	15.9	96.9	2.51	20	
Hexachlorobutadiene	0.07474	mg/L	0.010	0.1	0	74.7	21.1	97.9	1.59	20	
Hexachloroethane	0.07794	mg/L	0.010	0.1	0 -	77.9	18.1	105	5.48	. 20	
Nitrobenzene	0.08286	mg/L	0.010	0.1	0	82.9	23.3	123	6.97	20	•
Pentachlorophenol	0.05194	mg/L	0.010	0.1	. 0	51.9	10	150	1.38	20	
Pyridine :	0.05118	mg/L	0.010	0.1	0	51.2	9.15	86.2	6.83	20	
2,4,5-Trichlorophenol	0.07234	mg/L	0.010	0.1	. 0	72.3	8.46	119	4.78	20	
2,4,6-Trichlorophenol	0.06908	mg/L	0.010	0.1	0	69.1	4.44	115	3.54	20	
Cresols, Total	0.2429	mg/L	0.010	0.3	0	81.0	8.35	114	11.0	20	
Sample ID: mb-29917		MBLK				Batch ID:	29917	Analys	is Date:	1/3/2012 12	::07:57 Pf
2,4-Dinitrotoluene	ND	mg/L	0.13								
Hexachlorobenzene	ND	mg/L	0.13							-	,
Hexachlorobutadiene	ND	mg/L	~ 0.50			•			•		
Hexachloroethane	ND .	mg/L	3.0	•				•	•		
Nitrobenzene	ND	mg/L	2.0								
Pentachlorophenol	ND	mg/L	100						;		
Pyridine	ND	mg/L	5.0						•		
2,4,5-Trichlorophenol	ND		400								
2,4,6-Trichlorophenol	ND `	mg/L	2.0								
Cresols, Total	ND	mg/L	200						\		•
Sample ID: lcs-29917	, ND	mg/L LCS	200	•		Batch ID:	29917	Analysi	is Date:	1/3/2012 12	:37:08 PN
2,4-Dinitrotoluene	0.09236	mg/L	0.010	0.1	0	92.4	18.2	108			
Hexachlorobenzene	0.06614	mg/L	0.010	0.1	0	66.1	34.2	74.5			
Hexachlorobutadiene	0.06722	mg/L	0.010	0.1	0.	67.2	31.3	88.5			
Hexachloroethane	0.06796	. mg/L	0.010	0.1	0	68.0	31.6	94.6		•	•
Nitrobenzene	0.07686	mg/L	0.010	0.1	0	76.9	39.7	107			•
Pentachlorophenol	0.04042	mg/L	0.010	0.1	0	40.4	15.9	86.7			
Pyridine	0.05476	-		0.1	.0	54.8	14.7	73.6			
2,4,5-Trichlorophenol	0.05476	mg/L	0.010		. 0	68.3		102			
2,4,6-Trichlorophenol		mg/L	0.010	0.1 0.1	0	60.2	18.9 12.3	102			
	0.06020	mg/L	0.010		-		_				
Cresols, Total Sample ID: 1112721-01Ams	0.2326	mg/L MS	0.010	0.3	0	77.5 Batch ID:	25.9 29917	99.2 Analysi	s Date:	1/3/2012 1	35:09 PN
2,4-Dinitrotoluene	0.08542	mg/L	0.010	0.1	0	85.4	9.57	115		•	
Hexachlorobenzene	0.06856	mg/L	0.010	0.1	Ö	68.6	15.9	96.9			
Hexachlorobutadiene	0.07356	mg/L	0.010	0.1	0	73.6	21.1	97.9			
Hexachloroethane	0.07378	mg/L	0.010	0.1	. 0	73.8	18.1	105			
Nitrobenzene	0.07728	mg/L	0.010	0.1	ō	77.3	23.3	123			•
Pentachlorophenol	0.05266	mg/L	0.010	0.1	. 0	52.7	10	150			
Pyridine	0.04780	mg/L	0.010	0.1	0	47.8	9.15	86.2		, .	
2,4,5-Trichlorophenol	0.06896	mg/L	0.010	0.1	0	69.0	8.46	119			
2,4,6-Trichlorophenol	0.06668	mg/L	0.010	0.1	0	66.7	4.44	115			
·		-			0						
Cresols, Total	0.2176	mg/L	0.010	0.3	J	7,2.5	8.35	114			

Qualifiers:

Е Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Holding times for preparation or analysis exceeded · H

Non-Chlorinated

RPD outside accepted recovery limits

Page 7

Date: 06-Jan-12

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

J	<u> </u>			•					1112721
Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hi	ghLimit %RP	D RPDLimit Qual
Method: EPA Method 7471: M	ercury		•	,					·
Sample ID: 1112721-01AMSD		MSD				Batch ID:	29809	Analysis Date	: 12/19/2011 1:58:03 PM
Mercury	0.1911	mg/Kg	0.033	0.166	0.0182	104	75	125 0.58	
Sample ID: MB-29809	•	MBLK				Batch ID:	29809	Analysis Date	12/19/2011 1:50:53 PM
Mercury	ND	mg/Kg	0.033						•
Sample ID: LCS-29809		LCS		*		Batch ID:	29809	Analysis Date:	12/19/2011 1:52:40 PM
Mercury	0:1667	mg/Kg	0.033	0.167	0 .	100	80	120	·.
Sample ID: 1112721-01AMS	,	MS				Batch ID:	29809	Analysis Date:	12/19/2011 1:56:16 PM
Mercury	0.1900	mg/Kg	0.033	0.165	0.0182	104	75	125	
Method: MERCURY, TCLP									
Sample ID: 1112721-04AMSD		MSD				Batch ID:	29918	Analysis Date:	12/30/2011 1:41:33 PM
Viercury	ND	mg/L	0.020	0.005	. 0	101	75	125 0	20
Sample ID: MB-29918		MBLK				Batch ID:	29918	Analysis Date:	12/30/2011 1:29:08 PM
Mercury	ND	mg/L	0.020						
Sample ID: LCS-29918	,	LCS				Batch ID:	29918	Analysis Date:	12/30/2011 1:30:54 PN
Mercury	ND	mg/L	0.020	0.005	0	106	80	120	•
Sample ID: 1112721-04AMS	·	MS	0.020	0.000	Ū	Batch ID:	29918	Analysis Date:	12/30/2011 1:39.48 PM
Mercury	ND	mg/L	0.020	0.005	0	97.1	75	125	,
Welculy	- ND	iiig/L	0.020			37.1	10 -	125	•
Method: EPA Method 6010B: \$	Soil Metals	*				•			
Sample ID: MB-29800	•	MBLK				Batch ID:	29800	Analysis Date:	12/19/2011 12:31:41 PM
Arsenic	ND	mg/Kg	2.5				·		•
Barium	ND	mg/Kg	0.10						
Cadmium	ND	mg/Kg	0.10			•	٠.	\	
Chromium	ND -	mg/Kg	0.30						
ead	ND	mg/Kg	0.25			•			,
Selenium	ND	mg/Kg	2.5	•				•	•
Silver	ND	mg/Kg	0.25						·
Sample ID: LCS-29800		LCS				Batch ID:	29800	Analysis Date:	12/19/2011 12:33:36 PM
Arsenic	27.57	mg/Kg	2.5	25	0 .	110	80	120	
Barium ,	25.67	mg/Kg	0.10	25	0	103	80	120	
admium	26.20	mg/Kg	0.10	25	. 0	105	80	120	•
Chromium	25.93	mg/Kg	0.30		0.1172	103	80	120	•
ead ,	26.15	mg/Kg	0.25	25	0	105	80	120	•
Selenium Silver	28.34 5.113	mg/Kg	2.5 0.25	25 5	0 0	113 102	80 80	120 120	

Ona	lifī	ers:

E Estimated value

ND Not Detected at the Reporting Limit

NC Non-Chlorinated

R RPD outside accepted recovery limits

Page 8

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

Date: 06-Jan-12

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 35 Clean Up

Work Order:

1112721

Analyte	Result	Units	PQL	SPK V	a SPK ref	%Rec L	owLimit Hi	ghLimit %RPD	RPDLimit Qual
Method: EPA Method 6010B:	: TCLP Metals			-					
Sample ID: 1112721-05AMSD		MSD				Batch ID:	29915	Analysis Date:	1/3/2012 8:48:23 AM
Arsenic	ND	mg/L	5.0	0.5	0	98.5	75	125 0	20
Cadmium	ND -	mg/L	1.0	0.5	0	92.3	75	125 0	20
Chromium	ND	mg/L	5.0	0.5	. 0	84.6	75	125 0	20
Lead .	ND	mg/L	5.0	0.5	0.0021	84.4	75	125 0	20
Selenium	ND .	mg/L	1.0	0.5	0	89.1	. 75	125 ` 0	20
Silver	ND ·	mg/L	5.0	0.1	0	91.6	75	.125 0	20
Sample ID: 1112721-05AMSD		MSD _.		•		Batch ID:	29915	Analysis Date:	1/3/2012 9:52:30 AM
Barium	ŃD	mg/L	100	0.5	1.611	93.6	75	125 0	20
Sample ID: MB-29915		MBLK				Batch ID:	29915	Analysis Date:	1/3/2012 7:57:28 AM
Arsenic	ND	mg/L	5.0						•
Barium	ND	mg/L	100		•				
Cadmium	ND	mg/L	1.0			`			
Chromium	ND -	mg/L	5.0						•
Lead	ND	mg/L	5.0	•					• •
Selenium	ND	mg/L	1.0						•
Silver	ND	mg/L	5.0					•	•
Sample ID: LCS-29915		LCS				Batch ID:	29915	Analysis Date:	1/3/2012 8:01:58 AM
Arsenic -	ND .	mg/L	5.0	0.5	0	113	80	120	
Barium	ND	mg/L	100	0.5	0	100	80	120	•
Cadmium	ND	mg/L	1.0	0.5	.0	106	80	120	
Chromium	ND	mg/L	5.0	0.5	0	101	80 '	120	
_ead	ND	mg/L	5.0	0.5	0	100	80	120	
Selenium	ND	mg/L	1.0	0.5	0	108	80	120	
Silver .	ND	mg/L	5.0	0.1	0	155	80	120	S
Sample ID: 1112721-05AMS		MS	11			Batch ID:	29915	Analysis Date:	1/3/2012 8:46:04 AM
Arsenic	ND	mg/L	5.0	0.5	0	123	75	125	
Cadmium	ND	mg/L	1.0	0.5	0	114	75	125	•
Chromium	ND ·	mg/L	5.0	0.5	0	104	75	125	•
_ead	ND	mg/L	5.0	0.5	0.0021	104	75	125	
Seleníum	ND	mg/L	1.0.	0.5	0	109	75	125 .	
Silver	ND	mg/L	5.0	0.1	0	115.	75	125	•
Sample ID: 1112721-05AMS		MŚ		*		Batch ID:	29915	Analysis Date:	1/3/2012 9:50:28 AM
Barium	ND	mg/L	100	0.5	1.611	93.4	75	125	
								•	

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E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Page'9

	cal revikondrial		www.nailenvironmental.com ns NF - Albignerane NM 87109		ARINGIS TREINGIS			(H/) (NO ₂ ,F	als: ON, set	EDB (Method 8310 (PNA 68310 (PNA 8 Methons (F,C) 8081 Pesticides 8270 (Semi-York) Air Bubbles (F)	XXX	XXX	XXX	XXX	XXX					All Tech Record to all surreplan	8000 M 12/27 / 12/27.	id laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
			www.n. 4901 Hawkins NF	Tel 505	. 57423	الالال	Gas or) H9T (G:	80. 3E +	BTEX + MTE PTEX + MTE TPH Method								3		Remarks: Per Beck		ssibility. Any sub-
Turn-Around Time: / N3 12/14	□ Standard IM Rush 3 day	ne:	TANK 35 CLEAN UP	Project #:	NA NA	Project Manager:	سعو	Sampler: Sean Ukule	Temperature $/eta$	ative HEAL No:	1. 90z NA (,	(m)	J	5					Date Time	Date T	contracted to other accredited laboratories. This serves as notice of this po
Chain-of-Custody Record	Slient: Western Refining	0 1100 Jag - 11	Mailing Address: RT3 Rox 7	نـز ا	1 ()	ax#: SOS-	2A/QC Package: Level 4 (Full Validation)	n Other	□ EDD (Type)	Date Time Matrix Sample Request ID	2-15-11 1045 SOIL T-35-1	1055 T-35-2	1110 1-35-3	1137 , 1-35-4	V 1130 V T-36-5	S # 12/10/1/				 Sean Well Manuell	Date: Time: Relinquished by:	

Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Wednesday, February 08, 2012 7:21 AM 'Larsen, Thurman'; VanHorn, Kristen, NMENV

Subject:

RE: SEMI-ANNUAL BIO-VENTING MONITORING REPORT #3

Thurman:

Good morning. It appears that VOCs are declining at most monitoring locations.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the

Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at: http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Monday, February 06, 2012 1:16 PM

To: VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD

Subject: SEMI-ANNUAL BIO-VENTING MONITORING REPORT #3

Dear Kristen and Carl,

The above attachment is the Semi-annual Bio-venting Monitoring Report #3 for the passive bio-venting and remediation project of the ULSD tanks (T-115/116) area. I have included the entire report as a "*pdf" attachment above. If you should have any questions regarding this report, please either call me directly or via e-mail. Also, I will be following this report up with an hard copy for your review.

Regards,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Monday, February 06, 2012 1:16 PM

To:

VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD

Subject:

SEMI-ANNUAL BIO-VENTING MONITORING REPORT #3

Attachments:

SEIMI-ANNUAL BIO-VENTING REPORT #3.pdf

Dear Kristen and Carl,

The above attachment is the Semi-annual Bio-venting Monitoring Report #3 for the passive bio-venting and remediation project of the ULSD tanks (T-115/116) area. I have included the entire report as a "*pdf" attachment above. If you should have any questions regarding this report, please either call me directly or via e-mail. Also, I will be following this report up with an hard copy for your review.

Regards,

Beck Larsen; CHMM, REM, RPG Environmental Engineer



February 6, 2012

New Mexico Environmental Department Hazardous Waste Bureau (HWB) 1301 Siler Road, Building B Santa Fe, NM 87507 Attn: Kristen Van Horn

New Mexico Energy, Minerals and Natural Resources Oil Conservation Division (OCD) 1220 South St. Francis Drive Santa Fe, NM 87505 Attn: Mr. Carl Chavez

Re: REPORT #3:

Semi-annual Report submittal for Passive Bioremediation (Bio-ventilation) Project for Ultra Low Sulfur Diesel (ULSD) remediation in accordance with NSR Permit No. 0633-M8-R3, Part A.214

Dear Ms. Van Horn and Mr. Chavez:

On October 16, 2010, Western Refining Company, L.P. (Western) - Gallup Refinery (the "facility") was granted New Source Review (NSR) Permit 0633-M8-R3 which, under Part 1.214,, allowed the installation of a Passive Bioremediation (Bio-Ventilation) System for the Ultra Low Sulfur Diesel (ULSD) fuel spill that occurred at the facility. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. As part of this permit allowance, Western is required to submit semi-annual reports to the Agency. This semi-annual report includes monitoring data and analytical results from July 1, 2011 through December 31, 2011 in order to meet the requirements of the NSR permit and provides both a discussion and statistical analysis to the effectiveness of the remediation system.

In addition, Western will attempt to address the questions and/or concerns that were posed by the Agency in its July 22, 2011 email.

Question #1:

"It is not clear if Western is using a dilution kit or not, but that would not account for such high PID readings. Is Western using response factors and not showing that in the data?"

Response:

Western Leak Detection and Repair (LDAR) contractors do not use dilution kits to obtain PID measurements. These measurements are collected from each standpipe individually. The response factor is not shown in the data table but the response





time is included in the "QC Calibration Form" shown under the "Response Time" section, Please refer to the attached "Calibration and Drift Assessment Form."

Question #2:

"Western hasn't commented about the PID numbers being highly variable and may prove difficult to demonstrate remediation is effective."

Response:

Concentration variability was addressed in Semi-annual Report #2 where a negative trend was established between the time since monitoring began and daily average volatile organic compound (VOC) concentrations. Section 1 of that report presents a regression analysis which indicates a decrease in VOC concentrations over time (i.e. a negative slope) since monitoring began. Furthermore, the daily average VOC concentration shown in that report (15,256 parts per million) has decreased by 6.7 percent to a concentration of 14,233 ppm in the December 2011 monitoring results. Individual fluctuations are attributable to a number of factors including ambient temperature variations, atmospheric and soil moisture contents, individual point source concentrations at time of deposition, and the non-uniformed soil conditions surrounding each individual standpipe. Further statistical evaluation and analysis provides additional assurance that effective remediation is in progress. Please refer to the discussion below for further details.

This report includes several attachments including the Bio-ventilation Monitoring Log (Attachment 1), Linear Regression Statistical Analysis Summary (Attachment 2) and the Daily Average VOC Concentration versus Time graph (Attachment 3). Also included in Attachment 4 is the QA/QC data provided by the LDAR contractor. A detailed discussion of each will follow below.

VOC Monitoring and QA/QC Procedures

LDAR personnel conduct the VOC monitoring using a Flame Ionizing Detector (FID) (TVA-1000) in accordance with the United States Environmental Protection Agency (U.S. EPA) Method 21. LDAR personnel use the QA/QC procedures for VOC monitoring on a daily basis as prescribed by Method 21. As mentioned above, Western LDAR contractors do not use a dilution kit to obtain PID measurements. These measurements are collected from each standpipe individually. The response factor is not shown in the data table but is included in the "QC Calibration Form" shown in the "Response Time" section. Please refer to the attached "Calibration and Drift Assessment Form" in Attachment 4.

Monitoring Schedule

Initial VOC monitoring was conducted on a bi-weekly basis from December 2010 through January 2011 in order to establish a VOC baseline concentration. In February 2011, VOC monitoring frequency was changed from a bi-weekly to a monthly basis. Western conducted





monthly VOC monitoring through June 2011. Beginning on July 1, 2011, Western commenced a quarterly VOC monitoring schedule. One sampling event was conducted in the 3rd quarter of 2011 (September 28) and three sampling events were conducted in the 4th quarter (November 7, November 15, and December 12) to further assure the validity of the sampling results.

Discussion of Semi-annual Monitoring Period Results

The daily average VOC concentration for all sampling points combined was calculated for each sampling event and is reflected at the bottom of each column in the Bio-ventilation Monitoring Log. The Daily Average VOC Concentration and Temperature versus Time plot reflects an overall decrease in the VOC concentration from the initial event (December 7, 2010); however, there is an increase from the daily average value in the Semi-annual Report #2. The "overall" average of the system, which is the average of each sampling point combined over all sampling events, in Report #2 is 15,256 ppm and the overall average of the system as shown here is 15,891 ppm. This indicates an overall VOC increase of 635 ppm, which is primarily due to the September 28, 2011 sampling event on which several sampling points [C(8), C(9), C(14), and C(15)] resulted in sampling spikes. These abnormally high values tend to skew the actual trend resulting in a slight increase in the overall system efficiency. Although the exact cause of these sampling spikes is unknown, higher values may be the result of this semi-annual sampling period occurring during the warmer months. Soil temperatures during September reach near their annual peak which increases the volatility of the spilled material.

Regardless of individual daily spikes or seasonal impacts, the overall daily average VOC concentration has decreased over time as indicated by the negative slopes consistently calculated in the Linear Regression Statistical Analysis Summary. The initial daily average VOC concentration on December 7, 2010 was measured as 27,847 ppm and the daily average from December 12, 2011 was measured at 9,463 ppm. The data indicates that there is an average negative slope of -23.6 ppm per day with a 60.0% probability that this trending slope exists. Further detail and explanation of the statistical analysis will be provided below to further describe these calculations and provide additional confirmation on the bio-ventilation remediation system's VOC reduction progress.

The graph of the "Daily Average VOC Concentration versus Time" illustrates the reduction in VOC concentration over time. The individual spikes on 12/27/2010 (42,589 ppm), 2/17/2011 (28,850 ppm), and 9/28/2011 (34,654 ppm) tend to skew the overall trending slope and therefore reduces the overall efficiency. These individual fluctuations are not uncommon and, as mentioned before, are partially due to ambient temperature variations, individual point source concentrations at time of deposition, and the non-uniformed soil conditions surrounding each individual standpipe. However, by fitting an exponential curve to the daily average VOC concentration one can see a definitive decrease in the overall VOC concentrations in the system. As expected, the bio-ventilation system's daily average VOC concentration has a high initial concentration with an exponential decay over time.

The relative outside temperature has been plotted in conjunction with the daily average VOC concentration in the "Daily Average VOC Concentration versus Time' graph as a mode of comparison. There appears to be a correlation between the outside temperature and the VOC



concentration; however, several other variables contribute to the overall VOC concentrations and impact the significance of the temperature and VOC concentration correlation. Also, the temperature represents the average daily atmospheric temperature and does not reflect the soil temperature thus the correlation is time lagging. Concentrations tend to increase in the late summer months when the soil temperature is near its annual peak and appear to be declining again as the winter months approach and ground temperatures again decrease.

The daily average VOC concentration per sampling event has been trending downward from February 2011 which is indicative of a reduction in VOC Concentration. The initial VOC concentration measured on December 7, 2010 was 27,847 ppm. From December 7, 2010 to February 2011, the daily concentrations ranged from the initial value of 27,847 ppm to a maximum concentration of 42,589 ppm (December 27, 2010), to a minimum value on January 21, 2011 of 6345 ppm. In February 2011, monthly sampling began and on February 17, 2011 the daily average VOC concentration was 28,850 ppm. Over the next four months (I.e., March 2011 through June 2011) the daily average declined significantly relative to the first three months of sampling with a minimum of 82 ppm (March 22, 2011) and a maximum of 7,881 ppm (June 28, 2011). The overall average VOC concentration of all thirteen daily sampling events is 15,891 ppm which represents a 42% overall reduction in the VOC concentration from the initial sampling event (27,847 ppm). In Semi-annual Report #2, the overall daily average was 15,256 ppm thus there has been an increase in the overall average of 635 ppm that equates to an overall increase of 4.2% within this semi-annual monitoring period. This increase is primarily due to individual VOC fluctuations or spikes at standpipes # 8, 9, 14, and 15.

The major focus should be on the overall efficiency of the system and not individual fluctuations. These individual VOC fluctuations should be dampened using statistical analysis in order to analyze the system more effectively thus a linear regression analysis was applied to each monitoring point to determine if there is indeed a statistically valid negative trend in the VOC concentrations over the monitoring period.

The overall average slope was -23.56 ppm per day which indicates a declining trend in the VOC concentration over time. The F-value calculated in the regression analysis, and shown in Attachment 2, is compared to the F-distribution to determine the probability that a given F-value occurs by chance. Subtracting this probability from 1 provides a measure of the likelihood that the established linear trend exists between the VOC concentration and time. The average probability of a linear trend existing is 0.60 (60%); however, similar to the analysis above the data is skewed due to the sample spikes at several sampling locations. Many of the sampling locations indicate negative trends with greater than 95% confidence.

Conclusion

Passive bioremediation (bio-ventilation) of ultra low sulfur diesel (ULSD) for spill material in order to augment reduction of VOC concentration is a time dependent process. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard and monthly VOC monitoring through December 2011 per the requirements of the NSR permit has been performed in order to evaluate the effectiveness of the bio-ventilation system. Although several higher than average sampling measurements



occurred within the last semi-annual period, the average VOC concentrations at most all monitoring locations appears to be decreasing. To confirm this statement, a linear regression statistical analysis was performed in order to fit a linear trend line through the VOC concentration versus time data set. The trend line indicates that a negative slope exists in this data set and for the majority of the sampling locations greater than 95% confidence that this trend line is statistically valid exists.

Western intends to continue the quarterly sampling routine until satisfactory remediation has occurred and will submit to the Agency additional semi-annual progress reports approximately thirty days after the end of each semi-annual period. If you should require any additional information or assistance in this matter, please contact me at the number listed below or via e-mail.

Sincerely

Beck Larsen, CHMM/REM/PG

Environmental Engineer Western Refining Southwest

Direct Line: (505) 722-0258

e-mail: Thurman.larsen@wnr.com

Cc: File

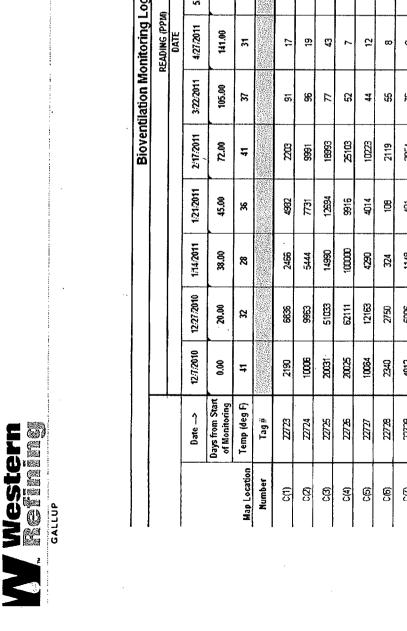
Attachment: #4- Qa/Qc Data; Calibration and Drift Assessment Form



Bio-Ventilation Monitoring Log Attachment 1

Passive Bioremediation Project Semi-Annual Report for July 1 – December 31, 2011 Western Refining Company, L.P. – Gallup Refinery





1	_	,	·									,	, .	···		,	,		,	,			2
				AVERAGE			1897.8	3826.4	11817.8	23807.1	9950.6	1700.6	2509.8	22570.0	32837.5	26062.8	12475.1	5629.2	57448.1	10368.2	28154.6	3204.5	15891.3
			12:12:2011	370.00	32		197	1130	2100	496	499	22	11	1294	15088	34922	2896	936	89772	æ	1000	ശ	9 7 2956
			11/15/2011	343.00	37		1164	1691	3451	7387	2449	709	184	21918	24897	2373	4441	77.4	688	44	7938	24	5020.8
			11:7.2011	335.00	ж		1236	1199	9995	18409	71925	5247	9009	15092	54332	25919	6357	3565	56611	9901	29475	8156	20145.3
			9:28:2011	295.00	23		1422	1317	14441	23331	11844	838	9735	99999	66666	13018	28265	3338	26697	96996	96999	12860	34653.9
			6/28/2011	203.00	93		1571	164	8105	41555	553	193	77	11087	35767	6313	2005	579	12774	966	3318	22	7881.2
bo.			5:27:2011	171.00	17		767	387	6//	1038	308	Ж	8	17006	68686	83	1295	412	88	312	3065	20	7854.6
nitoring L	READING (PPIM)	DATE	4:27:2011	141.00	34		17	19	43	7	12	ھ	8	13	34	89	æ	æ	æ	R	82	7	24.2
Bioventilation Monitoring Log			3/22/2011	105.00	37		91	98	71	25	44	88	76	72	901	91	112	101	50	101	107	32	82.1
Bioven			2/17/2011	72.00	¥		2203	1666	18993	25103	10223	2119	3954	23145	17663	74873	37603	14002	153216	9116	49660	9731	28849.7
			1/21/2011	45.00	ж		4982	7731	12694	9916	4014	90	401	6510	15	10143	1666	15699	6652	199	10341	123	2193.3
			174/2011	38.00	83		2466	5444	14990	(00000	4230	324	1148	10066	1583	11998	7977	6202	44112	2392	38849	579	15831.1 5555.3
			12:27:2010	20.00	Œ		9836	3983	51033	62111	12163	2750	9009	67115	57336	89037	31144	16600	193826	3406	72116	386	12589.3
			12:7:2010	0.00	11		2190	10006	20031	20025	10064	2340	4012	20033	19072	70093	30031	10056	160080	8252	50094	9112	27846.9
			Date ->	Days from Start of Monitoring	Temp (deg F)	Tagë	22723	\$7.727	22725	22726	12727	22728	22729	22730	16,722	22732	22733	22734	22736	22736	72737	22738	OVERALL DAILY AVG (ppm) DAILY GEOMETRIC AVG (ppm)
					Map Location	Number	C(1)	(Z)	(E)	C(4)	(වූ)	ଓଡ଼	CO	(<u>@</u>)	නිට	C(10)	C(11)	C(12)	C(13)	C(14)	(61)2	C(16)	DAILY GEOME



Linear Regression Statistical Analysis Summary Attachment 2

Passive Bioremediation Project Semi-Annual Report for July 1 – December 31, 2011 Western Refining Company, L.P. – Gallup Refinery



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Linear Regression Statistical Analysis Summary

C(1)									
-8.26	3257.10								
3.78	787.85								
0.30	1743.69								
4.78	11.00								
14521474.10	33444855.59								

Key						
Slope	Intercept					
SE of Slope	SE of Intercept					
R ² (Coefficient of Determination)	SE of C(1)					
F Statistic	Degrees of Freedom					
Regress Sum of Squares	Residual Sum of Squares					

0.992

Probability that trend exists (1 - P(F<x)).

C(2)							
-22.12	7465.03						
6.62	1379.51						
0.50	3053.14						
11.16	11.00						
104062147.23	102537993.85						

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

1.000

Probability that trend exists (1 - P(F < x)).

C(3)		
-53.69	20648.06	
26.66	5554.61	
0.27	12293.53	
4.06	11.00	
612850537.85	1662438507.84	

Key	Key	
Slope	Intercept	
SE of Slope	SE of Intercept	
R ² (Coefficient of Determination)	SE of C(1)	
F Statistic	Degrees of Freedom	
Regress Sum of Squares	Residual Sum of Squares	

0.986

Probability that trend exists (1 - P(F < x)).

C(4)	
-90.34	38665.18
60.47	12596.97
0.17	27879.73
2.23	11.00
1735158198.42	8550075558.50

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.901

Probability that trend exists (1 - P(F < x)).

C(5)	
42.49	2962.28
41.56	8658.67
0.09	19163.46
1.05	11.00
383848975.90	4039620045.18

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.529

Probability that trend exists (1 - P(F<x)).



C(6)		
5.03	874.11	
5.47	1139.49	
0.07	2521.93	
0.84	11.00	
5369140.86	69961496.22	

Key	Key	
Slope	Intercept	
SE of Slope	SE of Intercept	
R ² (Coefficient of Determination)	SE of C(1)	
F Statistic	Degrees of Freedom	
Regress Sum of Squares	Residual Sum of Squares	

0.392

Probability that trend exists (1 - P(F<x)).

C(7)		
3.42	1947.98	
7.54	1569.97	
0.02	3474.67	
0.21	11.00	
2481310.82	132806836.88	

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.007

Probability that trend exists (1 - P(F < x)).

C(8)	
14.82	20133.28
65.53	13650.74
0.00	30211.96
0.05	11.00
46668502.94	10040387735.06

Key	
Słope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.000

Probability that trend exists (1 - P(F<x)).

C(9)		
88.63	18261.29	
75.66	15762.58	
0.11	34885.90	
1.37	11.00	
1669952812.35	13387282896.88	

Key	Key	
Slope	Intercept	
SE of Slope	SE of Intercept	
R ² (Coefficient of Determination)	SE of C(1)	
F Statistic	Degrees of Freedom	
Regress Sum of Squares	Residual Sum of Squares	

0.696

Probability that trend exists (1 - P(F<x)).

C(10)		
-94.47	41599.27	
65.63	13672.20	
0.16	30259.45	
2.07	11.00	
1897207523.08	10071974984.62	

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.879

Probability that trend exists (1 - P(F<x)).





C(11)		
-41.76	19342.90	
28.72	5982.63	
0.16	13240.81	
2.11	11.00	
370723758.89	1928510128.03	

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.885

Probability that trend exists (1 - P(F<x)).

130

C(12)		
-31.63	10831.53	
10.76	2240.57	
0.44	4958.86	
8.65	11.00	
212723912.66	270493491.03	

Key	
Stope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.999

Probability that trend exists (1 - P(F<x)).

C(13)	
-201.66	90613.06
145.17	30242.93
0.15	66933.97
1.93	11.00
8645141341.93	49281719356.99

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.855

Probability that trend exists (1 - P(F<x)).

C(14)		
55.37	1261.72	
59.28	12350.06	
0.07	27333.27	
0.87	11.00	
651803322.05	8218186738.26	

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.412

Probability that trend exists (1 - P(F < x)).

	(15)
-44.94	35544.84
71.67	14930.55
0.03	33044.45
0.39	11.00
429267303.97	12011289465.11

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.068

Probability that trend exists (1 - P(F < x)).



C	(16)
2.10	2859.90
10.87	2265.40
0.00	5013.81
0.04	11.00
933146.57	276521370.66

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares

0.000

Probability that trend exists (1 - P(F<x)).

Overall Average				
-23.56	19766.72			
30.37	6326.83			
0.05	14002.60			
0.60	11.00			
118047820.68	2156801762.32			

Key	
Slope	Intercept
SE of Slope	SE of Intercept
R ² (Coefficient of Determination)	SE of C(1)
F Statistic	Degrees of Freedom
Regress Sum of Squares	Residual Sum of Squares



Daily Average VOC Concentration versus Time Attachment 3

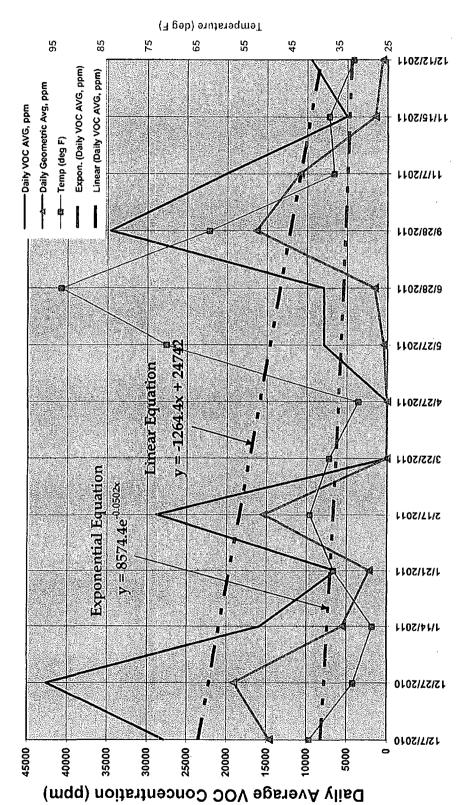
Passive Bioremediation Project Semi-Annual Report for July 1 – December 31, 2011 Western Refining Company, L.P. – Gallup Refinery





WNR ESSENIO

Daily Average VOC Concentration and Temperature versus Time



I-40 Exit 39, Jamestown, New Mexico 87347 • 505 722-3833 • www.wnr.com

Mail: Route 3 Box 7, Gallup, New Mexico 87301



Calibration and Drift Assessment Form Attachment 4

Passive Bioremediation Project Semi-Annual Report for July 1 – December 31, 2011 Western Refining Company, L.P. – Gallup Refinery

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 9/28/11 9:59

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CAL	IBRATION GASES		
GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 F		12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDE	R#TG-074076DOCUMENT:	04/26/2011	0
······································	 	METER CE	RTIFICATION RESPONSE	нісн	
		READING #1	1,987	9,798	
		READING #2	1,993	9,801	
		READING #3	1,996	9,803	
		ERROR PRECISION	2.15	1.88	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	:	(METER	READING)	-	(KNOWN	VALUE O	r CALIBRA	TION	GAS)	:	
%ERROR PRECISION	#		·								100
	;		4010111		ID 00 M		RATION GA	~ 1		;	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	6	5	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 9/28/11 9:59

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CAL	IBRATION GASES		
GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 08	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 12048	SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER#TG-074076DOCUMENT;		04/26/2011	0
		METER CER	RTIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	501	9,798	
		READING #2	503	9,801	
		READING #3	505	9,803	
		ERROR PRECISION	0.20	1.88	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)		
%ERROR PRECISION	#	* 1	00
	(KNOWN VALUE OF THE CALIBRATION GAS)		

RESPONSE TIME

				1
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 9/28/11 12:05

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		0/1011	DIVITION GAGES			
GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHA	NE MIX/LOT#1204SE08 F	12/05/2008	1,950	
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620	
ZERO	20003	AIR ULTRA ZERO CYLINDER	#TG-074076DOCUMENT:	04/26/2011	0	
<u></u>		METER CER	TIFICATION RESPONSE	HIGH		
		READING #1	2,013	9,895		
		READING #2	2,013	9,895		
		READING #3	2,013	9,895		
		ERROR PRECISION	3.23	2.86		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

EERROR PRECISION = (KNOWN VALUE OF THE CALIBRATION GAS)

(KNOWN VALUE OF THE CALIBRATION GAS)

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 9/28/11 12:06

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALI	BRATION GASES			
GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION	
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 08	12/05/2008	504	
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620	
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT:	04/26/2011	0	
		METER CER	LOW	нісн		
		READING #1	519	9,895		
		READING #2	519	9,895		
		READING #3	519	9,895		
		ERROR PRECISION	2.98	2.86		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION	·	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 9/28/11 16:01

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION
rom	L0004	L0004-EXP:12/5/2013 METHAI	NE MIX/LOT#1204SE08 F	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	#TG-074076DOCUMENT:	04/26/2011	0
		METER CERT	LOW	нівн	
		READING #1	2,025	9,795	
		READING #2	2,025	9,795	
		READING #3	2,025	9,795	
		ERROR PRECISION	3.85	1.82	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF, & ERROR IS EQUAL TO OR LESS THAN 10%

	1	(METER	READING	;} -	(KNOWN	VALUE	OF C	ALIBRATION	GAS)	:	
%ERROR PRECISION	m									. *	100
										1	
	•		(KNOWN	VALU	E OF T	HE CALI	BRAT	ION GASI		;	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 9/28/11 16:01

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

0107105			BRATION GASES		
GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 08	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT;	04/26/2011	0
			LOW	нівн	
		METER CER	TIFICATION RESPONSE		
		READING #1	526	9,795	
		READING #2	526	9,795	•
		READING #3	526	9,795	
		ERROR PRECISION 4.37		1.82	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	i		•	•			CALIBRATION	-	1	
%ERROR PRECISION	= :	 							, +	100
									1	
	:	KNOWN	VAL	JE OF T	HE CALL	RK4.	rion GAS)		1	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6 ·	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 11/7/11 9:40

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		OACI	BRATION GASES		
GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHA	NE MIX/LOT#1204SE08 F	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	AIR ULTRA ZERO CYLINDER#TG-074076DOCUMENT:		0
····		METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	1,920	9,715	
		READING #2	1,929	9,722	
		READING #3	1,921	9,725	
		ERROR PRECISION	1.37	1.05	
•		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION		100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST RE	ADING SECOND F	READING THIRD REA		PASSED
6	5	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 11/7/11 9:40

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALI	BRATION GASES		
GAS TYPE	GAS CODE	DESCRI	DESCRIPTION		CONCENTRATION
LOW	L0005 ·	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 08	12/05/2008	504
HIGH ZERO	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
	Z0003	AIR ULTRA ZERO CYLINDER	AIR ULTRA ZERO CYLINDER#TG-074076DOCUMENT:		0
· · · · · · · · · · · · · · · · · · ·		METER CER	TIFICATION RESPONSE		
		-	LOW	HIGH	
		READING #1	506	9,715	
		READING #2	503	9,722	
		READING #3	505	9,725	
		ERROR PRECISION	0.13	1.05	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION	=	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	
	INNUMY VALUE OF THE CALIBRATION GAST	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 11/7/11 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHA	NE MIX/LOT#1204SE08 F	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003 ·	AIR ULTRA ZERO CYLINDER#TG-074076DOCUMENT:		04/26/2011	0
<u> </u>		METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	1,961	9,772	
		READING #2	1,961	9,772	
		READING #3	1,961	9,772	
		ERROR PRECISION	0.56	1.58	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
SEDDAD DEFCICION -		100
PENNON LUBCISION -		700
	· · · · · · · · · · · · · · · · · · ·	
	KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 11/7/11 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

,		CALI	BRATION GASES		·····
GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 08	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT;	04/26/2011	0
	·	METER CER	TIFICATION RESPONSE	нівн	
		READING #1	510	9,772	
		READING #2	510	9,772	
		READING #3	510	9,772	
		ERROR PRECISION	1.19	1.58	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION	=	100
••	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 11/7/11 15:50

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 F		12/05/2008	1,950	
HIGH	H0003	METHANE MIX / LOT# 1204S	METHANE MIX / LOT# 1204SF08 PO# 46043		9,620	
ZERO	Z0003	AIR ULTRA ZERO CYLINDER#TG-074076DOCUMENT;		04/26/2011	. 0	
<u></u>		METER CER	TIFICATION RESPONSE	HIGH		
		READING #1	1,982	9,809		
		READING #2	1,982	9,809	•	
		READING #3	1,982	9,809		
	•	ERROR PRECISION	1.64	1.96		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION	*	100
	(KNOWN VALUE OF THE CALTERATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 11/7/11 15:50

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

		CALIBRA	TION GASES			
GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION	
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT	"# 1204SD08 PO # 08	12/05/2008	504	
HIGH	H0003	METHANE MIX / LOT# 1204SF08	PO# 46043	12/05/2008	9,620	
ZERO	Z0003	AIR ULTRA ZERO CYLINDER#TO	3-074076DOCUMENT;	04/26/2011	0	
		METER CERTIFI	CATION RESPONSE	HIGH		
		READING #1	516	9,809		
		READING #2	516	9,809		
		READING #3	516	9,809		
		ERROR PRECISION	2.38	1.96		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	; (1	HETER READIN	(G) -	(KNOWN	VALUE	OF CALIE	BRATION	GAS)	:	
*ERROR PRECISION	=									100
		(KNOM	VALU	E OF TH	E CALI	BRATION	GAS)		:	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED		
· · · · · · · · · · · · · · · · · · ·						
6	6	6	6	Yes		



NTEGRATED PROCESS RESOURCES Environmental Monitoring Service

Calibration and Drift Assessment Form

RAV	leion	Data:	02/1	7/2009
Nev	131011	Dale.	U41 I	114000

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Extension Prob	e used: Y (N ;
Date & Time Calibrated	11152011		11207	Pump Flow:	1.3
Technician & Facility	Western Refiner	y, Gallup NM	1323	-	
		CALIBRATION	GASES		
	LOW	MID-1	MID-2	HIGH	ZERO
Certified Concentration	504	1950		9620	Ø
Cylinder#	1058171	T7224100		C6599012	K-094397
Expiration Date	12/5/13	12/5/13		12/5/13	Ø
	TO THE WAR TO SAME	ETER CERTIFICATION	ON RESPONSE	PRAMA NEW STATE	
	LOW	MID-1	MID-2	HIGH	ZERO
Reading #1	50 o PPM	18CF PPM	PPM	4700PPM	(PPM
Reading #2	SOCI PPM	1903 PPM	PPM	9(095PPM)	C PPM
Reading #3	SOZ PPM	JCOS PPM	PPM	CIGOGOPPM	(PPM
Average Of Readings	504 I	1000	_ ·.	alan	
Error, Precision	1000				
Passed	(YES)/ NO	YES, / NO	YES / NO	YES // NO	YES I NO
			:		
	n (METER R	EADING) - (KNOWN '	VALUE OF CALIBRA	TION CAR) D	

Precision for the instrument is accepted when the average of the absolute value of % error is equal to or less than ten percent (<= 10%).

(KNOWN VALUE OF CALIBRATION GAS)

्र विकास प्राप्त के भूषित के श्री को ते । स		RESPONS	2000年6月日本 11月日 - 20日日日本 11月日			
	LOW	MID-1	MID-2	HIGH	ZERO	
First Reading	3	3		u		
Second Reading	T C	33		3	U	
Third Reading		U		U	U	
Average	3.7	13.3		3:7	401	
Passed	YES, / NO	(YES) NO	YES / NO	MES Y NO	(YES) / NO	

Acceptable response time (passed) should be 30 seconds of less from the time the leak definition calibration gas is introduced to the time the instrument reading reaches 90% of the final stable reading (the concentration of the calibration gas).

The high gas response times will be entered into LEADERSTM to become the official calibration record

nere sanda and a sanda and	LOW	MID-1	MID-2	HIGH	ZERO
Time				0	
Meter reading		1 210	1-1	17	
Difference (AM average - PM reading)	7	117 114	77		
10% of the AM reading average	50.4	CAS		0100	7
Is the difference greater than 10% of the AM average reading?	YES / NO-	YES / NO	YES / NO	YES / NO	YES / NO
		LIBRATION CHEC	K A	A. A. Starr B. Lan	YARAN KUTALAK
	LOW	MID-1	MID-2	HIGH	ZERO
Time	15:00	15:00		18:00	15:00
Meter reading	511	1930		9757	$\overline{}$
Difference (AM average - PM reading)	7	37		00	\bigcirc
10% of the AM reading average	50.4	190.9		9(6)	
Is the difference greater than 10% of the AM average reading?	YES / (NO)	YES / NO	YES / NO	YES / NO	YES NO
Dilution Probe Response Time:			nto Leaders:		

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WESTERN REFINING SOUTHWEST GALLUP REFINERY CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/12/11 10:17

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALI	DRATION GASES			
GAS TYPE	GAS CODE	DESCRI	DESCRIPTION		CONCENTRATION	
row	L0004	L0004-EXP:12/5/2013 METHA	ANE MIX/LOT#1204SE08 F	12/05/2008	1,950	
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620	
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT:	04/26/2011	0	
		METER CER	LOW	HIGH		
		READING #1	······································			
		NEADING #1	1,955	9,501		
		READING #2	1,960	9,491		
		READING #3	1,962	9,496		
		ERROR PRECISION	0.46	. 1.29		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	;		
*ERROR PRECISION	= {		*	10	0
	;	(KNOWN VALUE OF THE CALIBRATION GAS)	:		

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	. 6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/12/11 10:18

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	IPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX	LOT# 1204SD08 PO # 08	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDE	R#TG-074076DOCUMENT:	04/26/2011	0
		METER CEI	RTIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	505	9,501	
		READING #2	506	9,491	
		READING #3	504	9,496	
		ERROR PRECISION	0.20	1.29	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION	#	100
	i i	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	6	5	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/12/11 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALII	BRATION GASES		
GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHA	NE MIX/LOT#1204SE08 F	12/05/2008	1,950
нIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT	04/26/2011	0
		METER CER	TIFICATION RESPONSE LOW	. HIGH	
		METER CER		HIGH	
		READING #1	2,008	9,592	
		READING #2	2,008	9,592	
		READING #3	2,008	9,592	
		ERROR PRECISION	2.97	0.29	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIB	RATION GAS)	
*ERROR PRECISION	B		
	(KNOWN VALUE OF THE CALIBRATION O	GASI	

RESPONSE TIME

		•			
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED	
6	6	6	6	Yes	

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/12/11 15:13

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 08	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO.	20003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT:	04/26/2011	0
			LOW	HIGH	
			LOW	HIGH	
	•	READING #1	511	9,592	
		READING #2	511	9,592	
		READING #3	511	9,592	
		ERROR PRECISION	1.39	0.29	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

**ERROR PRECISION = (KNOWN VALUE OF THE CALIBRATION GAS)

(KNOWN VALUE OF THE CALIBRATION GAS)

Yes

Yes

RESPONSE TIME

_	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	6	6	6	6	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/12/11 15:57

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALI	BRATION GASES		
GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHA	ANE MIX/LOT#1204SE08 F	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9,620
ZERO	Z0003	AIR ULTRA ZERO CYLINDER	R#TG-074076DOCUMENT	04/26/2011	0
····		METER CER	ETIFICATION RESPONSE	HIGH	
		READING #1	2,031 .	9,682	
		READING #2	2,031	9,682	
,		READING #3	2,031	9,682	
(ERROR PRECISION	4.15	0.64	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)		
%ERROR PRECISION	=	* 1	.00
	(KNOWN VALUE OF THE CALIBRATION GAS)		

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED	
6	6	6	6	Yes	

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/12/11 15:58

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES.

/5/13 METHANE MIX/ LOT# 1204SD08 PO # 08	1010510000	
10/10 ME 11/AITE MIN COT# 120400001 O# 00	12/05/2008	504
NE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620
TRA ZERO CYLINDER#TG-074076DOCUMENT;	04/26/2011	0 '
		· · · · · · · · · · · · · · · · · · ·

METER CERTIFICATION RESPONSE

	row	нісн
READING #1	529	9,682
READING #2	529	9,682
READING #3	529	9,682
ERROR PRECISION	4.96	0.64
PASSEO	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

							CALIBRATION	•	;	
%ERROR PRECISION	= !	 							. *	100
	- ;								- 1	100
		CKNOWN	VETIF	FOF	UC CAL	TOD	ATION GAS)		,	

RESPONSE TIME

		_		
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
6	. 6	6	6	Yes

From:

Chavez, Carl J. EMNRD

Sent:

Thursday, November 10, 2011 2:02 PM

To: Cc: 'Riege, Ed'; VanHorn, Kristen, NMENV

Subject:

Larsen, Thurman; Morgan, Loretta; Dorsey, Alvin

Subject.

RE: Confirmation Soil Sampling Plan

Ed:

OCD is in receipt of your remediation plan based on the Tank 35 release.

I'll be discussing the soil sampling plan with Kristen soon and we'll get back with you soon. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the

Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at: http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental.htm

From: Riege, Ed [mailto:Ed.Riege@wnr.com] **Sent:** Thursday, November 10, 2011 12:37 PM

To: Chavez, Carl J, EMNRD; VanHorn, Kristen, NMENV **Cc:** Larsen, Thurman; Morgan, Loretta; Dorsey, Alvin

Subject: Confirmation Soil Sampling Plan

Carl,

The soil cleanup work is to begin on Monday November 14. The Confirmation Soil Sampling Plan is attached for your and Kristen's approval.

Thanks,

Ed

Ed Riege

Environmental Manager

Western Refining Gallup Refinery Route 3 Box 7 Gallup, NM 87301 (505) 722-0217 ed.riege@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Thursday, October 27, 2011 7:31 AM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

Good morning.

The C-141 Form is marked final report, but the corrective actions have not been completely implemented yet. Please resubmit the form as the initial report and when the corrective actions are completed, Western must submit the final report with all of the attached supporting documentation of the actions taken to correct the situation. Also, please notify the agencies when the work is scheduled to begin so we may be present to witness the corrective action(s).

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

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Sent: Wednesday, October 26, 2011 3:50 PM

To: Chavez, Carl J, EMNRD

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Hi Carl

Sorry I had the incorrect date. Attached is the revised C-141 and original placed in mail to you. Thanks.

Loretta Morgan

Environmental Specialist

Western Refining Route 3 Box 7 Gallup, NM 87301

Phone: (505) 722-0242 Fax: (505) 722-0268

loretta.morgan@wnr.com

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Tuesday, October 25, 2011 4:33 PM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

The C-141 does not concur with the OCD e-mail dated October 3, 2011 (see OCD Online <u>C-141s</u> thumbnail page 2). Could you please re-evaluate the C-141 information and revise it and resend it with the revised information by COB tomorrow.

Thank you.

Carl J. Chavez, CHMM

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Sent: Tuesday, October 25, 2011 3:27 PM

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Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

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Environmental Specialist

Western Refining Route 3 Box 7 Gallup, NM 87301

Phone: (505) 722-0242 Fax: (505) 722-0268

loretta.morgan@wnr.com

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Sent: Tuesday, October 25, 2011 2:50 PM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV

Subject: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

Good afternoon. Did Western send the C-141 for this release that was reported on 10/3/2011?

OCD does not see this form in our files. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

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November 10, 2011

Mr. Carl J. Chavez
Environmental Engineer
New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Confirmation Soil Sampling Plan, October 2, 2011 Tank 35 Release, Western Refining Company Southwest, Inc., Gallup Refinery, Gallup, New Mexico

Dear Mr. Chavez:

Western Refining Company's Gallup Refinery (Gallup) has prepared this Confirmation Soil Sampling Plan to guide Tank 35 confirmation soil sampling activities. Confirmation soil sampling will be conducted to verify that soil contaminated as a result of the October 2, 2011 release is removed during soil removal activities. A release of a mixture of stormwater, process water, and oily wastewater occurred when Tank 35 overflowed on October 2, 2011. The location of Tank 35 is shown on Figure 1. Form C-141 was completed and submitted to the New Mexico Oil Conservation Division (OCD) to report the release on October 3, 2011. A copy of From C-141 is included as Attachment A. At the time of the release, Tank 35 was being used to temporarily hold process waters so that API separator issues could be addressed. A heavy rain event occurred during this time frame and runoff water from the process units caused Tank 35 to overflow. Released fluids were contained by the tank berm. The refinery's Maintenance Department immediately began recovery of released fluids using a vacuum truck. Recovered fluids were temporarily stored in Tank 105 (slop oil tank). Based on the volume of fluids stored in Tank 105, approximately 1,240 barrels of process water/stormwater and 13 barrels of oily wastewater were recovered from the Tank 35 overflow.

Soil removal work, consisting of excavating contaminated gravel and soil, is scheduled to commence on November 14, 2011. Gallup believes that contaminated soil may be visually identified by staining and intends to excavate visually stained soil within the Tank 35 berm. Contaminated soil will be managed as hazardous waste and will be shipped off-site for disposal. After visually stained soil is excavated, Gallup proposes to collect five confirmation soil samples to confirm that the contamination associated with the October 2, 2011 release has been removed.

Trihydro Corporation (Trihydro) inspected the release area on October 28, 2011. Areas exhibiting staining were evident during Trihydro's inspection. Trihydro assisted in identifying five locations representative of the areas exhibiting the highest degree of staining. These locations were staked by Trihydro. Gallup intends to collect the confirmation samples from these five locations after soil removal is complete. Approximate confirmation sample locations are shown on Figure 2. Based on the observed staining, these five locations are representative of areas most heavily impacted by the October 2, 2011 release. Therefore, if contaminant concentrations in the confirmation soil samples are less than applicable cleanup standards, contamination associated with the October 2, 2011 release has likely been removed.

Mr. Carl J. Chavez November 10, 2011 Page 2

Care will be taken during soil removal activities to preserve the staked locations (i.e. staked locations will be surveyed with a global positioning system or their distance from a stationary reference point will be measured so that the areas can be relocated after soil removal activities are complete.) Soil samples will be collected using a clean, stainless steel trowel from approximately 0 to 6 inches below the postexcavated ground surface. The trowel will be decontaminated before and after sample collection using an Alconox or Simple Green solution followed by a de-ionized water rinse. The sampler will use clean latex gloves in order to minimize cross contamination. The sampler will use a new pair of latex gloves for each sample location. Samples will be collected in laboratory-provided sample containers and placed on ice or refrigerated immediately after collection. The soil samples will be analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi volatile organic compounds (SVOCs) by EPA Method 8270, diesel range organics extended (DRO) and gasoline range organics (GRO) by EPA Method 8015M, and RCRA metals. One sample will be submitted from each of the five locations; samples will not be composited.

Analytical results will be compared to the New Mexico Environment Department (NMED) industrial/occupational soil screening standards. If exceedances of the NMED industrial/occupational soil screening standards are identified, additional excavation will be conducted in the area from which the exceeding sample was collected. An additional confirmation sample will be collected to confirm that the additional excavation was successful in removing soil contamination. This process will be repeated until confirmation samples do not exceed the NMED industrial/occupational soil screening standards.

Soil removal activities are scheduled to commence on November 14. Confirmation soil samples will be collected pending OCD approval of this correspondence. If you have any questions or comments, please do not hesitate to call me at (505) 722-0217.

Sincerely,

Western Refining Company

Ed Riege

Environmental Manager

697-039-002

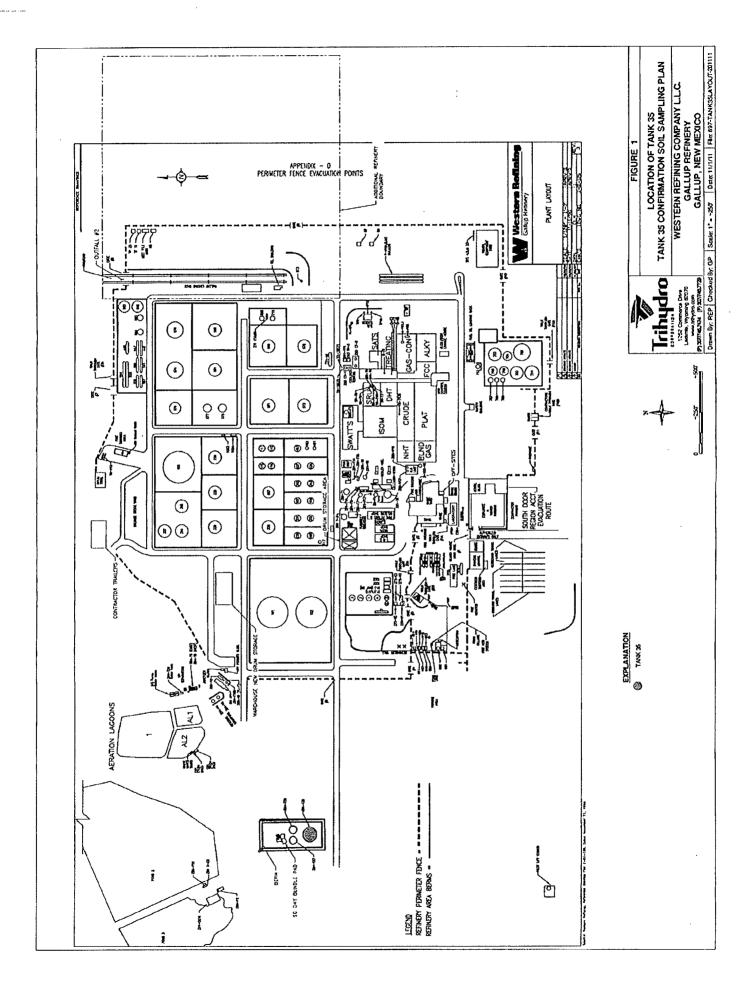
Attachments

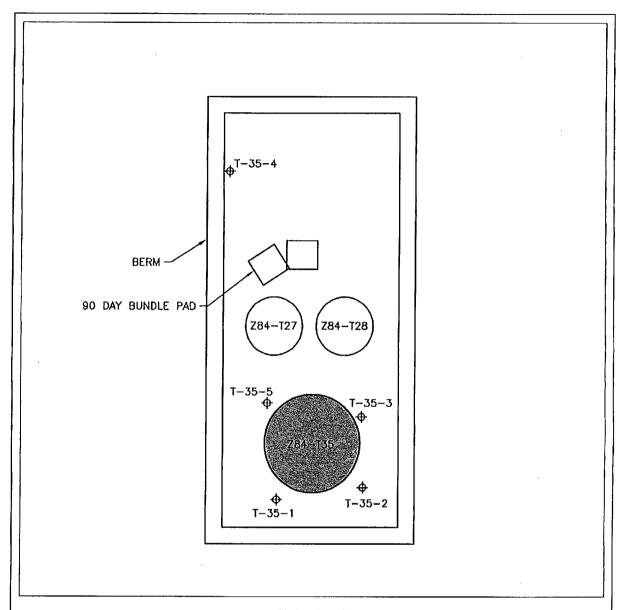
cc: L. Morgan, Western Refining

G. Price, Trihydro Corporation

K. Van Horn, NM

FIGURES





EXPLANATION

APPROXIMATE LOCATION OF PROPOSED CONFIRMATION SOIL SAMPLE



TANK 35

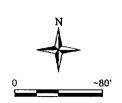




FIGURE 2

APPROXIMATE LOCATIONS OF PROPOSED **CONFIRMATION SOIL SAMPLES** TANK 35 CONFIRMATION SOIL SAMPLING PLAN WESTERN REFINING COMPANY L.L.C.

GALLUP REFINERY GALLUP, NEW MEXICO

Drawn By: REP | Checked By: GP | Scale: 1" = ~80"

Dale: 11/1/11 | File: 697-TANK35LAYOUT-201111

ATTACHMENT A FORM C-141

District 1 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Sania Fc, NM 87505

applicable regulations.

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised October 10, 2003
Submit 2 Copies to appropriate

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

			Rele	ase Notifi	catio	n and Co	orrective A	Action	1,			
		OPERA'	TOR		Initial Report Final Repo							
							Contact:					
Western Refining Southwest Inc.						Loretta Morgan						
Address:						Telephone l						
1-40 Exit 39						505-722-38	33					÷
Jamestown,		17										
Facility Na]	Facility Ty						
Gallup Refi	inery				l	Oil Refiner	у					
Surface Ow	mer:			Mineral (Owner:			· 	Lease 1	Vo.		
Western Re	fining			Western	Refinin	g	*		<u>.l</u>			
				LOCA	ATIO	N OF RE	LEASE					
Unit Letter	Section	Township		Peet from the	North	/South Line	Feet from the	East/\	Vest Line	County	,, <u></u>	
1	23&33	15N	15\\	•			}	Ì		McKinley	ı	
	<u> </u>	<u> </u>		•	1		<u></u>	<u> </u>		L		
		Lati	tude <u>35°</u>	29'22"		Longitud	le <u>108°25'24</u>	<u> </u>				
				NAT	URE	OF RELI	EASE					
Type of Rele						Volume of			Volume I	lecovered;		
Source of Re	Vater 13 bb	Is (011) / 1240	bbls (proces	s and stormwat	lcr)		3 barrel of oil					
Tank 35 over			•				lour of Occurrent	:e:		Hour of Dis	covery	:
Was Immedia		liven?	·····			10/2/2011 3:40 pm						
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Yes 🔲	No 🔲 Not R	equired							
		•	_		•	Kristen VanHorn, NMBD Hazardous Waste Burcau (phone call)						
						Brando Powell, NMED Hazardous Waste Bureau (plione call)						
D. When?						Carl J. Chavez, NMEMNRD, Oil Conservation Division (phone call)						
By Whom? Loretta Morg	an					Date and Hour: 10/3/2011 1:23 pin (approximately)						
noicha morg	,1871					10/3/2011	ւ . Հ. իու (արիստո	шасту				
Was a Watere	course Reac					If YES, Volume Impacting the Watercourse.						
			Yes 🔯	No		No, did not Impact watercourse.						
If a Watercou		pacied, Descri	be Fully.									
Not applicable												
Describe Cau	se of Proble	en and Remed	lial Action	nken:								
Atannroxima	tely 3:40 ni	n on 10/2/201	1. Tank 35	overflowed due	to heav	rurain API u	as shutdown due	to foam	ino issues	so Tank 35 v	was ho	lding process
							this period, it st					
process units	overfilled T	nnk 35. API	operator wa	s trying to mani	ually op	en the valves	lo the overflow ta	nks (To	nk 27 and 2	28), but did 1	not ope	n in time.
Tank 35 over	flowed water	er from the ver	nts. Immed	ate action was i	taken to	clean up the :	spill. The Mainte	nance D	epartment	was called o	out to s	lart
vacuumling up) the area. (Overflow did i	not reach an	y watercourse a	uid was	contained in t	he berm area of t	he fank.	Approxim	alely 75,600	gallon	s of rain
water and process water first was removed by the vacuum truck and put in						ilo 1-105 (siaj	р он tank). Water	Was ine	n decamed	1 1/0311 1 - 100 4 from a T 1	i, line o	secaning
sent process water and storm water from T-105 back to T-35 for reprocess and estimated to be 13 bbls. Rain water was included because during clean						sing. The mai	- 1 III VUIUUU III 1 -	Soil cla	anam will	COMMence :	เกาเคา ซ	hie to vet
heavy equipm			was morau	ra occasso 6611	ing cicin	mp process, n	·	. gon ele	ana-tago svisi	Commence	WIICH U	ole to get
Describe Area	a Affected a	and Cleanup A	ction Taken	•								
The area affect	cted is in the	e dirt berm are	a of Tank 3	5. The area is a	рргохіг	nately 15 feet	by 50 feet where	an oily-	water mixt	ure had settl	led. A	vacuum
truck was used	d to collect	the oily-water	mixture. Tl	ie soil in this bo	erm area	is stained wit	h oil. In further	cicanup	actions, co	ntaminated s	solls wi	ill be
excavated, co	nfirmatory (environmental	samples wi	ll be collected a	and anal	lyzed, and all	contaminated mat	lcrials w	ill be dispe	sed off in ac	cordar	nce with

I hereby certify that the information given above is true and complete regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remed or the environment. In addition, MMOCD acceptance of a C-141 reported federal, state, or local faws and/or regulations.	e notifications and perform corrective the NMOCD marked as "Pinal Repo tiale contamination that pose a threat	e actions for releases which may endanger ort" does not relieve the operator of liability to ground water, surface water, human health						
Signature: Mark J. Lusses OIL CONSERVATION DIVISION								
Printed Name: Mark B, Turri Approved by District Supervisor:								
Title: Refinery Manager - Gallup								
Approval Date: Expiration Date:								
E-mail Address: Mark Turdicwnr.com								
Date: 10-26-2011 Phone: 505-722-3833	Conditions of Approval: Attached							

• Attach Additional Sheets If Necessary

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, October 27, 2011 7:31 AM

To:

'Morgan, Loretta'

Cc:

VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman

Subject:

RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

Good morning.

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Western Refining Route 3 Box 7 Gallup, NM 87301

Phone: (505) 722-0242 Fax: (505) 722-0268

loretta.morgan@wnr.com

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New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505 Office: (505) 476-3490

Fax: (505) 476-3462

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Website: http://www.emnrd.state.nm.us/ocd/

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Fax: (505) 722-0268 loretta.morgan@wnr.com

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Loretta:

Good afternoon. Did Western send the C-141 for this release that was reported on 10/3/2011?

OCD does not see this form in our files. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

"Why not Prevent Pollution; Minimize Waste; Reduce the Cost of Operations; & Move Forward with the Rest of the

Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at: http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

		OPERA:	FOR		Initia	al Report	\boxtimes	Final Report				
Name of Co					(Contact:						
							Loretta Morgan					
Address:						Telephone No:						
I-40 Exit 39					:	505-722-38	33					
Jamestown,		7	***************************************			~~~						
Facility Nan			•		I .	Facility Typ						-
Gallup Refin	nery	~~ ~ ~~~~~~~~~~~				Oil Refinery	<i>!</i>					
Surface Ow	ner			Mineral C	Jumer:	· · · · · · · · · · · · · · · · · · ·			Lease N	Io		
Western Re				Western I		,			Lease 1	10.		
						OF RE	LEASE				***************************************	
Unit Letter	Section	Township	Range 1	Feet from the		South Line	Feet from the	East/W	est Line	County		
	23&33	15N	15W							McKinley		
					<u> </u>							
		Lati	tude35°2	29'22"		_ Longitud	le108°25'24	"				
<u> </u>			·	NAT	URE	OF REL						
Type of Relea		. (3) (1040		• .		Volume of			Volume F	Recovered:		ļ
Source of Re		is (011) / 1240	bbis (proces	s and stormwat	er)		3 barrel of oil		D-4 1	IICD:-		
Tank 35 over							lour of Occurrenc	e:		Hour of Disc	overy:	. ,
Was Immedia		Given?				10/2/2011 3:40 pm 10/2/2011 3:40 pm If YES, To Whom?						
			Yes 🔲	No 🔲 Not R	equired	d Ruth Horowitz, NMED Hazardous Waste Bureau (phone call)						
İ						Kristen VanHorn, NMED Hazardous Waste Bureau (phone call)						
						Brando Powell, NMED Hazardous Waste Bureau (phone call) Carl J. Chavez, NMEMNRD, Oil Conservation Division (phone call)						
By Whom?						Date and Hour:						
Loretta Morg	an					10/3/2011 1:23 pm (approximately)						
Was a Water	course Reac	hed?				If YES, Volume Impacting the Watercourse.						
			Yes 🛛	No		No, did not impact watercourse.						
If a Watercou		pacted, Descr	ibe Fully.									
		em and Reme	dial Action	Taken:								
Describe Cause of Problem and Remedial Action Taken: At approximately 3:40 pm on 10/2/2011, Tank 35 overflowed due to heavy rain. API was shutdown due to foaming issues so Tank 35 was holding process water while waiting for the API operator to troubleshoot the API foaming issue. During this period, it started to rain heavily and all runoff water from the process units overfilled Tank 35. API operator was trying to manually open the valves to the overflow tanks (Tank 27 and 28), but did not open in time. Tank 35 overflowed water from the vents. Immediate action was taken to clean up the spill. The Maintenance Department was called out to start vacuuming up the area. Overflow did not reach any watercourse and was contained in the berm area of the tank. Approximately 75,600 gallons of rain water and process water first was removed by the vacuum truck and put into T-105 (slop oil tank). Water was then decanted from T-105. The decanting sent process water and storm water from T-105 back to T-35 for reprocessing. The final oil volume in T-105 was determined from a T-105 strapping chart and estimated to be 13 bbls. Rain water was included because during cleanup process, it was still raining. Soil clean-up will commence when able to get heavy equipment into the area.												
Describe Are	a Affected	and Cleanup	Action Taker	1:								<u> </u>
truck was use excavated, co	Describe Area Affected and Cleanup Action Taken: The area affected is in the dirt berm area of Tank 35. The area is approximately 15 feet by 50 feet where an oily-water mixture had settled. A vacuum truck was used to collect the oily-water mixture. The soil in this berm area is stained with oil. In further cleanup actions, contaminated soils will be excavated, confirmatory environmental samples will be collected and analyzed, and all contaminated materials will be disposed off in accordance with applicable regulations.											

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and											
regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger											
public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability											
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health											
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other											
federal, state, or local Massand or regulations.											
Signature: Nach () (L	uni	OIL CONS	OIL CONSERVATION DIVISION								
,											
Printed Name: Mark B. Turri											
t		Approved by District Supervisor	г:								
Title: Refinery Manager - Gallup											
,		Approval Date: Expiration Date:									
E-mail Address: Mark.Turri@wn	r,com										
Conditions of Approval: Attached											
Date: 10-26-2011	Phone: 505-722-3833										

Attach Additional Sheets If Necessary

From:

Chavez, Carl J, EMNRD

Sent:

Tuesday, October 25, 2011 4:33 PM

To:

'Morgan, Loretta'

Cc:

VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman

Subject:

RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

The C-141 does not concur with the OCD e-mail dated October 3, 2011 (see OCD Online <u>C-141s</u> thumbnail page 2). Could you please re-evaluate the C-141 information and revise it and resend it with the revised information by COB tomorrow.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

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Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at: http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Morgan, Loretta [mailto:Loretta.Morgan@wnr.com]

Sent: Tuesday, October 25, 2011 3:27 PM

To: Chavez, Carl J, EMNRD

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV; Riege, Ed; Larsen, Thurman **Subject:** RE: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Hi Carl

Sorry, the report was sent out in the mail today. Attached is copy of the C141. Thanks

Loretta Morgan

Environmental Specialist

Western Refining Route 3 Box 7

Gallup, NM 87301

Phone: (505) 722-0242 Fax: (505) 722-0268 loretta.morgan@wnr.com

From: Chavez, Carl J, EMNRD [mailto:Carl J.Chavez@state.nm.us]

Sent: Tuesday, October 25, 2011 2:50 PM

To: Morgan, Loretta

Cc: VonGonten, Glenn, EMNRD; VanHorn, Kristen, NMENV

Subject: C-141 for Tank 35 Oily Waste Water Overflow Gallup Refinery (GW-032)

Loretta:

Good afternoon. Did Western send the C-141 for this release that was reported on 10/3/2011?

OCD does not see this form in our files. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

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Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at: http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From:

Morgan, Loretta [Loretta.Morgan@wnr.com]

Sent:

Monday, October 03, 2011 5:18 PM

To:

Powell, Brandon, EMNRD; Chavez, Carl J, EMNRD; Horowitz, Ruth, NMENV; VanHorn,

Kristen, NMENV

Cc:

Riege, Ed; Larsen, Thurman; Morgan, Loretta Western Refining - Gallup Refinery T35 overflow

Hi Brandon

Subject:

Per our phone conversation, here is a brief summary of our spill that happened over the weekend.

On Sunday October 2, 2011 at approximately 340 pm, T-35 (wastewater/storm water storage tank) overflowed due to heavy rain. Quantity of oily waste water is still to be determined, but Gallup estimates overflow to ground greater than 25 bbls. Spill was contained within the berm area of tank. Response to spill was immediate, as API operator was in the area trying to open valves to T27 and T28 to prevent overflow. Maintenance personnel was called out to vacuum up the water immediately.

Written report to follow, but should you have any questions please call me at (505) 722-0242. Thank you.

Loretta Morgan

Environmental Specialist

Western Refining

Route 3 Box 7

Gallup, NM 87301 Phone: (505) 722-0242

Fax: (505) 722-0268

loretta.morgan@wnr.com

7010 0290 0002713537112

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

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

							OPERA	TOR		☐ Initia	al Report	\boxtimes	Final Report
Name of Company:							Contact:						
Western Refining Southwest Inc.							Loretta Morgan						
Address:							Telephone 1			•			
I-40 Exit 39		-					505 - 722-38	33					1
Jamestown,		7					73 (11) 69						
Facility Nar							Facility Typ						
Gallup Refi	nery			 -			Oil Refiner	у					
Surface Ow	ner:				Mineral C)wner:				Lease N	√o.		
Western Re	fining				Western I	Refining	7						
					LOCA	ATIO	OF RE	LEASE					
Unit Letter	Section 23&33	Township 15N	Range 15W	Feet	from the	North	South Line	Feet from the	East/W	est Line	County McKinley		
		Lati	tude 3.	5°29'2	22"		Longitue	le 108°25'24'	··		·		
					NAT	URE	OF REL	EASE			•		
Type of Rele	ase:	*					Volume of		1	Volume F	Recovered:		
Oily Waste V		ls (oil) / 1240	bbls (proc	ess an	d stormwat	er)		3 barrel of oil					
Source of Re								Hour of Occurrenc	e:		Hour of Disc	covery:	
Tank 35 over Was Immedia		Given?	- "				10/5/2011			10/5/2011	1 3:40 pm		
was milicula	ate Nonce (Yes [l No	☐ Not Re	eouired	If YES, To Whom? Ruth Horowitz, NMED Hazardous Waste Bureau (phone call)						
		-		•		-,	Kristen VanHorn, NMED Hazardous Waste Bureau (phone call)						
							Brando Powell, NMED Hazardous Waste Bureau (phone call)						
			.,.				Carl J. Chavez, NMEMNRD, Oil Conservation Division (phone call)						
By Whom? Loretta Morg							Date and Hour: 10/6/2011 1:23 pm (approximately)						
Lorena Morg	,011						10/0/2011	1.25 pili (appioxii	matery)		. •		,
Was a Water	course Read	ched?	·-·				If YES, Volume Impacting the Watercourse.						
-			Yes 🗵] No			No, did not impact watercourse.						
If a Watercou		pacted, Descr	ibe Fully.				1						
Not applicable Describe Cau		em and Reme	dial Actio	n Take	·n·								
						to heav	v rain. API	was shutdown due	to foam	ing issues	so Tank 35	was hol	ding process
water while v	vaiting for t	he API operat	or to trou	blesho	ot the API	foaming	issue. Durin	g this period, it sta to the overflow to	arted to	rain heavil	y and all run	off wat	er from the
								spill. The Mainte					
vacuuming u	p the area.	Overflow did	not reach	any w	atercourse a	and was	contained in	the berm area of t	he tank.	Approxim	ately 75,600	gallon	s of rain
water and process water first was removed by the vacuum truck and put into T-105 (slop oil tank). Water was then decanted from T-105. The decanting							ecanting						
sent process water and storm water from T-105 back to T-35 for reprocess and estimated to be 13 bbls. Rain water was included because during clear					sing. The fina	il oil volume in T-	105 was	determine	d from a 1-1	i US SITA	pping chart		
heavy equipn			r was inci	uaca e	ecause dur	ing cicai	nup process,	n was sun raining	. 3011 010	can-up win	Commence	WHEH a	of to get
neavy equipi	non mo m	o urca.											
Describe Are	a Affected	and Cleanup A	Action Tal	cen:								,	
The area affe	cted is in th	e dirt berm ar	ea of Tanl	k 35. T	The area is	appróxii	nately 15 fee	t by 50 feet where	an oily	water mix	ture had sett	led. A	vacuum
truck was use	ed to collect	the oily-wate	r mixture.	The s	oil in this b	erm area	a is stained w	ith oil. In further	cleanup	actions, co	ontaminated :	soils w	ill be
		environmenta	ıl samples	will b	e collected	and ana	lyzed, and all	contaminated ma	terials w	ill be disp	osed off in a	ccordar	ice with
applicable res	gulations.												i

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other										
federal, state, or local laws and/of regulations.										
Signature: Mark D. William OIL CONSERVATION DIVISION										
Printed Name: Mark B. Turri Approved by District Supervisor:										
Title: Refinery Manager – Gallup										
	Approval Date:	Expiration Date:								
E-mail Address: Mark. Turri@wnr.com										
Date: 12-29-2009 10 21 11 Phone: 505-722-3833 Conditions of Approval: Attached										

• Attach Additional Sheets If Necessary

From:

Morgan, Loretta [Loretta.Morgan@wnr.com]

Sent:

Monday, October 03, 2011 5:18 PM

To:

Powell, Brandon, EMNRD; Chavez, Carl J, EMNRD; Horowitz, Ruth, NMENV; VanHorn,

Kristen, NMENV

Cc: Subject: Riege, Ed; Larsen, Thurman; Morgan, Loretta Western Refining - Gallup Refinery T35 overflow

Hi Brandon

Per our phone conversation, here is a brief summary of our spill that happened over the weekend.

On Sunday October 2, 2011 at approximately 340 pm, T-35 (wastewater/storm water storage tank) overflowed due to heavy rain. Quantity of oily waste water is still to be determined, but Gallup estimates overflow to ground greater than 25 bbls. Spill was contained within the berm area of tank. Response to spill was immediate, as API operator was in the area trying to open valves to T27 and T28 to prevent overflow. Maintenance personnel was called out to vacuum up the water immediately.

Written report to follow, but should you have any questions please call me at (505) 722-0242. Thank you.

Loretta Morgan

Environmental Specialist

Western Refining Route 3 Box 7 Gallup, NM 87301 Phone: (505) 722-0242

Fax: (505) 722-0268

loretta.morgan@wnr.com

From:

Chavez, Carl J, EMNRD

Sent:

Friday, September 09, 2011 11:16 AM

To:

'Larsen, Thurman'; VanHorn, Kristen, NMENV

Subject:

RE: SEMI-ANNUAL REPORT (#2)- Passive Bio-venting Project for remediating ULSD

Lars:

I sent the msg. below to you on 7/22, but have not heard back.

Lars:

Good afternoon. The agencies are aware of the startup and monitoring situation and that you may already be working to address PID issues and readings in the field, etc.

Consequently, the agencies provide some preliminary review comments based on your most recent submittal. Please respond and/or acknowledge the agencies comments and/or questions listed below.

- 1) It is not clear if Western is using a dilutor kit or not, but that would not account for such high PID readings. Is Western using response factors and not showing that in the data?
- 2) Western hasn't commented about the PID numbers being highly variable and may prove difficult to demonstrate remediation is effective.

Let me know if you would like me to copy and paste your questions on the FID to Beck. We can find out more details.

Thanks in advance.

Could you please respond to the above by COB next Friday, 9/16/2011? Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/

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Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Thursday, June 30, 2011 9:31 AM

To: VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD

Subject: SEMI-ANNUAL REPORT (#2)- Passive Bio-venting Project for remediating ULSD

Dear Kristen and Carl.

The above attachments includes the cover letter for the semi-annual report (#2) for the passive bio-venting and remediation project of the ULSD tanks (T-115/T-116) area, the Bio-venting Monitoring Log, and Qa/Qc Data for your review. If you should have any questions regarding this report, please either call me directly or send me an e-mail.

Regards,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210

Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

From:

Chavez, Carl J, EMNRD

Sent:

Friday, July 22, 2011 4:43 PM

To:

Larsen, Thurman

Cc:

VanHorn, Kristen, NMENV

Subject:

Passive Gas Remediation a Few Agency Observations/Questions

Lars:

Good afternoon. The agencies are aware of the startup and monitoring situation and that you may already be working to address PID issues and readings in the field, etc.

Consequently, the agencies provide some preliminary review comments based on your most recent submittal. Please respond and/or acknowledge the agencies comments and/or questions listed below.

- 1) It is not clear if Western is using a dilutor kit or not, but that would not account for such high PID readings. Is Western using response factors and not showing that in the data?
- 2) Western hasn't commented about the PID numbers being highly variable and may prove difficult to demonstrate remediation is effective.

Let me know if you would like me to copy and paste your questions on the FID to Beck. We can find out more details.

Thanks in advance.

File: OCD Online "C-141s"

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm

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Nation?" To see how, go to "Pollution Prevention & Waste Minimization" at:

http://www.emnrd.state.nm.us/ocd/environmental.htm#environmental)

Larsen, Thurman

From:

Larsen, Thurman

Sent:

Thursday, June 30, 2011 9:31 AM

To:

'VanHorn, Kristen, NMENV'; 'Chavez, Carl J, EMNRD'

RECEIVED OCD 2011 JUL 15 A 10:31

Subject:

SEMI-ANNUAL REPORT (#2)- Passive Bio-venting Project for remediating ULSD

Attachments: COVER LETTER 070111.doc; BIOVENTING MONITORING LOG.xis; QaQc-062811.pdf; CAL 011411.pdf; CAL 012111.pdf; CAL 021711.pdf; CAL 120710.pdf; CAL 122710.pdf; QaQc-032211.pdf; QaQc-042711.pdf; QaQc-

052711.pdf

Dear Kristen and Carl,

The above attachments includes the cover letter for the semi-annual report (#2) for the passive bio-venting and remediation project of the ULSD tanks (T-115/T-116) area, the Bio-venting Monitoring Log, and Qa/Qc Data for your review. If you should have any questions regarding this report, please either call me directly or send me an e-mail.

Regards.

Beck Larsen; CHMM, REM, RPG

Environmental Engineer

Western Refining Company- Gallup Refinery

Route 3, Box 7 Gallup, NM 87301

Office: (505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com



July 1, 2011

New Mexico Environmental Department Hazardous Waste Bureau (HWB) 1301 Siler Road, Building B Santa Fe, NM 87507 Attn: Kristen Van Horn

1

New Mexico Energy, Minerals and Natural Resources Oil Conservation Division (OCD) 1220 South St. Francis Drive Santa Fe, NM 87505 Attn: Mr. Carl Chavez

Re: **REPORT #2**:

Semi-annual Report submittal for Passive Bioremediation (Bio-venting) Project for remediating Ultra Low Sulfur Diesel (ULSD) in accordance with (NSR Permit No. 0633-M8-R3, Part A.214)

Dear Ms Van Horn and Mr. Chavez:

Western Refining (Gallup Refinery) was granted the new NSR Permit 0633-M8-R3 that was signed on October 6, 2010. Under Part A.214 of the new permit, Western Refining is allowed to install a Passive Bioremediation (bio-ventilation) System for any Ultra Low Sulfur Diesel (ULSD) fuel spills that may occur at our facility. This report will include monitoring data based on nine events extending from December 7, 2010 through June 28, 2011.

Western Refining previously addressed the preliminary layout, pipe manufacturing, boring and pipe installation, and pipe survey in the letter to the Agency of March 11, 2011. Therefore, any reference to or detailed discussions of these issues will be omitted from this report unless changes or modifications are made to the bio-ventilation system such as addition or subtraction will be mentioned if required.

The Agency will find an excel workbook included as an attachment. The workbook includes the "Bio-venting Monitoring Log", graphs of "Daily Overall Average VOC Concentration", "Daily Maximum vs Daily Average", Daily Minimum vs Daily Average", and (C(1) through C 16). A detailed discussion of each will follow below.

VOC Monitoring and Qa/Qc Procedures- As indicated in the letter to the Agency, LDAR (Leak-Detection and Repair) personnel will conduct the VOC monitoring using a Flame Ionizing Detector (FID) (TVA-1000). As previously stated, Method 21 uses a portable instrument to detect VOC leaks from sources. The regulations do not specify a



model or type of VOC instrument. However, the type of instrument does have to adhere to certain guidelines and requirements as specified in the regulations. One of the requirements for the instrument is that the detector either should be a catalytic oxidation, flame ionization, infrared absorption, or photo-ionization type of detector. Specific instrument methodology is addressed under Method 21. LDAR personnel use the proper Qa/Qc procedures for Volatile Organic Compounds (VOC) monitoring as prescribed by EPA in accordance with Method 21. This document specifies all guidelines for Qa/Qc procedures and detection of VOC leaks from process equipment. Daily Qa/Qc must be performed prior to VOC monitoring.

Monitoring Schedule- Initially VOC monitoring was conducted on a bi-monthly basis from December through January in order to establish a VOC base line. In February 2011, VOC monitoring frequency was changed from a bi-monthly to a monthly basis. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. Western has conducted monthly VOC monitoring through June 2011 in order to collect enough historical data on the bioventing system. Beginning on July 1, 2011, Western will commence a quarterly VOC monitoring schedule. The sampling events or monitoring will occur during October-December (4th qtr), January-March (1st qtr), April-June (2nd qtr), and July-September (3rd qtr).

Discussion of Semi-annual Monitoring Period Results- (Refer to "Bio-venting Monitoring Log", and graphs "Daily Overall Average VOC Concentration", "Average vs Maximum Concentration", "Average vs Minimum Concentration", "Average VOC Concentration by Sample Point", and individual standpipes (C (1) through 16).

1. Bio-venting Monitoring Logs vs Daily Overall Average VOC Concentration-

Nine sampling periods were conducted and included in this semi-annual report as indicated from the Bio-venting Monitoring Log. The average was calculated for each sampling event as reflected at the bottom of each column in the Bio-venting Monitoring Log. The VOC concentration over time is shown to have decreased from the initial event (December 7, 2010) to the latest sampling event (June 28, 2011). The initial overall daily average from December 7, 2010 was measured and found to be 27847 ppm. The overall daily average from June 28, 2011 was found to be 7881 ppm. If one views the graph of the "Daily Overall Average VOC Concentration", one can ascertain a definite reduction in VOC concentration over time. An exponential decrease is indicated by the "Trend Line" as shown. In order to determine the effectiveness of the Bio-venting System, it will have to be evaluated over a time dependant variable. Therefore, the daily overall concentration is expected to have a high initial concentration with an exponential decay over time. A Mathematical Model for this type of differential equation and decay function will be of the following general format: dC/dt=k*C, where C is the VOC concentration. The coefficient (k), which is a negative value, includes the dampening coefficient for the exponential function as the generalized solution that should theoretically approach an asymptotical value over a time (t). The General Solution to





this differential equation will take the following general format: $C=C_0^*e^*(kt)$, where C is the VOC concentration (ppm) at time (t) and C_0 is the initial VOC concentration. The coefficient (k) is same coefficient as mentioned above and provides a constant for the exponential function for the general solution to the differential equation. Once again, the solution to this generalized equation should also theoretically approach an asymptotical value over a time (t).

Please note that the relative outside temperature has been plotted in conjunction with the daily overall average VOC concentration as a comparison. It appears that there is a slight correlation between the outside temperature and the VOC concentration; however, several variables may contribute to any deviation from the average. The temperature is base on the average daily outside temperature and does not reflect the gas temperature. Also, the VOC concentration is taken at the sample point near top of pipe. Vapor concentration is not uniform and will vary due to the vapor pressure of the material and due to the permeability of the soil matrix.

2. Comparative Analysis between the "Daily Overall VOC Concentration"; "Daily Maximum vs Daily Average Concentration", and "Daily Minimum vs Daily Average Concentration" graphs—

The "Daily Overall VOC Concentration" graph is divided into two distinct sections that will be analyzed separately. The graph is drawn from data collected during sampling events and put into the cells of the "Bio-venting Monitoring Log" as shown. Daily average from each column was first calculated as an initial baseline for comparative analysis in order to determine an exponential decay constant that will be eventually utilized to determine the time require to cease monitoring. The accuracy of this constant will improve as the data is collected. The overall VOC reduction is the primary goal for the Bio-venting System.

The daily maximum and daily minimum are both components of the "Bio-venting Monitoring Log" daily columns. Each day has a maximum and minimum value that is shown in each column; however, when they are averaged over the sampling time period, they tend to normalize each other through cancellation. Individually however, they are apparent.

- 3. "Daily Maximum vs Daily Average Concentration" graph —
 If one refers to the graph designated as "Daily Maximum vs Daily Average
 Concentration", one finds there is a correlation between the maximum concentration
 values and average daily values. On the days that there is a high concentration one will
 find that the daily average will also increase. This is due to this high concentration value
 numerically increasing the daily average.
- **4. "Daily Minimum vs Daily Average Concentration" graph —**If one refers to the graph designated as "Daily Minimum vs Daily Average Concentration", one also finds that there is a similar correlation between the minimum



concentration values and average daily values. On the days that there is a high or low minimum concentration value one will also find a similar reflective image. These lower concentration values will tend to normalize the overall daily averages in order produce an exponential VOC concentration reduction per unit of time.

5. "Standpipe Graph (C (1) through C16)

Sixteen standpipes (C(1) through C16) were monitored from December 7, 2010 through June 30, 2011 for VOC concentration. These values are indicated in the Bio-venting Monitoring Log. A graph was prepared for each standpipe in order to determine the effectiveness of each standpipe. Base on individual standpipe data, it was determined that each standpipe has been effective in reducing the amount of VOC concentration. A "Trend Line" for each standpipe clearly reflects a theoretical reduction over time.

Report Submittals- Passive bioremediation (bio-ventilation) of ultra low sulfur diesel (ULSD) for spill material in order to augment reduction of VOC concentration is a time dependent process. In February 2011, VOC monitoring frequency was changed from a bi-monthly to a monthly basis. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. Western has conducted monthly VOC monitoring through June 2011 in order to collect enough historical data on the bio-venting system. Beginning on July 1, 2011, Western will commence a quarterly VOC monitoring schedule. The sampling events or monitoring will occur during October-December (4th qtr), January-March (1st qtr), April-June (2nd qtr), and July-September (3rd qtr).

Western Refining (Gallup Refinery) will continue to provide the Agency with semi-annual progress report on or about July 1st and January 1st based on the prior semi-annual sampling results.

If you should require any additional information or assistance in this matter, please contact me at the number listed below or via e-mail.

Sincerely

Beck Larsen, CHMM/REM/PG Environmental Engineer Western Refining Southwest

Direct Line: (505) 722-0258

e-mail: Thurman.larsen@wnr.com

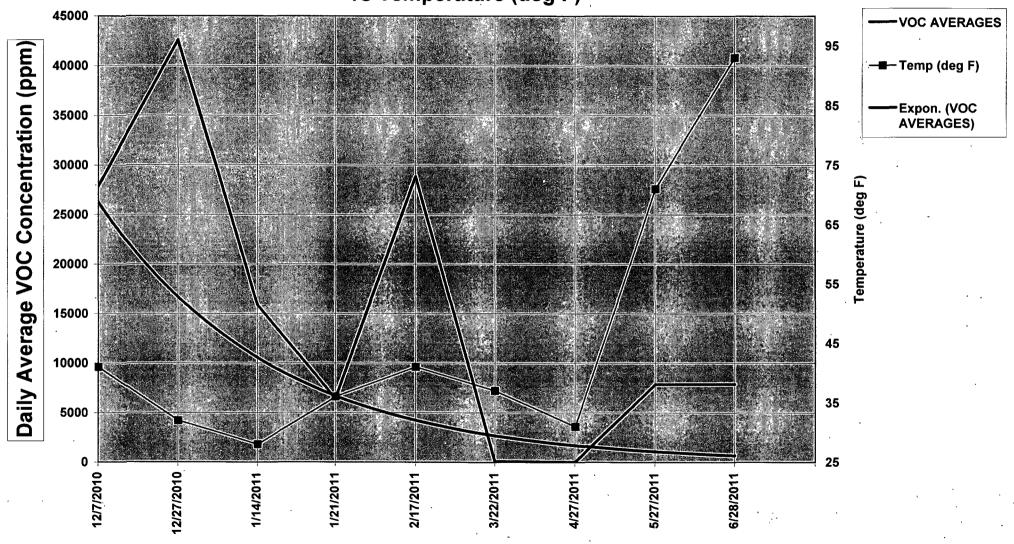
Cc: File

Attachment: Excel File

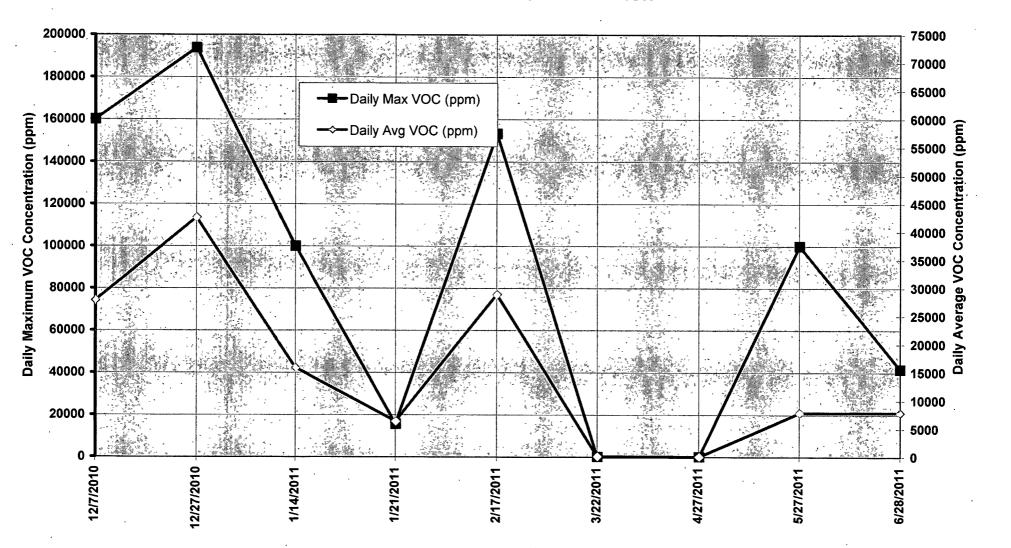
Qa/Qc Data

	•		BIOVE	NTING Mor	nitoring Lo	g for T-115	/T-116 Tan	k Area						
						READIN	G (PPM)							
			DATE										_	
Man Lagation	Date>	12/7/2010	12/27/2010	1/14/2011	1/21/2011	2/17/2011	3/22/2011	4/27/2011	5/27/2011	6/28/2011				
Map Location	Temp (deg F)	41	32	28	36	. 41	37	31	71	93	北麓社	AVERAGE	MAXIMUM	MINIMUM
Number	¹ Tag #				Transfer of	is the second						,		
C(1)	22723	2190	6836	2466	4982	2203	91	³ . 17	297	· . 1571		2294.8	6836.0	17.0
2	22724	10006	9963	5444	7731	9991	96	. 19	992	164		4934.0	10006.0	19.
. 3	22725	20031	51033	14990	12694	18993	. 77	43	779	8105		14082.8	51033 0	43.0
4	22726	20025	62111	100000	9916	25103	52	7	1098	41555		28874 1	100000.0	7.0
5	22727	10064	12163	4290	4014	10223	. 44	12	208	1623		4737.9	12163.0	12.0
6	22728	2340	2750	.: 324	108	2119	55	. 8	35	193		881.3	2750.0	8.0
7	22729	÷. 4012	5006	۱148 پَــــــــــــــــــــــــــــــــــــ	401	3954	· 76	8	_60	27		1632.4	5006.0	8.9
8 ′	22730	20093	67115	10066	6510	23145	; 	13	17006	11087		17234.1	67115.0	13.0
. 9	22731	19072	57336		15	17663	.106	31	. 99999	35767	11.0	25730.2	99999.0	15.0
10	22732	70093	89037	11998	10143	74873	91	8	29	6313	2000	29176.1	89037.0	, 8.0
11	22733	30031	31144	7977	9991	37603	112	59	1295	2005		13357.4	37603.0	59.
12	22734	10056	16600	7079	15699	14002	101	- 38	412	579		7174.0	16600.0	38.0
13	22735	160080	193826	44112	8652	153216	100	30	66	- 12774	144	63650.7	193826.0	30.
14	22736	8252	3406	2392	199	9116	101	39	312	996		2757.0	9116.0	39.0
15	22737	50094	72116	38849	10341	49660	107	` 48	3065	3318		25288.7	72116.0	48.
16	22738						32		20			2290.2	9731.0	
Daily Avg Daily Max		27847 160080	42589 193826		6345 15699		82 112		7855 99999		Average Maximum	15256.0 63650.7	48933.6 193826.0	
Daily Min		2190	986		15055				20		Minimum	881.3	2750.0	

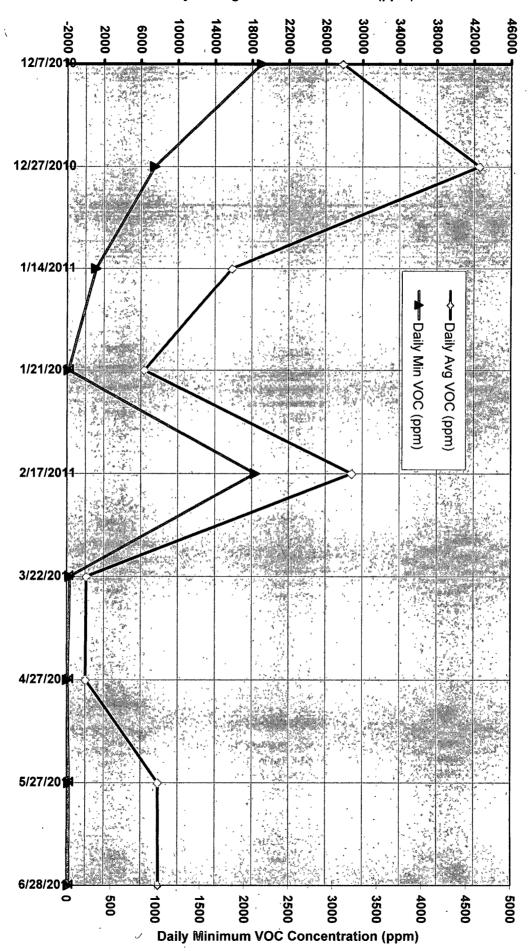
Daily Overall Average VOC Concentration-by Daily Sampling Event vs Temperature (deg F)



DAILY MAXIMUM vs DAILY AVERAGE CONCENTRATION







CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED 6/28/11 8 44

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP.12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRĄ ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.983	9.913
READING #2	1 992	9 922
READING #3	1.990	9.919
ERROR PRECISION	1.97	3.10
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PEDDOD DDECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
*ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

_					
	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	3	4	· 3	3	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 8:44

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	RIPTION	CERTIFICATION DATE	CONCENTRATION		
, LOW	L0005	EXP-12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 0840	12/05/2008	504		
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9.620		
ZERO	Z0001	AIR ULTRA ZERO PO # C142	47 CYLINDER #44 DOCUME	08/01/2006	. 0		
	METER CERTIFICATION RESPONSE						
		<u>.</u>	LOW	HIGH			
	•	READING #1	498	9,913			
•		READING #2	491	9 922			
		READING #3	495	9.919			
		ERROR PRECISION	1.85	3.10			

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
<pre>%ERROR PRECISION =</pre>		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

Yes

Yes

RESPONSE TIME

•		•		
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	· 3	4.	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 12:00

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP.12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	· METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0 .

METER CERTIFICATION RESPONSE

	LOW	HIGH			
READING #1	2.017	9,991			
READING #2	2 017	9 991			
READING #3	2.017	9.991			
ERROR PRECISION	3.44	3 86			
PASSED	Yes	Yes			

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

\$FDDOD DDFCTCTON -	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
ARKNOW INDCIDION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 12:00

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	-TION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
		METER CER	TIFICATION RESPONSE	·	···
			LOW	HIGH	
,		READING #1	482	9.991	
	٦	READING #2	482	9 991	
		READING #3	482	9.991	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

SEDDOD DDECICION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
SERROR PRECISION	(KNOWN VALUE OF THE CALIBRATION GAS)	. 100

4 37

Yes

3.86

Yes

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

CALIBRATION REPORT

INSTRUMENT. 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 14:50

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	, o

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	475	9,671
READING #2	475	9 671
READING #3	475	9,671
ERROR PRECISION	5.75	0 53
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
*ERROR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	. 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	· 4	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED 6/28/11 14:52

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1,971	9.671
READING #2	1 971	9 671
READING #3	1.971	9.671
ERROR PRECISION	1 08	0.53
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

*ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
PERKOR PRECISION =		× 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

WESTERN REFINING SOUTHWEST GALLUP REFINERY CALIBRATION DRIFT ASSESSMENT REPORT

1008240826 - TVA-1000

DATE: 05/27/2011

TIME	LOW GAS CONCENTRIN	LOW GAS AVE RDG	LOW GAS PRECISN	HIGH GAS CONCENTRTN	HIGH GAS AVE RDG	HIGH GAS PRECISN	NOTE
8:13:04 am	1,950	1,971	1.09 %	9,620	9,722	1.06 %	CALIBRATION
8 ⁻ 13:25 am	504	511	1.39 %	9,620	9,722	1.06 %	
11:17.06 am	1,950	2,001	2 62 %	9,620	9,772	1.58 %	
11:17.52 am	504	525	4 17 %	9,620	9,772	1 58 %	

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 8:37

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

_	LOW	HIGH
READING #1	519	9.955
READING #2	518	9 953
READING #3	520	9.951
ERROR PRECISION	2.98	3.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
· · · · · · · · · · · · · · · · · · ·	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 16:40

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP 12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	2.001	9.900
READING #2	2 001	9 900
READING #3	2.001	9.900
ERROR PRECISION	2.62	2 91
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION :	(METER READING) - (KNOWN VA	LUE OF CALIBRATION GAS)	100
SERROR PRECISION	(KNOWN VALUE OF THE C		100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
· 4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED 4/27/11 16:00

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		

-	LOW	HIGH
READING #1	503	9.900
READING #2	503	9 900
READING #3	503	9.900
ERROR PRECISION	. 0.20	-2.91
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100
SEKNOK EKECISION -	=	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 9:11

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
			-	•

METER CERTIFICATION RESPONSE

		LOW	HIGH
	READING #1	1.899	9.401
	READING #2	⁻ 1 898	9 409
	READING #3	/ 1.904	9.400
_	ERROR PRECISION	2.55	2.25
	PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
•	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 9:18

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALIBR	ATION GASES		
GAS TYPE	GAS CODE	. DESCRIPTI	ON	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT	F# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08	PO# 46043	12/05/2008	9.620.
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 (CYLINDER #44 DOCUME	08/01/2006	0
·		METER CERTIF	LOW LOW	HIGH	
-			LOW	HIGH	
,		READING #1	520	9.401	
		READING #2	519	9 409	
		READING #3	517	9.400	
		ERROR PRECISION	2.91 .	2.25	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

AUDDOD DDEGLGTON	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
TERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	, 100

 RESPONSE TIME

 FIRST READING
 SECOND READING
 THIRD READING
 AVERAGE
 PASSED

 3
 3
 4
 3
 Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 12:55

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

	GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION
	LOW	L0004	L0004-EXP:12/5/2013 METHAN	E MIX/LOT#1204SE08 PC	12/05/2008	1.950
	HIGH	H0003	METHANE MIX / LOT# 1204SF0	98 PO# 46043	12/05/2008	9.620
_	ZERO	20001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
_			METER CERT	IFICATION RESPONSE	·	-
				LOW	HIGH	
			READING #1	1.941	9.490	
			READING #2	1 941	9 490	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

READING #3

PASSED

ERROR PRECISION

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	* 100

1.941

0.46

Yes

9.490

1.35

 RESPONSE TIME						
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED		
		4				

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 12:55

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE GAS CODE DESCRIPTION CERTIFICATION DATE CONCENTRATION LOW L0005 EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840 12/05/2008 504 HIGH H0003 METHANE MIX / LOT# 1204SF08 PO# 46043 12/05/2008 9.620 ZERO Z0001 AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME 08/01/2006 0 METER CERTIFICATION RESPONSE LOW HIGH READING #1 523 9.490 READING #2 523 9.490 READING #3 523 9.490 ERROR PRECISION 3.77 1.35 PASSED Yes Yes		CALIBRATION GASES						
LOW L0005 EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840 12/05/2008 504 HIGH H0003 METHANE MIX / LOT# 1204SF08 PO# 46043 12/05/2008 9.620 ZERO Z0001 AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME 08/01/2006 0 METER CERTIFICATION RESPONSE LOW HIGH READING #1 523 9.490 READING #2 523 9.490 READING #3 523 9.490 ERROR PRECISION 3.77 1.35	GAS TYPE	GAS CODE	DESCF	DESCRIPTION		CONCENTRATION		
ZERO Z0001 AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME 08/01/2006 0 METER CERTIFICATION RESPONSE LOW HIGH	LOW	L0005	EXP 12/5/13 METHANE MIX/	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840				
METER CERTIFICATION RESPONSE LOW HIGH READING #1 523 9.490 READING #2 523 9.490 READING #3 523 9.490 ERROR PRECISION 3.77 1.35	HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043		12/05/2008	9.620		
LOW HIGH READING #1 523 9.490 READING #2 523 9.490 READING #3 523 9.490 ERROR PRECISION 3.77 1.35	ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0		
READING #2 523 9 490 READING #3 523 9.490 ERROR PRECISION 3.77 1.35			METER CE		HIGH	*		
READING #3 523 9.490 ERROR PRECISION 3.77 1.35			READING #1	523	9.490			
ERROR PRECISION 3.77 1.35			READING #2	523	9 490			
		,	READING #3	523	9.490			
PASSED Yes Yes		,	ERROR PRECISION	3.77	1.35			
			PASSED	Yes	Yes			

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

-	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	:	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

 RESPONSE TIME

 FIRST READING
 SECOND READING
 THIRD READING
 AVERAGE
 PASSED

 4
 4
 4
 4
 Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 2/17/11 9:44

TECHNICIAN 1323 - TRACEY PRIETO

CONCENTRATION

CERTIFICATION DATE

1.30

Yes

CALIBRATION GASES

DESCRIPTION

GAS CODE

GAS TYPE

			-		
LOW	L0004	L0004-EXP:12/5/2013 METHAN	E MIX/LOT#1204SE08·PO	12/05/2008	1.950
HiGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		0
,		. METER CERT	IFICATION RESPONSE		
	LOW			HIGH	
		READING #1	1.902	9,499	
		READING #2	1 908	9 495	•
		READING #3	1.907	9.491	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
SERROR FRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100
_	(MICHIE VALUE OF THE CALIFORNIUM GAS)	

2.27

,	RESPONSE TIME					
	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED	
	4	. 4	3	4	Yes	

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 2/17/11 9:46

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504 .
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	504	9.499
READING #2 ·	508	9 495
READING #3	509	9.491
ERROR PRECISION	0.60	1 30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100
SERKOR PRECISION	=	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4 .	4	· 3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED 2/17/11 11:48

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH .	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
			*	

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.919	9,513
READING #2	1 919	9 513
READING #3	1.919	9.513
ERROR PRECISION	1.59	1.11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	. 4	. 4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 11:49

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	N	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT#	1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 P	°C# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CY	LINDER #44 DOCUME	08/01/2006	0
		METER CERTIFIC	HIGH		
		READING #1	511	9.513	
		READING #2	511	9 513	
		READING #3 .	511	9.513	
		ERROR PRECISION	1 39	1 11	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

PASSED

SERBOR RECUCION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
SERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	, 100

Yes

RESPONSE TIME

-	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	. 4	4	4	4	· Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN 1323 - TRACEY PRIETO

CONCENTRATION

CERTIFICATION DATE

CALIBRATION GASES

DESCRIPTION

GAS CODE

GAS TYPE

LOW	L0004	L0004-EXP:12/5/2013 METH	HANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204	4SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	. 0
		METER C	ERTIFICATION RESPONSE	HIGH	
		READING #1	1,899	9.406	-
		READING #2	1 899	9 406	
		READING #3	1.899	9.406	
		ERROR PRECISION	2.62	2.22	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4.	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE*CALIBRATED 2/17/11 16:13

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
ҢІ G Н	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	500	9.406
READING #2	500	9 406
READING #3	500	9.406
ERROR PRECISION	0.79	2.22
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS , THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS) .	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION CAS)	

RESPONSE TIME

•	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 9:46

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH '	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	, 12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
	•			

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1,950	9.597
READING #2	1 949	9 591
READING #3	1.952	9.593
ERROR PRECISION	. 0 02	0 27
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	· ·	
	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
SERROR PRECISION =	*	* 100
PERMON INECIPION -		100
	(KNOWN VALUE OF THE CALIBRATION CAS)	

RESPONSE TIME

•				
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4 `	3	- 4	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 9:47

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

•	LOW	HIGH
READING #1	501	9.597
READING #2	499	9.591
READING #3	498	9.593
ERROR PRECISION	0.93	0.27
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100
SERROR PRECISION	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 11:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	. DES	CRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MI	X/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 120	94SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
	,	METER C	CERTIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	506	9,581	
		READING #2	506	9 581	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

READING #3

PASSED

ERROR PRECISION

506

0 40

9.581

0 41

Yes

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 4 4 Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED 2/17/11 11:50

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHAN	IE MIX/LOT#1204SE08 PO	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LQT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CER	TIFICATION RESPONSE LOW	HIGH	,
•		READING #1	1.959	9.581	
		READING #2	1 959	9 581	
		READING #3	1.959	9,581	•

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
UZIMON TREGISTON	(KNOWN VALUE OF THE CALIBRATION GAS)	100

0.46

Yes

0.41

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPT	70N	CERTIFICATION DATE	CONCENTRATION
LOW .	, L0004	L0004-EXP 12/5/2013 METHANE	MIX/LOT#1204SE08 PO	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204SF08	8 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTI	FICATION RESPONSE	HIGH	
		READING #1	1.980	9,613	
		READING #2	1 980 ,	9 613	
		READING #3	1.980	9 613	
		ERROR PRECISION	1.54	0.07	
	,	PASSED	Yes	Yes	· ·

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

	(METER READING) -	(KNOWN VALUE OF CALIBR	ATION GAS)
%ERROR PRECISION =			· * 100
	(KNOWN VAT	HE OF THE CALIBRATION G	IZA

RESPONSE TIME SECOND READING AVERAGE **PASSED** Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 16:14

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	511·	9,613
READING #2	511	9 613
READING #3	511	9.613
ERROR PRECISION	1.39	0.07
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ARROAD DEROTATON	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 9:14

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		12/05/2008	·1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043		12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	1.895	9.541	
		READING #2	1 896	9 530	
		READING #3	1.898	9.533	
	•	ERROR PRECISION	2 75	0.89	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

<pre>%ERROR -PRECISION =</pre>	*(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

		•		
FIRST READING .	SECOND READING	THIRD READING	AVERAGE	PASSED
		•		
4	3	4 .	4	Yes
•	<u> </u>	•	•	

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED 1/21/11 9:15

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620 ' '
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	515	9,541
READING #2	511	9 530
READING #3	512	9.528
ERROR PRECISION	1.72	0.90
PASSED.	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

_ FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4 .	3	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 1/21/11 12:47

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METH	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		1.950
HIGH	H0003	METHANE MIX// LOT# 1204SF08 PO# 46043		12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CI	ERTIFICATION RESPONSE	HIGH	
		READING #1	1.899	. 9.518	
		READING #2	1 899	9 518	,
		READING #3	1,899	9.518	
		ERROR PRECISION	2.62	1.06	
		PASSED	Yes	Yes	•

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	* 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 1/21/11 12:48

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0 .

METER CERTIFICATION RESPONSE

_	LOW	HIGH
READING #1	519	9.518
READING #2	519	9 518
READING #3	519	9.518
ERROR PRECISION	2 98	. 1 06
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

ARREST PRESTATOR	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100	
SERROR PRECISION	(KNOWN VALUE OF THE CALIBRATION GAS)		

RESPONSE TIME THIRD READING **AVERAGE PASSED**

FIRST READING SECOND READING Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 16:38

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHAN	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		1.950
ніGН	H0003	METHANE MIX / LOT# 1204SF	METHANE MIX / LOT# 1204SF08 PO# 46043		9.620
ZERO	Z0001	AIR ULTRA ZERO PO#C1424	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		0
		METER CERTIFICATION RESPONSE			
		_	LOW	HIGH	
		READING #1	1.905	9.525	
		READING #2	1 905	9.525	
		READING #3	1.905	9.525	
	ì	ERROR PRECISION	2 31	0.99	
		PASSED	Yes '	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
FERROR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

			•	
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4.	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 1/21/11 16.39

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

	·			
GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	, 522	9.525
READING #2	522	9 525
READING #3	552	9.525
ERROR PRECISION	5 56	0.99
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

APPROD DOTOTOTO	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

				· 	
	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
_	4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED 1/21/11 9:19

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE.	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
Ĺow	L0004	L0004-EXP:12/5/2013 METHANE	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		- 1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08	3 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		READING #1 READING #2	LOW 1.930 1 934	9.390 9.392	
	,	READING #3	1.939	9.387	
		ERROR PRECISION	0 80	2 39	·

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION =	=	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

Yes

Yes.

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

, CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED 1/21/11 9:19

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	.Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	499	9.390
READING #2	498	9 392
READING #3	499	9.387
ERROR PRECISION	1.06	2.39
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

SERDOD DREGICION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100
%ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
•	3	4	3	3	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED 1/21/11 12 48

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE	•	

	LOW	HIGH ·
READING #1	1.940	9.395
READING #2	1 940	9 395
READING #3	1.940	9.395
ERROR PRECISION	0.51	. 2.34
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

						•
			(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)			
%ERROR	PRECISION	=		*	100	ł
		- 1	(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME

	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
•	5	5	5	. 5	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED. 1/21/11 12:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT#	# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08	PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 C	YLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFI	CATION RESPONSE	HIGH	
		READING #1	491	9.395	
		READING #2	491	. 9 395	
		READING #3	. 491	9.395	
		ERROR PRECISION	2.58	2.34	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

,	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	. 100
*ERROR PRECISION =	/KNOWN VALUE OF THE CALIBRATION CASA	* 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5 .	5	5	5	Yes

CALIBRATION REPORT

INSTRUMENT 730425604 - TVA 1000

DATE CALIBRATED 1/21/11 16:39

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION .	CERTIFICATION DATE	CONCENTRATION
· LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.945	9.399
READING #2	1 945	9.399
READING #3	1.945	9.399
ERROR PRECISION	0.26	2 30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

4	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
FERROR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	^ 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	5	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 16:40

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
Low	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		

•	LOW	HIGH
READING #1	489	9.399
READING #2	489	9 399
READING #3	489	9.399
ERROR PRECISION	2.98	2 30
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

PEDDOD DECICION -	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
PERMON ENECTSTON -	(KNOWN VAIUE OF THE CALIBRATION CAS)	- 100

RESPONSE TIME.

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	5	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED 1/14/11 10:32

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH .	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
· READING #1	1.940	9.720
READING #2	1 943	9 716
READING #3	1.943	9.715
ERROR PRECISION	0.41	1 01
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
*ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	, 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 10:32 -

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	- DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	. 0

METER CERTIFICATION RESPONSE

_	LOW	HIGH
READING #1	507	9.720
READING #2	506	9 716
READING #3	501	9.715
ERROR PRECISION	0 13	1.01
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
**ERROR PRECISION =	·	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

•				
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
2	4	3	2	
3	4	3	3	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 1/14/11 13.06

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950	
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0	
		METER CERTIFICATION RESPONSE			

	LOW	HIGH
READING #1	1.980	9.920
READING #2	1 980	9 920
READING #3	1.980	9.920
ERROR PRECISION	1.54	3 12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

ARROAD DEFOICION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100
SERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4 0	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 13:06

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALIBRA	TION GASES		
GAS TYPE	GAS CODE	DESCRIPTION DESCRIPTION	DESCRIPTION		CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT	# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08	PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 C	CYLINDER #44 DOCUME	08/01/2006	0
	·	· METER CERTIF	ICATION RESPONSE	нідн	
	•	READING #1	501	9.920	
		READING #2	501	9 920	
		READING #3	501	9.920	
		ERROR PRECISION	0.60	3.12	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE	OF CALIBRATION	GAS)
%ERROR PRECISION =				* 100
	(KNOWN	VALUE OF THE CAT	IBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED 1/14/11 15:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHA	ANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 12045	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CE	RTIFICATION RESPONSE		
		-	LOW	HIGH	
		READING #1	1,955	9,631	
•		READING #2	1 955	9 631	
		READING #3	1.955	9.631	
		ERROR PRECISION	0.26	,0.11	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)			
%ERROR PRECISION	=		*	100)
	ĺ	(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME SECOND READING FIRST READING THIRD READING AVERAGE PASSED 4 Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED 1/14/11 15:00

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0 .
		METER CERTIFICATION RESPONSE		
		Low	HIGH	

	LOW	HIGH
READING #1	496	9.631
READING #2	496	9 631
READING #3	496	9.631
ERROR PRECISION	1.59	0 11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	100

 	RES	SPONSE TIME	· · · · · · · · · · · · · · · · · · ·	
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4 ,	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 12/27/10 9:26

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP·12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1,957	9,699
READING #2	´ 1 953	9 703
READING #3	1.959	9.709
ERROR PRECISION	0 32	0 87
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
APVIOR LVECTOTON -		, 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	ĺ

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 9.27

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006 .	0

METER CERTIFICATION RESPONSE

-	LOW	HIGH
READING #1	511	9.699
READING #2	507	9 703
READING #3	·508	9.709
ERROR PRECISION	0.93	. 0.87
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	_	1.0	20
#ERROR PRECISION	= -		*	ΤÚ	JU
	-	(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	` 3	4	Yes

. CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 12/27/10 12:30

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP.12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620 ·
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
			•	
		METER CERTIFICATION RESPONSE		•
		WETER GERTIFICATION RESPONSE	•	

	LOW	HIGH
READING #1	1.968	9.711
READING #2	1 968	9 711
READING #3	1.968	9.711
ERROR PRECISION	0 92	0.95
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)			
%ERROR PRECISION	=		*	10	0
		(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME

_ <u>F</u>	IRST READING	_ 5	SECOND READING	THIRD REAL	DING	AVERAGE		PASSED	
	4		4	4		4	•	Yes	

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED 12/27/10 12.30

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620
ZERO .	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	517	9.711
READING #2	517 [~]	9 711
READING #3	517	9.711
ERROR PRECISION	2 58	0.95
PASSED	Yes	Yes.

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	•	
	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION =		* 100
VERTICAL LINEOTOTOR		100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4 .	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 15:48

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP 12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DÓCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.974	9.718
READING #2	1 974	9 718
READING #3	. 1.974	9.718
ERROR PRECISION	1.23	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION	=	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 15:49

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	` 12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
	-		,	

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	523	9.718
READING #2	523	9 718
READING #3	523	9.718
ERROR PRECISION	3.77	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

* 1		
	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

	FIRST READING	SECOND READING	THIRD READING	_AVERAGE	PASSED
•	. 4	4	4 .	4	Yes

CALIBRATION REPORT

INSTRUMENT 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 9:27

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	~ 0
•				

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.929	, 9.506
READING #2	1 923	9 521
READING #3	1.913	9.509
ERROR PRECISION	1.45	1.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR	PRECISION	=	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	*	100)
		Ì	(KNOWN VALUE OF THE CALIBRATION GAS)		200	

RESPONSE TIME

FIRS	T READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	3 .	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED 12/27/10 9 28

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		

	LOW	HIGH .
READING #1	499	9,506
READING #2	501	9 521
READING #3	503	9.509
ERROR PRECISION	0.60	1.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHAN	NE MIX/LOT#1204SE08 PO	. · 12/05/2008	1.950
HIGH	. H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
· .		. METER CER	TIFICATION RESPONSE	HIGH	
• ,		READING #1	1.931	9,553	
		READING #2	1 931	9 553	
		READING #3	1.931	9.553	
		ERROR PRECISION	. 0.97	0.70	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	,	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4 .	Yes

CALIBRATION REPORT

INSTRUMENT 1008240833 - TVA-1000

DATE CALIBRATED 12/27/10 12:30

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LC	OT# 1204SD08 PO # 0840	12/05/2008	504
. HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001 ,	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		, METER CERT	HIGH		
		READING #1	508	9,553	
		READING #2	508	9 553	
,		READING #3	508	9.553	
	•	ERROR PRECISION	0.79	0 70	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

PASSED

	-	(METER	READING)	_	(KNOWN	VALUE	OF	CALIBRATION	GAS)		
%ERROR PRECISION	=									*	100
	- 1		(KNOWN V	A T.I	IE OF TH	HE CAL	TRR	ATTON GASI		i	

Yes

RESPONSE TIME

Yes

FIRST READING SECOND READING THIRD READING **AVERAGE** PASSED Yes

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED. 12/27/10 15:49

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
				•

METER CERTIFICATION RESPONSE

	LOW		HIGH
READING #1	1.938		9,564
READING #2	1 938		9 564
READING #3	1.938		9.564
ERROR PRECISION	0.62	•	0.58
PASSED	Yes	1	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	, (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	* 100

RESPONSE TIME

	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
•	4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 1008240833 - TVA-1000

DATE CALIBRATED 12/27/10 15:49

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	PTION .	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	. 08/01/2006	0
		METER CER	TIFICATION RESPONSE	HIGH ·	
		· READING #1	523	9,718	
		READING #2	523	9 718	
		READING #3	523	9.718	
		· ERROR PRECISION	3 77	1 02	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	· (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

				•
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 8:58

TECHNICIAN. 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP 12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1,950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0.

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1,963	9.634
READING #2	1 967	9 631
READING #3	1.952	9.621
ERROR PRECISION	0.55	0 09
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%FRROR PRECISION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	100
BERRON PRESENTA	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

· CALIBRATION REPORT

INSTRUMENT. 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 8:58

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	· LOW	HIGH
READING #1	509	9.634
READING #2	. 510	9 631
READING #3	515	9.621
ERROR PRECISION	1 46	0.09
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

			•	
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	3	3	Yes

CALIBRATION REPORT

INSTRUMENT 0712122196 - TVA1000

DATE CALIBRATED. 12/7/10 12 00

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

•	LOW	HIGH
READING #1	2.015	9.901
READING #2	2 015	9 901
READING #3	2.015	9.901
ERROR PRECISION	3.33	2.92
PASSED	Yes	, Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
,	(KNOWN VALUE OF THE CALIBRATION GAS)	i

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4 ·	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED. 12/7/10 12:00

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTI	10N	CERTIFICATION DATE	CONCENTRATION
LOW	L0005 ,	EXP 12/5/13 METHANE MIX/ LOT	T# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08	3 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 (CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIF	FICATION RESPONSE	HIGH	
		READING #1	520	9,901	
		READING #2	520	9 901	•
		READING #3	520	9.901	
		ERROR PRECISION	3 17	2.92	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	÷
%ERROR PRECISION =	=	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

			=	
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4 ·	. Yes

CALIBRATION REPORT

INSTRUMENT 0712122196 - TVA1000

DATE CALIBRATED. 12/7/10 15 53

TECHNICIAN. 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTIO	ON	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE I	MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	. H0003	METHANE MIX / LOT# 1204SF08	PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 C	YLINDER #44 DOCUME	08/01/2006	0
 		METER CERTIF	ICATION RESPONSE		· · · · · · · · · · · · · · · · · · ·
		<u> </u>	LOW	HIGH	
		READING #1	1.999	. 9.816	
		READING #2	1 999	9 816	
		READING #3	1.999	9.816	
		ERROR PRECISION	2.51	2.04	
	•	PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
*ERROR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	- 100

RESPONSE TIME

•			•	
FIRST READING	SECOND READING	. THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED 12/7/10 15:53

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH _	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		
		LOW	HIGH	

	LOW	HIGH	
READING #1	518	9,816	
READING #2	518	9 816	
READING #3	518	9.816	
ERROR PRECISION	2.78	2.04	
PASSED	Yes	Yes	}

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

*ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
SERROR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	. 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED. 12/7/10 9:03

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION .	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.977	9.668
READING #2	1 971	9 663
READING #3	1.973	9.661
ERROR PRECISION	1.21	0.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

•	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION	=	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

		•		
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4 `	3	. 4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED 12/7/10 9:04

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	516	9,668
READING #2	517	9 663
READING #3	516	9.661
ERROR PRECISION	2 45	0.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

		•		
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED. 12/7/10 12:00

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP-12/5/2013 METHANE	MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF0	8 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTI	FICATION RESPONSE		
		· · ·	LOW	HIGH	-
		READING #1	1,996	9.769	
		READING #2	1 996	9 769	
		READING #3	1.996	9.769	
		ERROR PRECISION	2.36	1 55	
		PASSED	. Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION	= *	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4) 4	. 4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 12.00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	527	9.769
READING #2	527	9 769
READING #3	527	9.769
ERROR PRECISION	4.56	1 55
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION	= *	100
UBILITOR TRECTOTOR	/KNOWN NATHE OF THE CALIBRATION CASA	100

RESPONSE TIME

_	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	4	4	4	4 .	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 15:54

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHAN	IE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9,620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
	 	METER CERT	CIFICATION RESPONSE LOW	HIGH	
		READING #1	2.005	9.769	
		READING #2	2 005	9 769	
		READING #3	2.005	9.769	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

A EDDOD DODGE (10)	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
FERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	100

2.82

Yes

1 55

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4 .	. 4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED 12/7/10 15:55

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION · `	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ Le	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE LOW		HIGH	· · · · · · · · · · · · · · · · · · ·
,		READING #1	535	9.799	•
		READING #2	535	9 799	
		READING #3	535	9.799	
		ERROR PRECISION	6.15	1.86	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)		
%ERROR PRECISION =		* 100	
(KNOWN VALUE OF THE CALIBRATION GAS)			

Yes

Yes

RESPONSE TIME

•	FIRST READING	SECOND READING	THIRD READING	- AVERAGE	PASSED
	. 4	4	4	4	Yes

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Thursday, June 30, 2011 9:31 AM

To:

VanHorn, Kristen, NMENV; Chavez, Carl J, EMNRD

Subject: Attachments: SEMI-ANNUAL REPORT (#2)- Passive Bio-venting Project for remediating ULSD COVER LETTER 070111.doc; BIOVENTING MONITORING LOG.xls; QaQc-062811.pdf; CAL

011411.pdf; CAL 012111.pdf; CAL 021711.pdf; CAL 120710.pdf; CAL 122710.pdf;

QaQc-032211.pdf; QaQc-042711.pdf; QaQc-052711.pdf

Dear Kristen and Carl,

The above attachments includes the cover letter for the semi-annual report (#2) for the passive bio-venting and remediation project of the ULSD tanks (T-115/T-116) area, the Bio-venting Monitoring Log, and Qa/Qc Data for your review. If you should have any questions regarding this report, please either call me directly or send me an e-mail.

Regards,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com





July 1, 2011

New Mexico Environmental Department Hazardous Waste Bureau (HWB) 1301 Siler Road, Building B Santa Fe, NM 87507 Attn: Kristen Van Horn

New Mexico Energy, Minerals and Natural Resources Oil Conservation Division (OCD) 1220 South St. Francis Drive Santa Fe, NM 87505 Attn: Mr. Carl Chavez

Re: **REPORT #2**:

Semi-annual Report submittal for Passive Bioremediation (Bio-venting) Project for remediating Ultra Low Sulfur Diesel (ULSD) in accordance with (NSR Permit No. 0633-M8-R3, Part A.214)

Dear Ms Van Horn and Mr. Chavez:

Western Refining (Gallup Refinery) was granted the new NSR Permit 0633-M8-R3 that was signed on October 6, 2010. Under Part A.214 of the new permit, Western Refining is allowed to install a Passive Bioremediation (bio-ventilation) System for any Ultra Low Sulfur Diesel (ULSD) fuel spills that may occur at our facility. This report will include monitoring data based on nine events extending from December 7, 2010 through June 28, 2011.

Western Refining previously addressed the preliminary layout, pipe manufacturing, boring and pipe installation, and pipe survey in the letter to the Agency of March 11, 2011. Therefore, any reference to or detailed discussions of these issues will be omitted from this report unless changes or modifications are made to the bio-ventilation system such as addition or subtraction will be mentioned if required.

The Agency will find an excel workbook included as an attachment. The workbook includes the "Bio-venting Monitoring Log", graphs of "Daily Overall Average VOC Concentration", "Daily Maximum vs Daily Average", Daily Minimum vs Daily Average", and (C(1) through C 16). A detailed discussion of each will follow below.

VOC Monitoring and Qa/Qc Procedures- As indicated in the letter to the Agency, LDAR (Leak-Detection and Repair) personnel will conduct the VOC monitoring using a Flame Ionizing Detector (FID) (TVA-1000). As previously stated, Method 21 uses a portable instrument to detect VOC leaks from sources. The regulations do not specify a



model or type of VOC instrument. However, the type of instrument does have to adhere to certain guidelines and requirements as specified in the regulations. One of the requirements for the instrument is that the detector either should be a catalytic oxidation, flame ionization, infrared absorption, or photo-ionization type of detector. Specific instrument methodology is addressed under Method 21. LDAR personnel use the proper Qa/Qc procedures for Volatile Organic Compounds (VOC) monitoring as prescribed by EPA in accordance with Method 21. This document specifies all guidelines for Qa/Qc procedures and detection of VOC leaks from process equipment. Daily Qa/Qc must be performed prior to VOC monitoring.

Monitoring Schedule- Initially VOC monitoring was conducted on a bi-monthly basis from December through January in order to establish a VOC base line. In February 2011, VOC monitoring frequency was changed from a bi-monthly to a monthly basis. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. Western has conducted monthly VOC monitoring through June 2011 in order to collect enough historical data on the bioventing system. Beginning on July 1, 2011, Western will commence a quarterly VOC monitoring schedule. The sampling events or monitoring will occur during October-December (4th qtr), January-March (1st qtr), April-June (2nd qtr), and July-September (3rd qtr).

Discussion of Semi-annual Monitoring Period Results- (Refer to "Bio-venting Monitoring Log", and graphs "Daily Overall Average VOC Concentration", "Average vs Maximum Concentration", "Average vs Minimum Concentration", "Average VOC Concentration by Sample Point", and individual standpipes (C (1) through 16).

1. Bio-venting Monitoring Logs vs Daily Overall Average VOC Concentration-

Nine sampling periods were conducted and included in this semi-annual report as indicated from the Bio-venting Monitoring Log. The average was calculated for each sampling event as reflected at the bottom of each column in the Bio-venting Monitoring Log. The VOC concentration over time is shown to have decreased from the initial event (December 7, 2010) to the latest sampling event (June 28, 2011). The initial overall daily average from December 7, 2010 was measured and found to be 27847 ppm. The overall daily average from June 28, 2011 was found to be 7881 ppm. If one views the graph of the "Daily Overall Average VOC Concentration", one can ascertain a definite reduction in VOC concentration over time. An exponential decrease is indicated by the "Trend Line" as shown. In order to determine the effectiveness of the Bio-venting System, it will have to be evaluated over a time dependant variable. Therefore, the daily overall concentration is expected to have a high initial concentration with an exponential decay over time. A Mathematical Model for this type of differential equation and decay function will be of the following general format: dC/dt=k*C, where C is the VOC concentration. The coefficient (k), which is a negative value, includes the dampening coefficient for the exponential function as the generalized solution that should theoretically approach an asymptotical value over a time (t). The General Solution to





this differential equation will take the following general format: $C=C_0*e^{(kt)}$, where C is the VOC concentration (ppm) at time (t) and C_0 is the initial VOC concentration. The coefficient (k) is same coefficient as mentioned above and provides a constant for the exponential function for the general solution to the differential equation. Once again, the solution to this generalized equation should also theoretically approach an asymptotical value over a time (t).

4.70

Please note that the relative outside temperature has been plotted in conjunction with the daily overall average VOC concentration as a comparison. It appears that there is a slight correlation between the outside temperature and the VOC concentration; however, several variables may contribute to any deviation from the average. The temperature is base on the average daily outside temperature and does not reflect the gas temperature. Also, the VOC concentration is taken at the sample point near top of pipe. Vapor concentration is not uniform and will vary due to the vapor pressure of the material and due to the permeability of the soil matrix.

2. Comparative Analysis between the "Daily Overall VOC Concentration"; "Daily Maximum vs Daily Average Concentration", and "Daily Minimum vs Daily Average Concentration" graphs—

The "Daily Overall VOC Concentration" graph is divided into two distinct sections that will be analyzed separately. The graph is drawn from data collected during sampling events and put into the cells of the "Bio-venting Monitoring Log" as shown. Daily average from each column was first calculated as an initial baseline for comparative analysis in order to determine an exponential decay constant that will be eventually utilized to determine the time require to cease monitoring. The accuracy of this constant will improve as the data is collected. The overall VOC reduction is the primary goal for the Bio-venting System.

The daily maximum and daily minimum are both components of the "Bio-venting Monitoring Log" daily columns. Each day has a maximum and minimum value that is shown in each column; however, when they are averaged over the sampling time period, they tend to normalize each other through cancellation. Individually however, they are apparent.

3. "Daily Maximum vs Daily Average Concentration" graph -

If one refers to the graph designated as "Daily Maximum vs Daily Average Concentration", one finds there is a correlation between the maximum concentration values and average daily values. On the days that there is a high concentration one will find that the daily average will also increase. This is due to this high concentration value numerically increasing the daily average.

4. "Daily Minimum vs Daily Average Concentration" graph -

If one refers to the graph designated as "Daily Minimum vs Daily Average Concentration", one also finds that there is a similar correlation between the minimum





concentration values and average daily values. On the days that there is a high or low minimum concentration value one will also find a similar reflective image. These lower concentration values will tend to normalize the overall daily averages in order produce an exponential VOC concentration reduction per unit of time.

5. "Standpipe Graph (C (1) through C16)

Sixteen standpipes (C(1) through C16) were monitored from December 7, 2010 through June 30, 2011 for VOC concentration. These values are indicated in the Bio-venting Monitoring Log. A graph was prepared for each standpipe in order to determine the effectiveness of each standpipe. Base on individual standpipe data, it was determined that each standpipe has been effective in reducing the amount of VOC concentration. A "Trend Line" for each standpipe clearly reflects a theoretical reduction over time.

Report Submittals- Passive bioremediation (bio-ventilation) of ultra low sulfur diesel (ULSD) for spill material in order to augment reduction of VOC concentration is a time dependent process. In February 2011, VOC monitoring frequency was changed from a bi-monthly to a monthly basis. The objective of the bio-ventilation system is to decrease the average VOC concentration over time to a satisfactory standard. Western has conducted monthly VOC monitoring through June 2011 in order to collect enough historical data on the bio-venting system. Beginning on July 1, 2011, Western will commence a quarterly VOC monitoring schedule. The sampling events or monitoring will occur during October-December (4th qtr), January-March (1st qtr), April-June (2nd qtr), and July-September (3rd qtr).

Western Refining (Gallup Refinery) will continue to provide the Agency with semi-annual progress report on or about July 1st and January 1st based on the prior semi-annual sampling results.

If you should require any additional information or assistance in this matter, please contact me at the number listed below or via e-mail.

Sincerely,

Beck Larsen, CHMM/REM/PG Environmental Engineer Western Refining Southwest

Direct Line: (505) 722-0258

e-mail: Thurman.larsen@wnr.com

Cc: File

Attachment: Excel File

Qa/Qc Data

. '			BIOVE	NTING Mon	itoring Lo	g for T-115	/T-116 Tan	k Area				1		
READING (PPM)														
		••				DA	TE							
Map Location	Date>	<i>3</i> 12/7/2010	12/27/2010	1/14/2011	1/21/2011	2/17/2011	3/22/2011	4/27/2011	5/27/2011	6/28/2011				
map Location	Temp (deg F)	41	32	28	36	41	37	31	₹ [*] (71 (93		AVERAGE	MAXIMUM	мінімим
Number	Tag #													
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14	22736	8252	3406	2392	199	9116	3 101 3 2 101	. 39	312	996		2757.0	9116.0	39.0
15	22737	50094	72116	38849	10341	49660	107	48	3065	3318		25288.7	72116.0	48.0
16	22738				2 123		32			22		2290.2	9731.0	
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Daily Min NOTE- Coordin	aton for C (1)	2190	986	324	15	2119				. 22	Minimum	881.3	2750.0	7.0

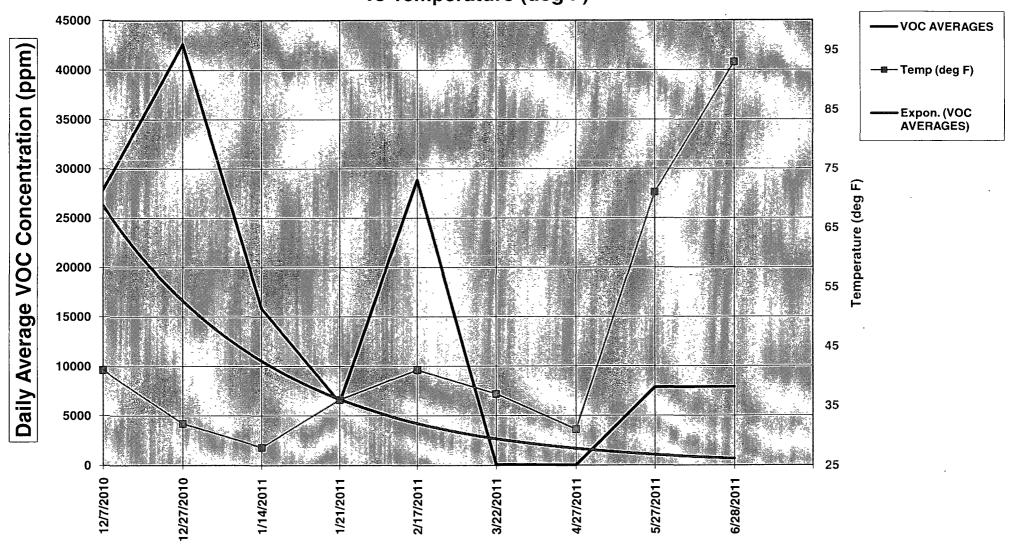
BIOVENTING Monitoring Log for T-115/T-116 Tank Area READING (PPM) DATE 12/7/2010 12/27/2010 1/14/2011 Date ---> 1/21/2011 2/17/2011 3/22/2011 4/27/2011 5/27/2011 6/28/2011 Map Location Temp (deg F) ·71 AVERAGE MAXIMUM MINIMUM Number Tag # 6836.0 C(1) **·2190 2294.8 17.0 4934.0 10006.0 19.0 14082.8 51033.0 43.0 28874.1 100000.0 4737:9 12163.0 . 12.0 5 2750.0 881.3 ा <u>।</u> ्री1148 ₹76 ∞27 1632:4 5006.0 £11087 17234.1 67115.0 25730.2 99999.0 *£106 √91 29176.1 89037.0 59.0 13357.4 37603:0 16600.0 7174.0 38:0 193826.0 63650.7 30.0 ~199 9116.0 2757. 25288.7 72116.0 48.0 ିର୍ବ86 2290.2 9731.0 7.0 Daily Avg 7881 Average 15256.0 48933.6 23.2 Daily Max 41555 Maximum 63650.7 193826.0 59.0

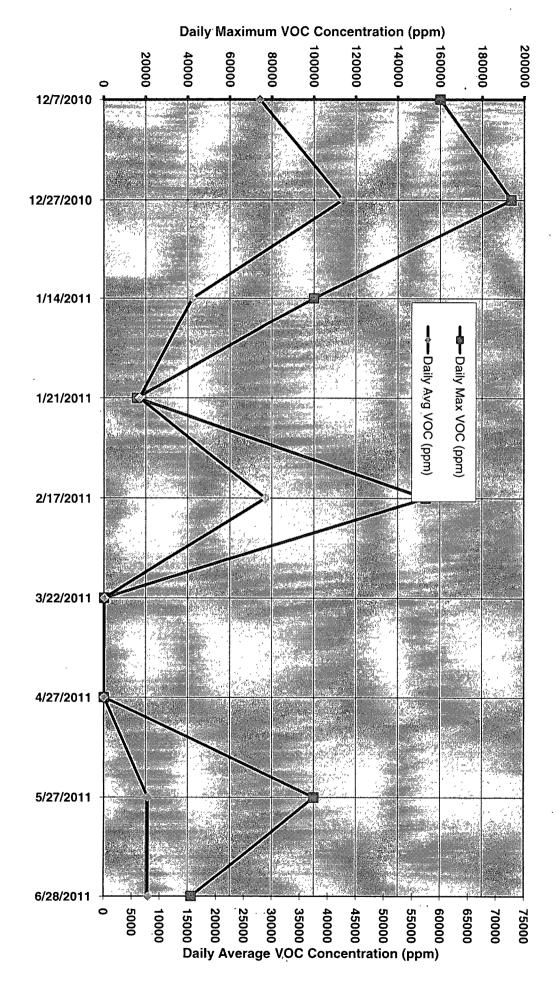
22 Minimum

881.3 3 2750.0

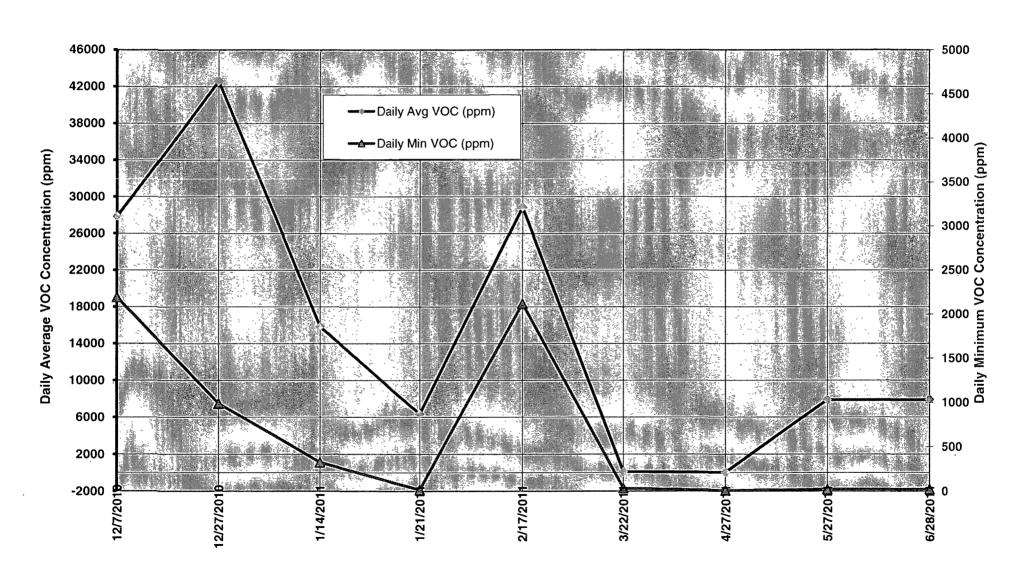
NOTE- Coordinates for C (1)- Lat: 35 deg, 29 min, 23.82285 sec; Long: 108 deg, 25 min, 35.48146 sec

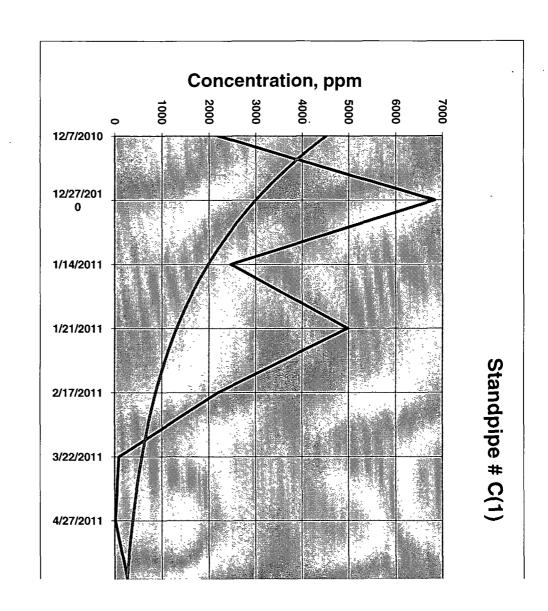
Daily Overall Average VOC Concentration-by Daily Sampling Event vs Temperature (deg F)

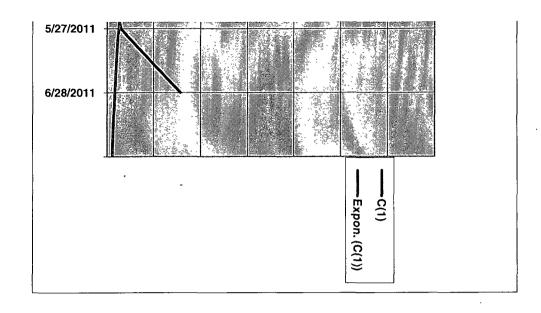


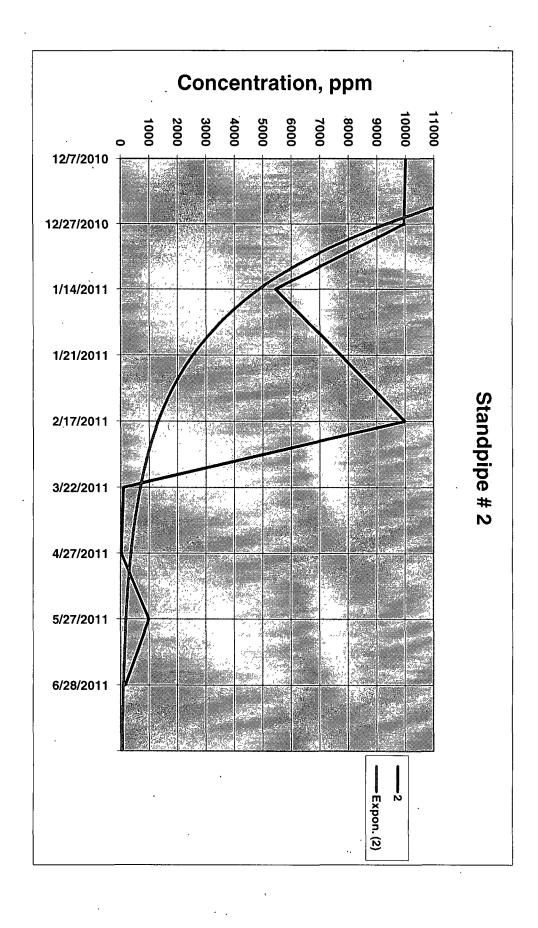


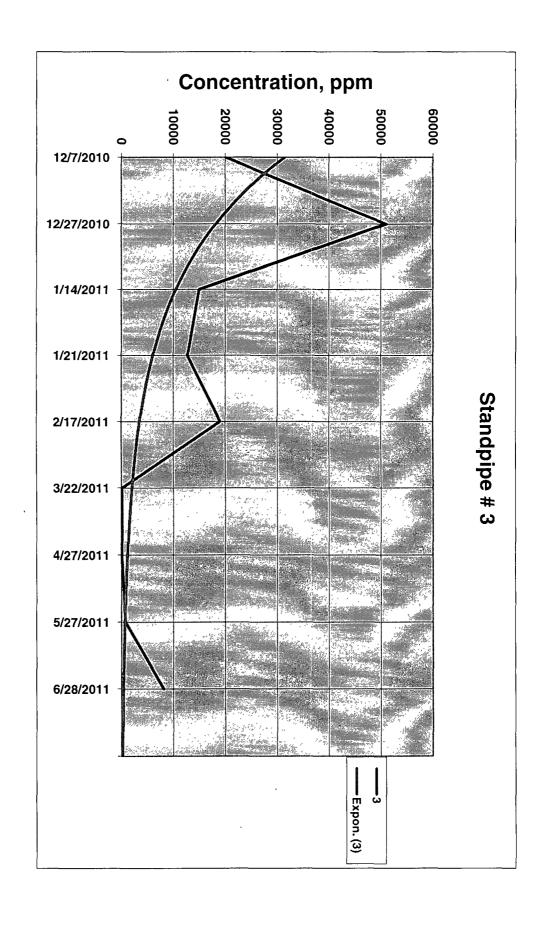
DAILY MINIMUM vs DAILY AVERAGE CONCENTRATION

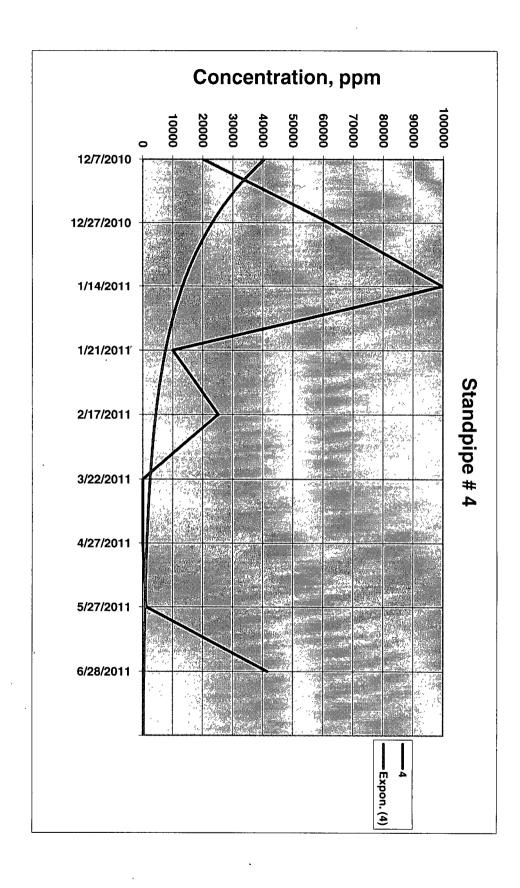


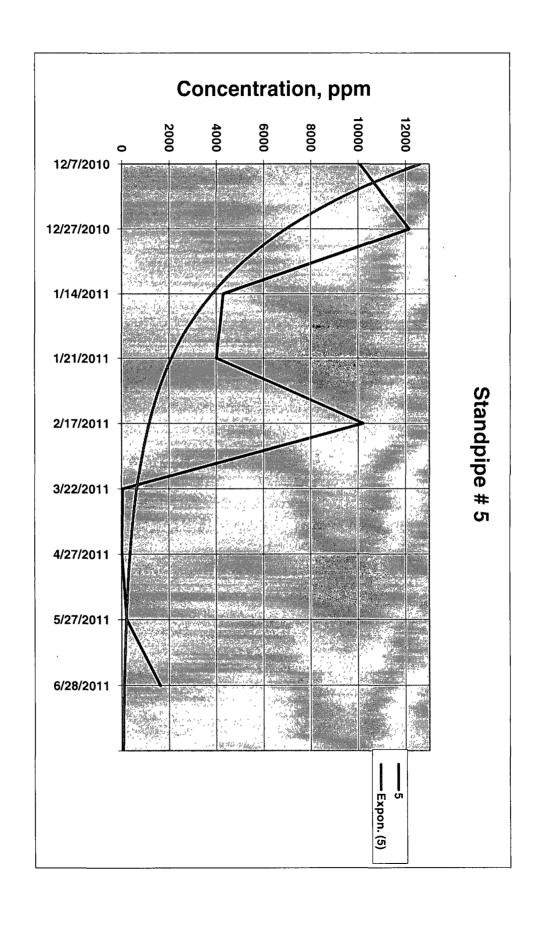


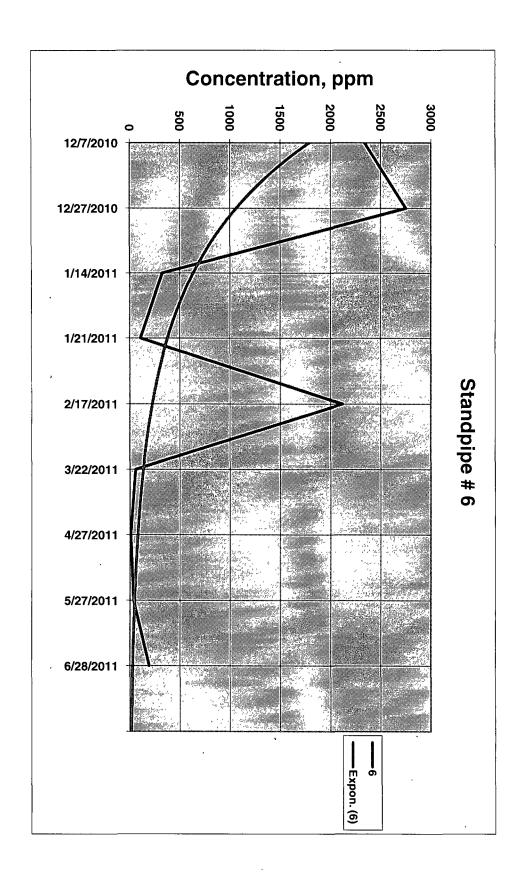


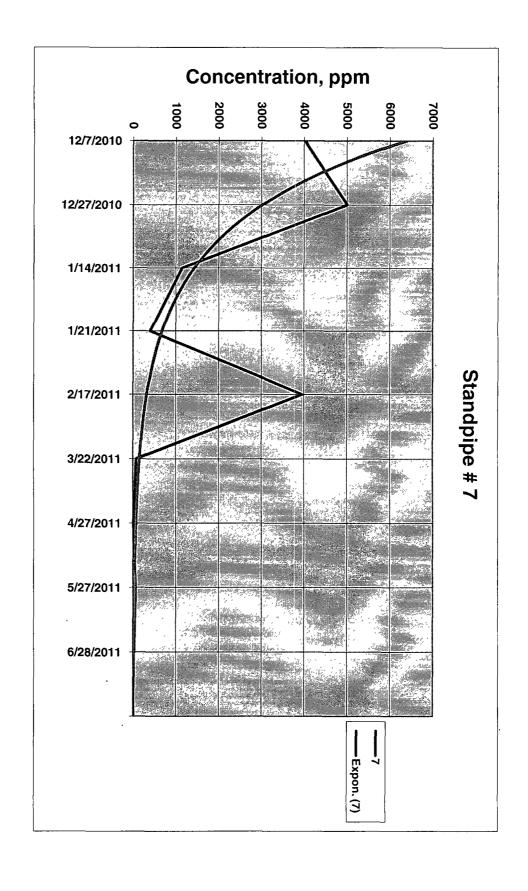


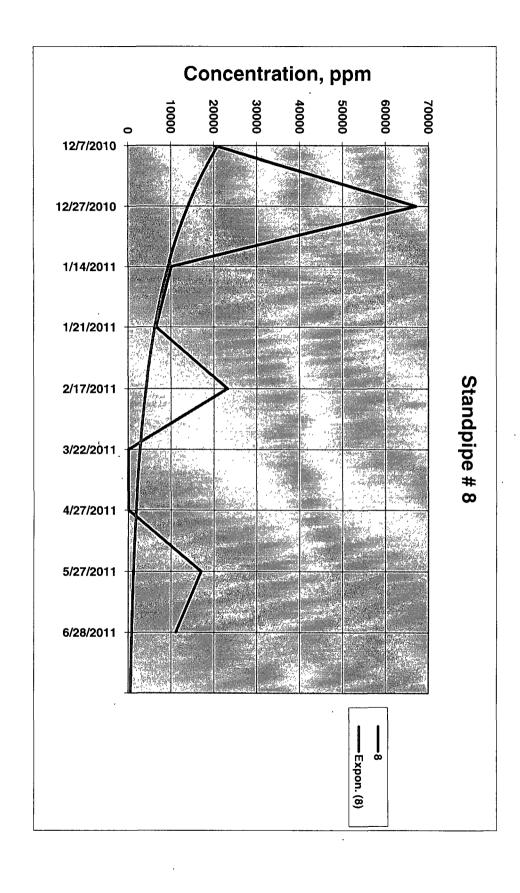


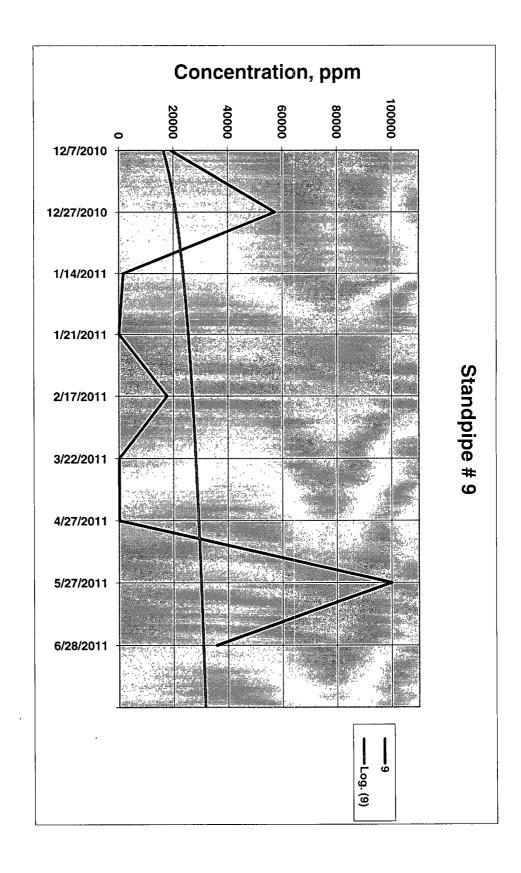


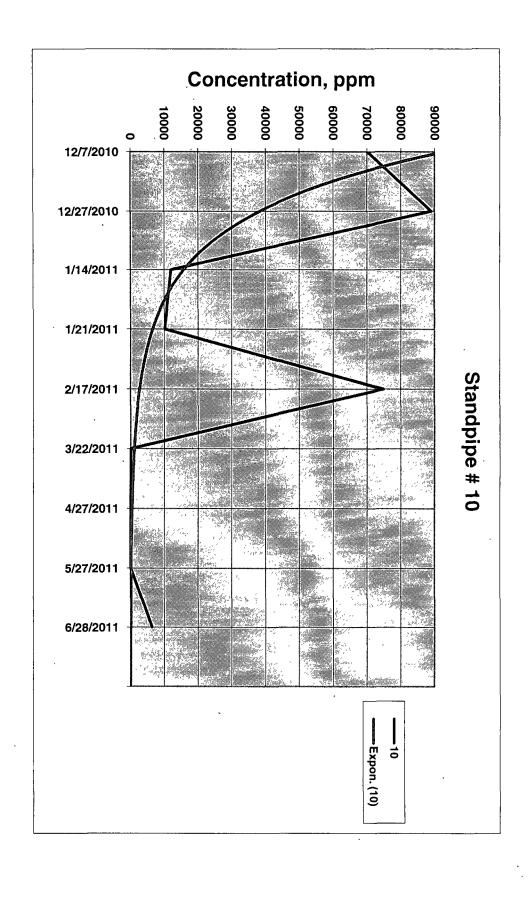


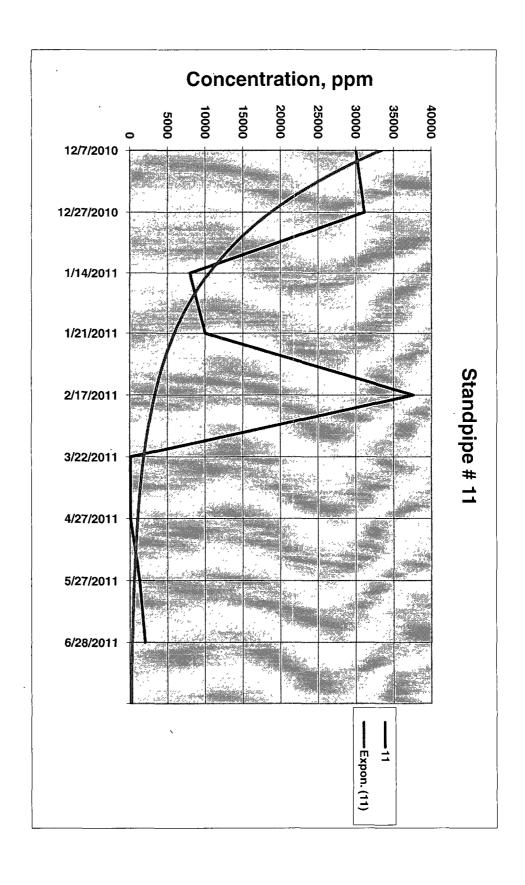


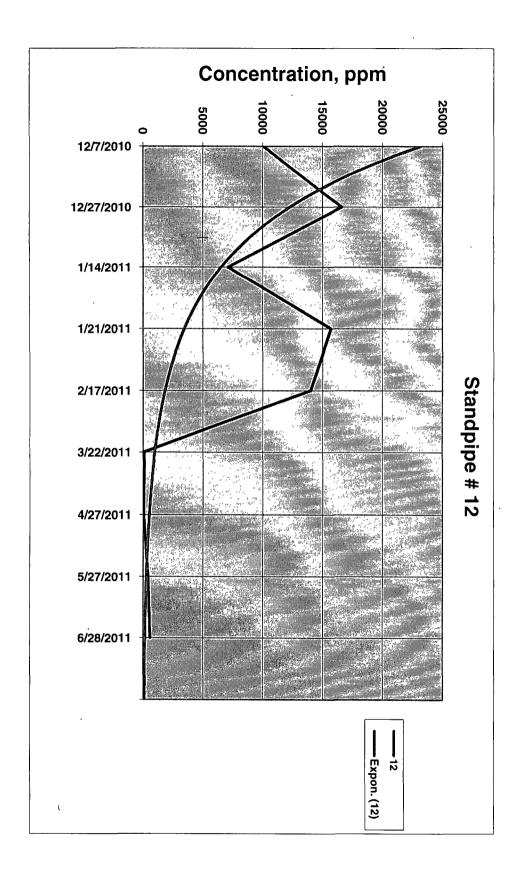


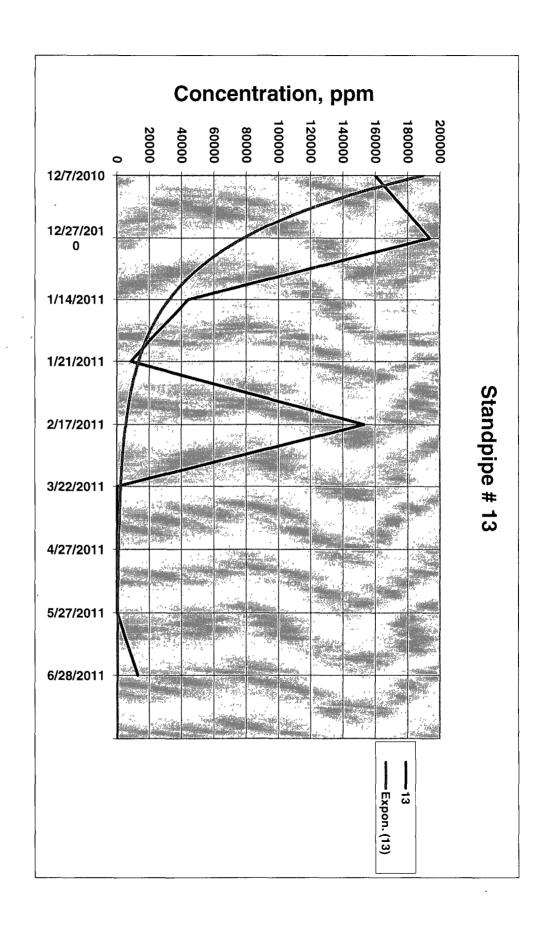


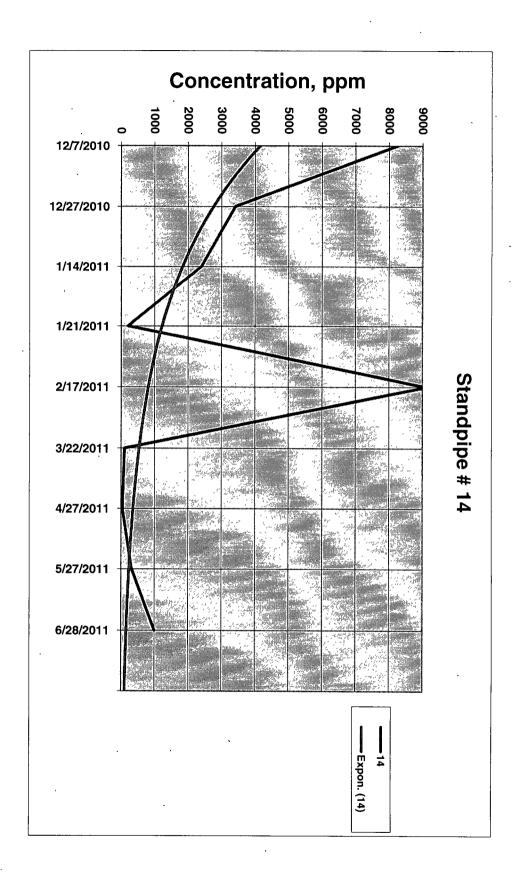


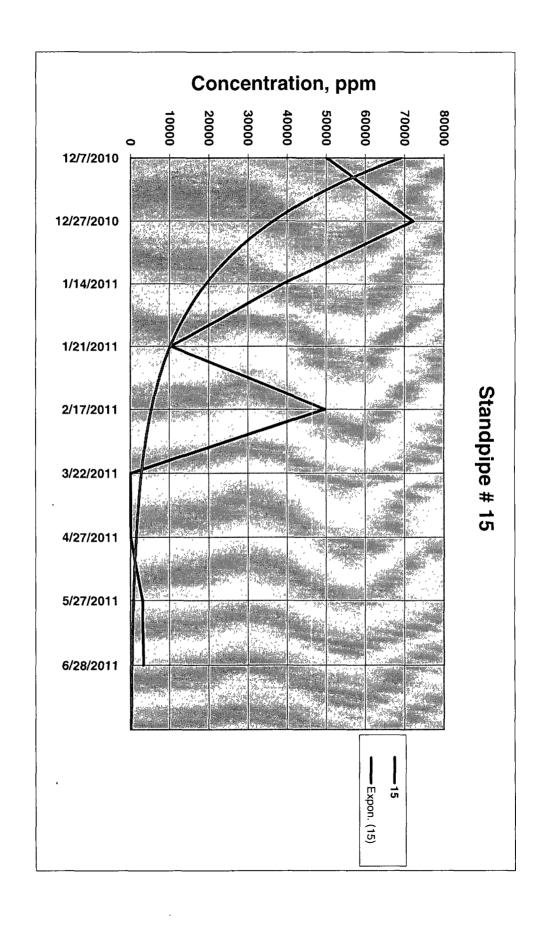


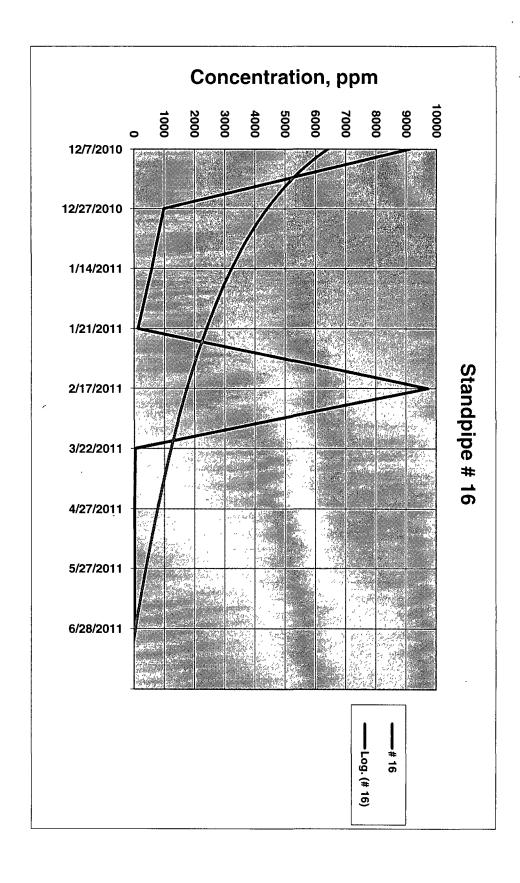












CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 8:44

TECHNICIAN: 1323 - TRACEY PRIETO

Yes

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION			
LOW	L0004	L0004-EXP:12/5/2013 METHAN	IE MIX/LOT#1204SE08 PO	12/05/2008	1.950			
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620			
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0			
METER CERTIFICATION RESPONSE LOW HIGH								
	·	READING #1	1.983	9.913				
		READING #2	1 992	9 922				
		READING #3	1.990	9.919				
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PASSED

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SERROR PRECISION	_	(KNOWN VALUE OF THE CALIBRATION GAS)	 100

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
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CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 8:44

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESC	RIPTION	CERTIFICATION DATE	CONCENTRATION				
LOW	L0005	EXP 12/5/13 METHANE MIX	/ LOT# 1204SD08 PO # 0840	12/05/2008	504				
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620				
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0				
METER CERTIFICATION RESPONSE									
		-	LOW	HIGH	•				
		READING #1	498	9.913					
		READING #2	491	9 922					
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* 100

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 3 4 Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED. 6/28/11 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION
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HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	. 9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
	•	METER CER	TIFICATION RESPONSE	UICU	
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		READING #1	2.017	9.991	
		READING #2	2.017	9.991	
		READING #3	2.017	9.991	
		ERROR PRECISION	3.44	3.86	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

PASSED

Yes

Yes

RESPONSE TIME

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FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	. 4	· 4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED. 6/28/11 12:00

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	IPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	47 CYLINDER #44 DOCUME	08/01/2006	0
			LOW	HIGH	
		READING #1	482	9.991	
		READING #2	482	9 991	
		READING #3	482	9.991	
		ERROR PRECISION	4.37	3.86	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

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RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
· 1	4	Δ	Δ	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 14:50

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCI	RIPTION	CERTIFICATION DATE	CONCENTRATION
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HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CE	RTIFICATION RESPONSE	HIGH	
		READING #1	475	9.671	
		READING #2	475	9 671	
		READING #3	475	9.671	
		ERROR PRECISION	5.75	0.53	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

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	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 6/28/11 14:52

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	RIPTION .	CERTIFICATION DATE	CONCENTRATION	
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HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C142	47 CYLINDER #44 DOCUME	08/01/2006	0	
METER CERTIFICATION RESPONSE						
			LOW	HIGH		
		READING #1	1.971	9.671		
		READING #2	1 971	9 671		
		READING #3	1.971	9.671		
		ERROR PRECISION	1.08	0.53		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

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	Į		(KNOWN	VALU	JE OF	THE	CALI	BRA	TION	GAS)	1	

RESPONSE TIME

FIRST READ	SECOND READING	THIRD READING	AVERAGE	PASSED
. 4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 10:32

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESC	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METH	ANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0
		_	LOW	HIGH	
		READING #1	1.940	9.720	
		READING #2	1.943	9 716	•
		READING #3	1.943	9.715	
		ERROR PRECISION	0.41	1.01	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
SERVOR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	. 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

CAI IBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 10:32

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANÉ MIX / LOT# 12045	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	247 CYLINDER #44 DOCUME	08/01/2006	0
		READING #1	507	9.720	
		READING #2	506	9 716	
		READING #3 501		9.715	
		ERROR PRECISION	0.13	1.01	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	1 (KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 13:06

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	•	HIGH
READING #1	1.980		9.920
READING #2	1.980		9 920
READING #3	1.980		9.920
ERROR PRECISION	1.54		3.12
PASSED	· Yes		Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	1

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED. 1/14/11 13:06

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 12048	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	247 CYLINDER #44 DOCUME	08/01/2006	0
		_	LOW	HIGH	
		READING #1	501	9.920	
		READING #2	501	9 920	
		READING #3	501	9.920	
		ERROR PRECISION 0.60		3.12	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

* 100

RESPONSE TIME

 FIRST READING
 SECOND READING
 THIRD READING
 AVERAGE
 PASSED

 4
 4
 4
 4
 Yes

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 15:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	~. L0004-EXP:12/5/2013 METHANE	E MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0.
		METER CERT	IFICATION RESPONSE		
			LOW	HIGH	•
		READING #1	1.955	9.631	
		READING #2	1 955	9 631	
		READING #3	1.955	9.631	
		ERROR PRECISION	0.26	0.11	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	*	1 /	00
	_	(KNOWN VALUE OF THE CALIBRATION GAS)		Τ.	50
		(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/14/11 15:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DES	SCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE M	IX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 120	04SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C	14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER (CERTIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	496	9.631	
		READING #2	496	9 631	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

READING #3

PASSED

ERROR PRECISION

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

(KNOWN VALUE OF THE CALIBRATION GAS)

496

1.59

Yes

9.631

0.11

RESPONSE TIME

 FIRST READING
 SECOND READING
 THIRD READING
 AVERAGE
 PASSED

 4
 4
 4
 4
 Yes

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 9:14

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620-
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

_	LOW	HIGH
READING #1	1.895	9.541
READING #2	1 896	9 530
READING #3	1.898	9.533
ERROR PRECISION	2.75	0.89
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	3	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 9:15

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	17 CYLINDER #44 DOCUME	08/01/2006	0
			LOW	HIGH	
		READING #1	515	9.541	
		READING #2	511	9 530	
		READING #3 512		9.528	
		ERROR PRECISION	ERROR PRECISION 1.72		
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER	READING)	-	(KNOWN	VALUE	OF CAI	LIBRATION	GAS)		
%ERROR PRECISION =							~		*	100
	1	(KNOWN V	A T.UE	OF T	HE CAL	IBRATIO	ON GAS)			

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	3	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 12:47

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE.	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

-	LOW	HIGH
READING #1	1.899	9.518
READING #2	1 899	9 518
READING #3	1.899	9.518
ERROR PRECISION	2.62	1.06
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

RESPONSE TIME

FIRST RE	ADING SECOND F	READING THIRD REA	DING AVERAGE	PASSED
4	4	4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 12:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0 .
		METER CERTIFICATION RESPONSE		
		LOW	HIGH	

-	LOW	HIGH
READING #1	519	9.518
READING #2	519	9 518
READING #3	519	9.518
ERROR PRECISION	2.98	1.06
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%FRROR POFCISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
BERNON INDOISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST	READING SECO	ND READING THIRE	D READING A	VERAGE PAS	SSED
	4	4	4	4 Y	'es

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 16:38

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTIO	ON	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08	PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 C	YLINDER #44 DOCUME	08/01/2006	0
		METER CERTIF	ICATION RESPONSE	HIGH	748-44
		READING #1	1.905	9.525	
		READING #2	1.905	9 525	
		. READING #3	1.905	9.525	
		ERROR PRECISION	2.31	0.99	
		PASSED	Yes	Yes	1

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
*ERROR PRECISION =		, 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 1/21/11 16:39

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LC	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840		504
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		METER CERT	IFICATION RESPONSE	HIGH	
		READING #1	522	9.525	
		READING #2	522	9 525	
		READING #3	552	- 9.525	
		ERROR PRECISION	5.56	0.99	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

(KNOWN VALUE OF THE CALIBRATION GAS)

* 100

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 4 4 Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 9:19

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF	METHANE MIX / LOT# 1204SF08 PO# 46043		9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
	 	METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	1.930	9.390	
		READING #2	1.934	9 392	
		READING #3	1.939	9.387	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

ERROR PRECISION

PASSED

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

0.80

Yes

2.39

Yes

RESPONSE TIME

!	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	4	4	4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 9:19

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RECOONES		

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	499	9.390
READING #2	498	9 392
READING #3	499	9.387
ERROR PRECISION	1.06	2.39
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ADDDOD DDECISION -	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
TERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	^ 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 12:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	. DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHA	NE MIX/LOT#1204SE08 PO	12/05/2008	1.950
, HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CEI	RTIFICATION RESPONSE	нідн	
		READING #1	1.940	9.395	
		READING #2	1 940	9 395	
		READING #3	1.940	9.395	
		ERROR PRECISION	: 0.51	2.34	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

Yes

RESPONSE TIME

_	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	5	5	5	5	Yes

CALIBRATION REPORT

INSTRUMENT. 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 12:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPT	DESCRIPTION		CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LO	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840		504
HIGH	H0003	METHANE MIX / LOT# 1204SF0	8 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
	METER CERTIFICATION RESPONSE				
			LOW	HIGH	
		READING #1	491	9.395	
		READING #2	491	9 395	
•		READING #3	491	9.395	
		ERROR PRECISION	ERROR PRECISION 2.58		
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
•	5	5	5	5	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED. 1/21/11 16:39

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPT	70N	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF0	METHANE MIX / LOT# 1204SF08 PO# 46043		9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		0
		METER CERTI	FICATION RESPONSE	HIGH	
		. READING #1	1.945	9.399	
		READING #2	1.945	9 399	
		READING #3	1.945	9.399	
		ERROR PRECISION	0.26	2.30	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

A PROCE	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
*ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

 FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
5	5	5	, 5	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 1/21/11 16:40

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	IPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	_OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SI	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	47 CYLINDER #44 DOCUME	08/01/2006	0
METER CERTIFICATION RESPONSE LOW HIGH					
		READING #1	489	9.399	
		READING #2	489	9 399	
		READING #3	489	9.399	
		ERROR PRECISION	2.98	2.30	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	* 100

Yes

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING_	AVERAGE	PASSED
5	5	5	5	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 9:44

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTIO	DN	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE N	MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 I	PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 C	YLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFI	CATION RESPONSE	HIGH	
		READING #1	1.902	9.499	
		READING #2	1 908	9.495	
		READING #3	1.907	9.491	
		ERROR PRECISION	2.27	1.30	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

•			•		CALIBRATION	
%ERROR PRECISION =	=					 ·* 100
	1	(KNOWN VA	ALUE OF T	HE CALIBR	RATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
. 4	4	3	4	Yes

CAI IBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 9:46

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESC	CRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX	V LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204	ISF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14	1247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CE	ERTIFICATION RESPONSE	HIGH	
		- READING #1	504	9.499	
		READING #2	508	9 495	
		READING #3	509	9.491	
		ERROR PRECISION	0.60	. 1.30	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	*	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
	4		1	Vac

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 11:48

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESC	RIPTION	CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METH	ANE MIX/LOT#1204SE08 PO	12/05/2008	1.950	
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0	
METER CERTIFICATION RESPONSE						
		-	LOW	HIGH		
		READING #1	1.919	9.513		
		READING #2	1 919	9 513		
		READING #3	1.919	9.513		
		ERROR PRECISION	1.59	1.11		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

\$FDDOD DDFCISION -	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	l * 100
TERROR FRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST I	READING SECO	OND READING TH	HIRD READING A	AVERAGE PA	ASSED
	4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 11:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	IPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ I	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	47 CYLINDER #44 DOCUME	08/01/2006	0
		METER CEF	RTIFICATION RESPONSE		
		_	LOW	HIGH	
		READING #1	511	9.513	

	LOW	HIGH
READING #1	511	9.513
READING #2	511	9 513
READING #3	511	9.513
ERROR PRECISION	1.39	1.11
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER REA	ADING) - (KNOWN	VALUE	OF	CALIB	RATION	GAS)		
%ERROR PRECISION	=										*	100
		(KI	NWO!	VALUE	OF T	HE CAL	IBRA	TION	GAS)			

 	RES	SPONSE TIME		·
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
A	4	4	4	Voc

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE	49. 1	

 LOW
 HIGH

 READING #1
 1.899
 9.406

 READING #2
 1.899
 9.406

 READING #3
 1.899
 9.406

PASSED Yes Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

(KNOWN VALUE OF THE CALIBRATION GAS)

* 100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4 ·	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LC	DT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		METER CERT	IFICATION RESPONSE	HIGH	
		READING #1	500	9.406	
		READING #2	500	9 406	
		READING #3	500	9.406	•
		ERROR PRECISION 0.79		2.22	
		PASSED	Yes	, Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER	READING	3) -	(KNOW	N VALUE	OF	CALIE	BRATION	GAS)	1	
%ERROR PRECISION =	:										*	100
			(KNOWN	VALU	E OF	THE CA	IBR.	ATION	GAS)		١.	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 9:46

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0 .

METER CERTIFICATION RESPONSE

	LOW ·	HIGH
READING #1	1.950	9.597
READING #2	1 949	9 591
READING #3	1.952	9.593
ERROR PRECISION	0.02	0.27
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

 ·	RE	SPONSE TIME		
FIRST READING	SECOND READING	THIRD READING	AVERAGE.	PASSED
4	4	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 9:47

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION
Low	L0005	EXP 12/5/13 METHANE MIX/ L	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANÉ MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
		METER CER	HIGH		
		READING #1	501	9.597	
		READING #2	499	9 591	
		READING #3	498	9.593	
		ERROR PRECISION	0 93	0 27	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION ≈		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

CALIBRATION REPORT

INSTRUMENT. 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 11:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION					
LOW	L0005	EXP 12/5/13 METHANE MIX/ LC	OT# 1204SD08 PO # 0840	12/05/2008	504					
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620					
ZERO	Z 0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	.0					
METER CERTIFICATION RESPONSE										
			LOW .	HIGH						
		READING #1	506	9.581						
		READING #2	506	9 581						
		READING #3	506	9.581						
		ERROR PRECISION	0.40	0.41						
		PASSED	Yes	Yes						

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)			
%ERROR PRECISION	=	(KNOWN VALUE OF THE CALIBRATION GAS)	*	100	,

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 11:50

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PC	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		

	LOW	HIGH
READING #1	1.959	9.581
READING #2	1 959	9 581
READING #3	1.959	9.581
ERROR PRECISION	0.46	0.41
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

		(METER	READING	3)	- (KNOWI	AV I	LUE	OF	CALIE	BRATION	GAS)		
%ERROR PRECISION	=												*	100
			(KNOWN	VA	LUE	OF '	THE	CALI	BRA	NOITA	GAS)			

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 16:13

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTIO	DESCRIPTION .		CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHANE M	IIX/LOT#1204SE08 PO	12/05/2008	1.950	
HIGH	H0003	METHANE MIX / LOT# 1204SF08 F	PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0	
	\	METER CERTIFIC	CATION RESPONSE	HIGH		
		 READING #1	1.980	9.613		
		READING #2	1 980	9 613		
		READING #3	1.980	9.613		
		ERROR PRECISION	1.54	0.07		
		PASSED	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METE	R READING) -	- (KNOWN	VALUE	OF CALIE	BRATION	GAS)	ĺ	
%ERROR PRECISION =	:							*	100
]	(KNOWN VAI	LUE OF T	HE CALI	BRATION	GAS)		ĺ	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 730425604 - TVA 1000

DATE CALIBRATED: 2/17/11 16:14

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SI	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	47 CYLINDER #44 DOCUME	08/01/2006	0
METER CERTIFICATION RESPONSE					
		_	LOW	HIGH	
		READING #1	511	9.613	
		READING #2	511	9 613	
		READING #3	511	9.613	
		ERROR PRECISION	1.39	0.07	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)		
%ERROR PRECISIO)N =		*	100
		(KNOWN VALUE OF THE CALIBRATION GAS)		

 	RE_	SPONSE TIME			
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED	
4	4	4	4	Yes	

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 8:58

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHAN	NE MIX/LOT#1204SE08 PO	12/05/2008	1.950	
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0	
		METER CERTIFICATION RESPONSE LOW HIGH				
		READING #1	1.963	9.634		
		READING #2	1 967	9 631		
		READING #3	1.952	9.621		
		ERROR PRECISION	0.55	0.09		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

&EDDOD DECISION	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
TERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	~ 100

Yes

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	3	3	Yes

CAI IBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 8:58

TECHNICIAN 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO#_46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	509	9.634
READING #2	510	9 631
READING #3	515	9.621
ERROR PRECISION	1.46	0.09
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	3	3	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPT	TON	CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHANE	MIX/LOT#1204SE08 PO	12/05/2008	1.950	
HIGH	H0003	METHANE MIX / LOT# 1204SF08	8 PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0	
		METER CERTI	FICATION RESPONSE	HIGH		
		READING #1	2.015	9.901		
		READING #2	2.015	9 901		
		READING #3	2.015	9.901		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
SERROR PRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100

3.33

Yes

2.92

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LO	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		METER CERT	LOW LOW	HIGH .	
		READING #1	520	9.901	
		READING #2	520	9 901	
		READING #3	520	9.901	
		ERROR PRECISION	3.17	2.92	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)			
%ERROR PRECISION :	=		*	10	0
		(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	. 4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 15:53

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0 .
		METER CERTIFICATION RESPONSE		

	LOW	HIGH
READING #1	1.999	9.816
READING #2	1 999	9 816
READING #3	1.999	9.816
ERROR PRECISION	2.51	2.04
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	1			LUE OF CALIBRATION	
%ERROR PRECISION		-			* 100
	1	(KNOWN VAL	UE OF THE O	CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0712122196 - TVA1000

DATE CALIBRATED: 12/7/10 15:53

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	, DESCRIF	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LO	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	7 CYLINDER #44 DOCUME	08/01/2006	0
METER CERTIFICATION RESPONSE LOW HIGH					
		READING #1	518	9.816	
		READING #2	518	9 816	
		READING #3	READING #3 518		
		ERROR PRECISION	ERROR PRECISION 2.78		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

(KNOWN VALUE OF THE CALIBRATION GAS)

* 100

Yes

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING_	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 9:03

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESC	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METH	IANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CE	ERTIFICATION RESPONSE		
		-	LOW	HIGH	
		READING #1	1.977	9.668	
		READING #2	1.971	9.663	

Yes Yes PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS **THAN 10%**

READING #3

PASSED

ERROR PRECISION

. SERBOD DRECICION -	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
*BRROK FRECISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	. 100

1.973

1.21

9.661

0.46

 	RE	SPONSE TIME		
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	3	4	, 4	Yes

CAI IBRATION REPORT

INSTRUMENT 0730425599 - TVA-1000

DATE CALIBRATED. 12/7/10 9:04

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	516	9.668
READING #2	517	9 663
READING #3	516	9.661
ERROR PRECISION	2.45	0.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION	_	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 10	10	0
		(KNOWN VALUE OF THE CALIBRATION GAS)			

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED. 12/7/10 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESC	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METH	ANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0
METER CERTIFICATION RESPONSE					
		_	LOW	HIGH	
		READING #1	1.996	9.769	
		READING #2	1 996	9 769	
		• READING #3	1.996	9.769	
		ERROR PRECISION	2.36	1.55	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION	_	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	. 10	00	
SERROR FRECISION	-	(KNOWN VALUE OF THE CALIBRATION GAS)		1	00

RESPONSE TIME

FIRST REA	ADING SECOND F	READING THIRD RE	EADING AVERAG	E PASSED
4	4	4	. 4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 12:00

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840		12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043		12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	527	9.769	
		READING #2	527	9 769	
		READING #3	527	9.769	
		ERROR PRECISION	4.56	1.55	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

** 100

Yes

Yes

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 4 4 Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 15:54

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO		12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043		12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
			LOW	HIGH	
		READING #1	. 2.005	9.769	
		READING #2	2 005	9 769	
		READING #3	2.005	9.769	
		ERROR PRECISION	2.82	1.55	•

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	*	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST REAL	DING SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/7/10 15:55

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840		504
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CER	RTIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	535	9.799	
		READING #2	535	9 799	
	•	READING #3	535	9.799	
		ERROR PRECISION	6.15	1.86	
	•	PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

* (KNOWN VALUE OF THE CALIBRATION GAS)

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 4 Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 - 9:26

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.957	9.699
READING #2	1 953	9 703
READING #3	1.959	9.709
ERROR PRECISION	0.32	0.87
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

&EDDOD DDECICION	_	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 1	00
SERROR PRECISION	_	(KNOWN VALUE OF THE CALIBRATION GAS)	` 1	100

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 0730425599 - TVA-1000

DATE CALIBRATED. 12/27/10 9:27

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
rom ,	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840		12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043		12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	77 CYLINDER #44 DOCUME	08/01/2006	0
		METER CER	RTIFICATION RESPONSE	HIGH	
		READING #1	511	9.699	
		READING #2	507	9.703	
		READING #3	508	9.709	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS) * 100

0.93

Yes

0.87

Yes

RESPONSE TIME

_ FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	Δ	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.968	9.711
READING #2	1 968	9.711
READING #3	1.968	9.711
ERROR PRECISION	0.92	0.95
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

		•		
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	1		Yes
	~~	7	7	100

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840		504
HIGH	H0003	METHANE MIX / LOT# 12045	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CE	RTIFICATION RESPONSE		
		_	LOW	HIGH	
		READING #1	517	9.711	
		READING #2	517	9.711	
		READING #3	517	9.711	
		ERROR PRECISION	2.58	0.95	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)		
%ERROR PRECISI	ON =		* 10	0
		(KNOWN VALUE OF THE CALIBRATION GAS)		

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 15:48

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

05/2008 1.950
05/2008 9.620
01/2006 0
/

METER CERTIFICATION RESPONSE

	LOW	HIGH
READING #1	1.974	9.718
READING #2	1 974	9 718
READING #3	1.974	9.718
ERROR PRECISION	1.23	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ABBROD DEBOTOTON	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	* 100
*EULON ENDOISION -	(KNOWN VALUE OF THE CALIBRATION GAS)	100

RESPONSE TIME

FIRST READING	SECOND READING	· THIRD READING	AVERAGE	PASSED
4	4	4	4	. Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 12/27/10 15:49

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08_PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		
		LOW	HIGH	

	LOW	HIGH
READING #1	523	9.718
READING #2	523	9 718
READING #3	523	9.718
ERROR PRECISION	3.77	1.02
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION = (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

* 100

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 4 4 Yes

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 9:27

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
	•	METER CERTIFICATION PEOPONICE		

METER CERTIFICATION RESPONSE

_	LOW	HIGH
READING #1	1.929	9.506
READING #2	1 923	. 9 521
READING #3	1.913	9.509
ERROR PRECISION	1.45	1.12
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

RESPONSE TIME

		•		
FIRST READING	SECOND READING	THIRD READING	<u>AVERAGE</u>	PASSED
3	4	4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 9:28

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 12048	SF08 PO# 46043	12/05/2008	9 620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CE	RTIFICATION RESPONSE		
		_	LOW	HIGH	
		READING #1	499	9.506	
		READING #2	501	9 521	
		READING #3	503	9.509	
		ERROR PRECISION	0.60	1.12	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	3	4	Yes

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN. 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
			•	•

METER CERTIFICATION RESPONSE

-	LOW	HIGH
READING #1	1.931	9.553
READING #2	1 931	9 553
READING #3	1.931	9.553
ERROR PRECISION	0.97	0.70
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
SERROR FRECISION =	(KNOWN VALUE OF THE CALIBRATION GAS)	. 100
	(UNOWN ANTOR OF THE CHITEKATION CH2)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	A	VERAGE	PASSED
4	4	4	,	4	Yes

CALIBRATION REPORT

INSTRUMENT: 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 12:30

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LO	OT# 1204SD08 PO # 0840	12/05/2008	. 504
HIGH	H0003	METHANE MIX / LOT# 1204SF	08 PO# 46043	12/05/2008	9.620
ZERO	Z0 001	AIR ULTRA ZERO PO # C14247	7 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERT	TIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	508	9.553	
		READING #2	508	9.553	
		READING #3	508	9.553	
		ERROR PRECISION	0.79	0.70	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	:	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 1008240833 - TVA-1000

DATE CALIBRATED. 12/27/10 15:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METH	IANE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204	SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14	247 CYLINDER #44 DOCUME	08/01/2006	0
	7.4	METER CE	ERTIFICATION RESPONSE	HIGH	
		READING #1	1.938	9.564	
		READING #2	1 938	9 564	
		READING #3	1.938	9.564	
		ERROR PRECISION	0.62	0.58	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT. 1008240833 - TVA-1000

DATE CALIBRATED: 12/27/10 15:49

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
		METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	523	9.718	
		READING #2	523	9 718	
		READING #3	523	9.718	
		ERROR PRECISION	3.77	1.02	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 9:11

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

		CALIE	DRATION GASES		
GAS TYPE	GAS CODE	DESCRI	PTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHAN	NE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
•		METER CER	LOW LOW	HIGH	
		سننت	LOW	HIGH	
		READING #1	1.899	9.401	
		READING #2	1 898	9 409	
		READING #3	1.904	9.400	
		ERROR PRECISION	2.55	2.25	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	l		
*ERROR PRECISION	=		*	10	0
		(KNOWN VALUE OF THE CALIBRATION GAS)			

Yes

Yes

 RESPONSE TIME						
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED		
1	· 4	3 ,	<i>A '</i>	Vos		

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 9:18

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ L	.OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C1424	7 CYLINDER #44 DOCUME	08/01/2006	0
METER CERTIFICATION RESPONSE LOW HIGH					
		READING #1	520	9.401	
		READING #2	519 ~	9 409	
		READING #3	517	9.400	
		ERROR PRECISION	2.91	2.25	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

PASSED

* 100 (METER READING) - (KNOWN VALUE OF CALIBRATION GAS)

Yes

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 12:55

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRI	· DESCRIPTION		CONCENTRATION
LOW	L0004	L0004-EXP:12/5/2013 METHAN	NE MIX/LOT#1204SE08 PO	12/05/2008	1.950
HIGH	H0003	METHANE MIX / LOT# 1204SF	708 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME		08/01/2006	0
		METER CER	TIFICATION RESPONSE	HIGH	
		READING #1	1,941	9.490	
		READING #2	1 941	9 490	
•		READING #3	1.941	9.490	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

ERROR PRECISION

PASSED

		(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)			
%ERROR PRECISION	=		*	10	0
		(KNOWN VALUE OF THE CALIBRATION GAS)			

0 46

`Yes

1.35

. RESPONSE TIME									
_	FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED				
	4	4	4	4	Yes				

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 3/22/11 12:55

TECHNICIAN: 1086 - BARBIE PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TION	CERTIFICATION DATE	CONCENTRATION				
LOW	L0005	EXP 12/5/13 METHANE MIX/ LC	DT# 1204SD08 PO # 0840	12/05/2008	504				
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043 .	12/05/2008	9.620				
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0				
	METER CERTIFICATION RESPONSE LOW HIGH								
		READING #1	523 .	9.490					
		READING #2	523	9 490					
		READING #3	523	9.490	•				
		ERROR PRECISION	3.77	1.35					
		PASSED	Yes	Yes					

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION = (KNOWN VALUE OF CALIBRATION GAS)

*KNOWN VALUE OF THE CALIBRATION GAS)

* 100

RESPONSE TIME

FIRST READING SECOND READING THIRD READING AVERAGE PASSED

4 4 4 4 Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED. 3/22/11 16:00

TECHNICIAN 1323 - TRACEY PRIETO

		CALIBE	RATION GASES					
GAS TYPE	GAS CODE	DESCRIP	DESCRIPTION		CONCENTRATION			
LOW	L0004	L0004-EXP:12/5/2013 METHANE	E MIX/LOT#1204SE08 PC	12/05/2008	1.950			
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620			
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0			
	METER CERTIFICATION RESPONSE LOW HIGH							
		READING #1	1.850	9.351				
•		READING #2	1 850	9 351				
		READING #3	1.850	9.351				
		ERROR PRECISION	5.13	2.80				
•		PASSED	Yes	Yes				

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

		(METER I	READING	3) -	(KNOV	NN VA	TUE	OF	CALIE	RATION	GAS)		
%ERROR PRECISION	=							-				*	100
			(KNOWN	VAL	JE OF	THE	CALI	BRA	TION	GAS)			

 RESPONSE TIME									
FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED					
4	4	4	4	Yes					

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED. 3/22/11 16:00

TECHNICIAN. 1323 - TRACEY PRIETO

CALIBRATION GASES

			TOTTION ONE E		
GAS TYPE	GAS CODE	DESCRIPTION		CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LC	OT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0
		METER CERT	IFICATION RESPONSE	HIGH	
		READING #1	510	9.357	
		READING #2	510	9 357	
		READING #3	510	9.357	
		ERROR PRECISION	1.19	2.73	
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =	.	100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

 RESPONSE TIME

 FIRST READING
 SECOND READING
 THIRD READING
 AVERAGE
 PASSED

 4
 4
 4
 4
 Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 8:37

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION				
LOW	L0004	L0004-EXP:12/5/2013 METHANE MIX/LOT#1204SE08 PO	12/05/2008	1.950				
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620				
ZERO	Z0001	AIR ULTRÀ ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0				
METER CERTIFICATION RESPONSE								

-	LOW	HIGH
READING #1	2.043	9.955
READING #2	2 039	9 953
READING #3	2.040	9.951
ERROR PRECISION	4.65	3.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION	_	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	1 (20
*ERROR FRECISION	_	(KNOWN VALUE OF THE CALIBRATION GAS)	1(, 0

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
3	3	4	3	Yes

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED. 4/27/11 8:37

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/ LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204SF08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C14247 CYLINDER #44 DOCUME	08/01/2006	0
		METER CERTIFICATION RESPONSE		

	LOW	HIGH
READING #1	519	9.955
READING #2	518	9 953
READING #3	520	9.951
ERROR PRECISION	2.98	3.46
PASSED	Yes	Yes

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING		SECOND READING	THIRD READING	AVERAGE	PASSED
	3	4	4	4	Yes

CALIBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 16:40

TECHNICIAN: 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCRIP	TTON .	CERTIFICATION DATE	CONCENTRATION	
LOW	L0004	L0004-EXP:12/5/2013 METHAN	E MIX/LOT#1204SE08 PO	12/05/2008	1.950	
HIGH	H0003	METHANE MIX / LOT# 1204SF0	08 PO# 46043	12/05/2008	9.620	
ZERO	Z0001	AIR ULTRA ZERO PO # C14247	CYLINDER #44 DOCUME	08/01/2006	0 ,	
		METER CERT	LOW	HIGH		
		·		HIGH		
		READING #1	2.001	9.900		
		READING #2	2 001	9.900		
•		READING #3	2.001	9.900		
		ERROR PRECISION	2.62	2.91		
	•	PASSED .	Yes	Yes		

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

%ERROR PRECISION =	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	+ 100
SERROR PRECISION =	,	, 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	ı

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

CAI IBRATION REPORT

INSTRUMENT: 0730425599 - TVA-1000

DATE CALIBRATED: 4/27/11 16:00

TECHNICIAN 1323 - TRACEY PRIETO

CALIBRATION GASES

GAS TYPE	GAS CODE	DESCR	RIPTION	CERTIFICATION DATE	CONCENTRATION
LOW	L0005	EXP 12/5/13 METHANE MIX/	LOT# 1204SD08 PO # 0840	12/05/2008	504
HIGH	H0003	METHANE MIX / LOT# 1204S	F08 PO# 46043	12/05/2008	9.620
ZERO	Z0001	AIR ULTRA ZERO PO # C142	47 CYLINDER #44 DOCUME	08/01/2006	0
		METER CEF	RTIFICATION RESPONSE		
			LOW	HIGH	
		READING #1	503	9.900	
		READING #2	503	9 900	•
ı					
		ERROR PRECISION	ERROR PRECISION . 0.20		,
		PASSED	Yes	Yes	

PRECISION FOR THE INSTRUMENT IS ACCEPTED WHEN THE AVERAGE OF THE ABSOLUTE VALUE OF % ERROR IS EQUAL TO OR LESS THAN 10%

	(METER READING) - (KNOWN VALUE OF CALIBRATION GAS)	
%ERROR PRECISION =		* 100
	(KNOWN VALUE OF THE CALIBRATION GAS)	

RESPONSE TIME

FIRST READING	SECOND READING	THIRD READING	AVERAGE	PASSED
4	4	4	4	Yes

WESTERN REFINING SOUTHWEST GALLUP REFINERY CALIBRATION DRIFT ASSESSMENT REPORT

1008240826 - TVA-1000

DATE: 05/27/2011

TIME	LOW GAS CONCENTRIN	LOW GAS AVE RDG	LOW GAS PRECISN	HIGH GAS CONCENTRTN	HIGH GAS AVE RDG	HIGH GAS PRECISN	NOTE
8:13:04 am	1,950	1,971	1.09 %	9,620	9,722	1.06 %	CALIBRATION
8:13:25 am	504	511	1.39 %	9,620	9,722	1.06 %	
11:17:06 am	1,950	2,001	2.62 %	9,620	9,772	1.58 %	
11:17:52 am	504	525	4.17 %	9,620	9,772	1.58 %	

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Tuesday, January 18, 2011 5:27 PM

To:

Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; VanHorn, Kristen, NMENV

Subject:

FW: Initial C-141 for Slop Line and Caustic Tank

Attachments:

Slop Line Init 010311 C-141.pdf; Caustic Tank Init 010411 C-141.pdf

Sorry folks but I just realized that the e-mail that I sent on Friday, January 14, with the C-141 attachment did not have an attachment.

Sorry for the confusion.

Beck Larsen; CHMM, REM, RPG

Environmental Engineer

Western Refining Company- Gallup Refinery

Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210

Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

From: Larsen, Thurman

Sent: Tuesday, January 18, 2011 8:50 AM

To: 'VanHorn, Kristen, NMENV'

Subject: RE: Initial C-141 for Slop Line and Caustic Tank

Sorry,

I must have got in a hurry.

Beck Larsen; CHMM, REM, RPG

Environmental Engineer

Western Refining Company- Gallup Refinery

Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210

Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

From: VanHorn, Kristen, NMENV [mailto:Kristen.VanHorn@state.nm.us]

Sent: Tuesday, January 18, 2011 8:28 AM

To: Larsen, Thurman

Subject: RE: Initial C-141 for Slop Line and Caustic Tank

Beck,

The last email you sent with the spill info didn't have any forms attached. Can you please re-send them?

Thanks!

Kristen Van Horn

NMED Hazardons Waste Bureau 2905 Rodeo Park Drive East Building 1 Santa Fe, NM 87505 Phone: 505-476-6046

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Friday, January 14, 2011 4:09 PM

To: VanHorn, Kristen, NMENV; Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV

Subject: Initial C-141 for Slop Line and Caustic Tank

Importance: High

Dear Kristen,

The above attachments are the initial C-141 reports for the Slop Line and Caustic Tank incidents that occurred on January 3 and January 4, 2011 respectively. Please feel free to contact me if you have any questions.

Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

From:

Monzeglio, Hope, NMENV

Sent:

Tuesday, January 18, 2011 9:47 AM

To:

Strange, Aaron

Cc:

Moore, Darrell; Lackey, Johnny; Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV

Subject:

RE: C-141 report

Aaron

The C-141 form states "[a]fter the soil is removed Navajo will collect bottom hole samples." The analytical suite should include DRO analysis. Please send NMED a copy of the analytical results. This information must be submitted to NMED by April 1, 2011.

Let me know if you have any questions.

Hope

From: Strange, Aaron [mailto:aaron.strange@hollycorp.com]

Sent: Monday, January 17, 2011 3:40 PM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV; Dade, Randy, EMNRD; Hill, Larry, EMNRD

Cc: Moore, Darrell; Lackey, Johnny

Subject: C-141 report

Hope, Carl, Randy, and Buddy,

Please see the attached C-141.

Thank you, Aaron

Aaron Strange

Environmental Technician, Senior

Environmental Department Navajo Refining Co, LLC Artesia NM Off: (575) 746-5468

Cell: (575) 703-5057

CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged, proprietary and/or confidential. If you

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

			Rele	ease Notific	catioi	1 and Co	rrective A	ction)	
	•					OPERA'	ГOR		M Initia	al Report
Name of Co	Name of Company Western Refining					Contact Bed	k Larsen			•
Address I-4	0 / Exit 39)					No.(505) 722-02	258		
Facility Na	me Wester	n Refining (Gallup)			Facility Typ	e Refinery			· · · · · · · · · · · · · · · · · · ·
Surface Ow	/ner			Mineral C)wner				Lease N	١٥.
				LOCA	ATIO!	N OF REI	LEASE			
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/V	Vest Line	County
	28	15 N	15 W		İ					McKinley
			L	atitude_35° 29	' 030"	Longitud	e 108° 24' 040)"		
						OF REL				
Type of Rele	ase Slop L	ine (Product N	Aixture)			Volume of	Release <12 b	obls		Recovered
Source of De	daga Punt	ture in the 2 in	oh Lina fi	rom T-107 to T-10	15	Oil (<504)	gallons) lour of Occurrenc			y Pending) Hour of Discovery
Source of Re	nease Rup	ture in the 2 in	ich Line ii	rom 1-107 to 1-10	J3		/<1430 hrs	e		1 / 1430 hrs
Was Immedi	ate Notice (Vac [No □ Not R	amirod	If YES, To Whom? NMED (Kristen Van Horn/ Hope Monziglio/Ruth				
Dr. Whom? I	Paals Largan					Date and Hour 1/03/11 1404 (msg) /1407 (msg) / 1412/ 1423 (msg)				
By Whom? I Was a Water				· · · · · · · · · · · · · · · · · · ·			lume Impacting t			sg) / 1412/ 1423 (filsg)
l lives a reason	000130 1140		Yes 🗵] No			ramo impaoting i			
If a Watercon	arse was Im	pacted, Descr	ibe Fully.	* N/A		1				
Describe Cau	ise of Probl	em and Reme	dial Actio	n Taken.* At ap	proxima	tely 1430 hrs	on 1/02/2011, the	API O	perator disc	covered a rupture in the 2 inch
slop line fror	n T-107 to T	Γ-105. The lin	ne rupture	d was due to a lin	e freeze.	A vacuum tr	uck operator was	notified	to begin re	emoval of the slop oil along the
pipe rack and	1 affected di	tch areas. The	line was	repaired using an	enginee	ring clamp. I	his section of the	line is t	o be schedu	ıled for replacement. t side of pipe rack. The area
										emedial cleanup of these areas.
Cleanup effo	rts are in pr	ogress. All co	ntaminate	d soils are being r	emoved	for disposal.	· •			•
										suant to NMOCD rules and
regulations a	Il operators	are required to	o report ar	nd/or file certain r	elease n	otilications at	id perform correct	tive acti	ions for rela	eases which may endanger leve the operator of liability
should their	operations h	ave failed to a	acceptant	investigate and r	emediate	e contaminati	on that pose a thr	eat to gr	ound water	surface water, human health
or the enviro	nment. In a	ddition, NMC	CD accep							ompliance with any other
federal, state	, or local las	vs and/or regu	llations.							
	j		/				OIL CONS	<u>SERV</u>	ATION	DIVISION
Signature:	1人	Jan	2							
						Approved by	District Supervise	or:		
Printed Name	e: Beck Lar	sen					*	———		
Title: Enviro	nmental Eng	gineer		·		Approval Dat	e:		Expiration	Date:
E-mail Addre	ess: Thurma	ın.larsen@wnı	.com			Conditions of	Approval:			Attached
Data: 1/14/2/	\11		Dhanad	505) 722 0250						Attached
Date: 1/14/20	<i>)</i>		rnone:(505) 722-0258						

^{*} Attach Additional Sheets If Necessary

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action OPERATOR Initial Report Final Report Name of Company Western Refining Contact Beck Larsen Telephone No.(505) 722-0258 Address I-40 / Exit 39 Facility Name Western Refining (Gallup) Facility Type Refinery Surface Owner Mineral Owner Lease No. LOCATION OF RELEASE North/South Line Unit Letter Section Township Range Feet from the Feet from the East/West Line County 28 15 N 15 W McKinley Latitude 35° 29' 030" Longitude 108° 24' 040" NATURE OF RELEASE Type of Release Sodium Hydroxide (Caustic) Volume of Release 9527 lbs Volume Recovered Unknown Volume Source of Release Caustic Tank at Flare Area Date and Hour of Occurrence Date and Hour of Discovery 1/04/2011 / 0800 hrs 1/04/2011 / 0800 hrs (approximate) If YES, To Whom? NRC (Report # 963846); NMED (Ruth Horozitz) / OCD Was Immediate Notice Given? (Carl Chavez) By Whom? Beck Larsen Date and Hour 1/05/11 (1620 to 1705 hrs) Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* N/A Describe Cause of Problem and Remedial Action Taken.* At approximately 0800, the API Operator discovered caustic coming from the caustic tank line. The caustic tank is heated with internal steam coils. Corrosion, pipe and valve freeze caused the caustic to eat through the steam coils and associated discharge valve. Caustic began to filling the containment pin and an estimated 2300 gallons (9527 lbs) went on to the ground. Most of the caustic was removed with a vacuum truck. Any remaining caustic was neutralized. Soil samples were collected to confirm neutralization. Describe Area Affected and Cleanup Action Taken.* The area included the containment pin and the soil beneath the associated piping system. The caustic was removed with a vacuum truck. Any remaining caustic was neutralized. Soil samples were collected to confirm neutralization. The internal steam coils, valves, and associated piping has been repaired or replaced. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Beck Larsen Title: Environmental Engineer Approval Date: Expiration Date: E-mail Address: Thurman.larsen@wnr.com Conditions of Approval: Attached

Phone:(505) 722-0258

Date: 1/14/2011

^{*} Attach Additional Sheets If Necessary

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Friday, January 14, 2011 4:09 PM

Sent:

VanHorn, Kristen, NMENV; Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Cobrain,

Dave, NMENV

Subject:

Initial C-141 for Slop Line and Caustic Tank

Importance:

High

Follow Up Flag:

For Your Information

Flag Status:

Flagged

Dear Kristen,

The above attachments are the initial C-141 reports for the Slop Line and Caustic Tank incidents that occurred on January 3 and January 4, 2011 respectively. Please feel free to contact me if you have any questions.

Sincerely,

Beck Larsen; CHMM, REM, RPG

Environmental Engineer

Western Refining Company- Gallup Refinery

Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

From:

Larsen, Thurman [Thurman.Larsen@wnr.com] Friday, January 14, 2011 4:04 PM

Sent:

To:

VanHorn, Kristen, NMENV; Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Cobrain,

Dave, NMENV

Subject:

Recall:

Larsen, Thurman would like to recall the message, "".

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

To:

Friday, January 14, 2011 3:58 PM VanHorn, Kristen, NMENV; Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Cobrain,

Dave, NMENV

Subject:

Recall:

Larsen, Thurman would like to recall the message, "".

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Friday, January 14, 2011 3:53 PM

To:

VanHorn, Kristen, NMENV; Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Cobrain,

Dave, NMENV

Attachments:

Slop Line Init 010311 C-141.pdf; Caustic Tank Init 010411 C-141.pdf

Dear Kristen,

The above attachments are the initial C-141 for the Slop Line rupture and for the Caustic Tank line. Please feel free to contact me if you have any questions.

Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action													
						OPERATOR			Initia	al Report		Final Report	
							k Larsen						
							Telephone No.(505) 722-0258						
Facility Name Western Refining (Gallup)							Facility Type Refinery						
Surface Owner Mineral Owner										Lease No.			
				LOCA	TIOI	N OF REI	LEASE						
Unit Letter	Section	Township	Range	Feet from the	North	th/South Line Feet from the East/West				County			
	28	15 N	15 W							McKinley			
Latitude_35° 29' 030"Longitude108° 24' 040"_													
NATURE OF RELEASE													
Type of Release Slop Line (Product Mixture)							olume of Release <12 bbls Volume R						
Source of Release Rupture in the 2 inch Line from T-107 to T-105							gallons) lour of Occurrenc		(Recovery Pending) Date and Hour of Discovery			,	
Source of Resease Rupture in the 2 men blife from 1-107 to 1-105							/<1430 hrs				1 / 1430 hrs		
							(approximate)			<u> </u>			
Was Immediate Notice Given?							If YES, To Whom? NMED (Kristen Van Horn/ Hope Monziglio/Ruth						
☐ Yes ☐ No ☐ Not Required													
By Whom? Beck Larsen						Date and Hour 1/03/11 1404 (msg) /1407 (msg) / 1412/ 1423 (msg)							
Was a Watercourse Reached? ☐ Yes ☒ No						If YES, Volume Impacting the Watercourse.							
If a Watercourse was Impacted, Describe Fully.* N/A													
Describe Cau	se of Proble	em and Reme	dial Actio	n Taken,* At app	oroxima	tely 1430 brs	on 1/02/2011 the	API Opera	ator disc	overed a rur	ture ir	the 2 inch	
slop line from T-107 to T-105. The line ruptured was due to a line freeze. A vacuum truck operator was notified to begin removal of the slop oil along the pipe rack and affected ditch areas. The line was repaired using an engineering clamp. This section of the line is to be scheduled for replacement.													
Describe Area Affected and Cleanup Action Taken.*. The line ruptured occurred at the intersection of the road and the west side of pipe rack. The area													
affected included under the pipe rack and affected ditch area. A vacuum truck operator was immediately notified to begin remedial cleanup of these areas. Cleanup efforts are in progress. All contaminated soils are being removed for disposal.													
							knowledge and u	nderstand t	hat purs	uant to NMO	OCD r	ules and	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger													
public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability													
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health													
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or logal-laws and/or regulations.													
According to the Control of Toggarda Control						OIL CONSERVATION DIVISION							
							540 5 54155411441541 5411541						
Signature:	1	Jan											
Printed Name: Beck Larsen							Approved by District Supervisor:						
					_								
Title: Environmental Engineer						Approval Dat	pproval Date: Expiration Date:						
E-mail Address: Thurman.larsen@wnr.com						Conditions of Approval:				Attached [
									Attached				

Phone:(505) 722-0258

Date: 1/14/2011

^{*} Attach Additional Sheets If Necessary

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action OPERATOR Initial Report Final Report Name of Company Western Refining Contact Beck Larsen Address I-40 / Exit 39 Telephone No.(505) 722-0258 Facility Name Western Refining (Gallup) Facility Type Refinery Surface Owner Mineral Owner Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County 28 15 W 15 N McKinley Latitude_35° 29' 030" __Longitude__108° 24' 040"_ NATURE OF RELEASE Type of Release Sodium Hydroxide (Caustic) Volume of Release 9527 lbs Volume Recovered Unknown Volume Source of Release Caustic Tank at Flare Area Date and Hour of Occurrence Date and Hour of Discovery 1/04/2011 / 0800 hrs 1/04/2011 / 0800 hrs (approximate) If YES, To Whom? NRC (Report # 963846); NMED (Ruth Horozitz) / OCD Was Immediate Notice Given? Yes No Not Required (Carl Chavez) By Whom? Beck Larsen Date and Hour 1/05/11 (1620 to 1705 hrs) Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* N/A Describe Cause of Problem and Remedial Action Taken.* At approximately 0800, the API Operator discovered caustic coming from the caustic tank line. The caustic tank is heated with internal steam coils. Corrosion, pipe and valve freeze caused the caustic to eat through the steam coils and associated discharge valve. Caustic began to filling the containment pin and an estimated 2300 gallons (9527 lbs) went on to the ground. Most of the caustic was removed with a vacuum truck. Any remaining caustic was neutralized. Soil samples were collected to confirm neutralization. Describe Area Affected and Cleanup Action Taken.* The area included the containment pin and the soil beneath the associated piping system. The caustic was removed with a vacuum truck. Any remaining caustic was neutralized. Soil samples were collected to confirm neutralization. The internal steam coils, valves, and associated piping has been repaired or replaced. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Beck Larsen Title: Environmental Engineer Approval Date: Expiration Date: E-mail Address: Thurman.larsen@wnr.com Conditions of Approval: Attached

Date: 1/14/2011

Phone:(505) 722-0258

^{*} Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From:

Horowitz, Ruth, NMENV

Sent:

Monday, January 03, 2011 2:23 PM

To:

Chavez, Carl J, EMNRD

Subject:

Spill report

Hi Carl,

Happy New Year.

Environmental Notification Tracking System

View Notification

Back to list

Notification Id

7794

Notification Type

Spills

Notification Date

1/3/2011 2:13:44 PM

Notification

Priority

Low

EJ Issue

...

Status

Assigned Bureau Assigned Staff

Status Date

Description

Slop line rupture, approximately 12 barrels were released. Oil field products. Rupture was discovered at approximately 2:30 PM

January 2, 201

Location

Tank 107 to tank 105, approximately 17 miles east of Gallup.

Nearest City

Jamestown

County

Mckinley

District

Field Office

Suspected

Violator

Western Refining

Violator Address1 Rte 3 Box 7 Violator Address2

Violator City

Gallup

Violator State

New Mexico

Violator Zip

87301

Violator Phone

505-722-0258

Reporter Name

Beck Larson/Western Refining

Reporter

Rte 3 Box 7

Address1

Reporter Address2

Reporter City

Gallup

Reporter State

New Mexico

Reporter Zip

87301

Reporter Phone

505-722-0258

Reporter Email

thurman.larson@wnr.com

Created By

ruth.horowitz

Date Created

1/3/2011 2:19:50 PM

Ruth Horowitz

Invironmental Scientist and Specialist

Incident Response Coordinator

Hazardous Waste Bureau

2905 Rodeo Park Drive fast, Building 1

Santa fe. New Mexico 87505-6303

Phone: (505) 476-6025 / (866) 428-6535

fax: (505) 476-

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Saturday, October 30, 2010 11:25 AM

To:

Chavez, Carl J, EMNRD

Subject:

FW: FINAL REPORT RESPONSE LETTERS for July 30 and August 2, 2010 API Overflows

Attachments:

API FINAL REPORT LTR-073010.pdf; API FINAL REPORT LTR-080210.pdf; API OF ANALYSIS-072210.pdf; API OF ANALYSIS-091410A.pdf; API OF ANALYSIS-091410B.pdf

Sorry Carl. I forgot to include you in this list.

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

Safety starts with "S", but always begins with YOU"!

From: Larsen, Thurman

Sent: Saturday, October 30, 2010 11:17 AM

To: Van Horn, Kristen, NMENV

Cc: Cobrain, Dave, NMENV; Monzeglio, Hope, NMENV

Subject: FINAL REPORT RESPONSE LETTERS for July 30 and August 2, 2010 API Overflows

Dear Kristen.

As per the agency's request in an e-mail from August 4, 2010, Western Refining (Gallup Refinery) is to submit a Final Report addressing the API Overflows issues that occurred on July 30 and August 2, 2010.

As per the agency's e-mail from August 4, 2010, a Final Report is due to the Agency by October 31, 2010. The above attachments include report (cover) letters addressing each overflow and confirmation sampling.

Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

Safety starts with "S", but always begins with YOU"!

GALLUP

October 29, 2010

New Mexico Environmental Department (NMED) Hazardous Waste Bureau (HWB) 2905 Rodeo Park Drive East-Building 1 Santa Fe, New Mexico 87505 Attention: Ms Kristen Van Horn

New Mexico Energy Minerals and Natural Resources Department New Mexico Oil Conservation Division (NMOCD) 1220 South St. Francis Drive Santa Fe, New Mexico 87505 Attention: Mr. Carl J, Chavez

Reference:

CLEANUP STATUS and FINAL REPORT for Western Refining (Gallup Refinery) for the API OVERFLOW of July 30, 2010 and of August 2, 2010

EPA ID NO. NMD000333211

HWB-GRCC-MISC

Dear Ms Van Horn and Mr. Chavez;

Please accept the following letter as a status report describing the API overflow events that occurred on July 30 and August 2, 2010. These two events even though separate should be treated as one event due to the chronological separation between the two and due to the same extent of Area of Contamination (AOC) that occurred. The following describes the cause of the problem, remedial and cleanup actions taken, and areas affected.

On July 30, 2010 a heavy rain came through the area. At approximately 1745 hrs due to this rain, the API began to overflow. The API continued to overflow until about 1905 hrs. (80 minutes). Notifications were made on July 31, 2010 to both NMED (HWB) and OCD as required. The overflow was localized to a small area around the API and the containment area surrounding the Baker Frac Tanks that are used for overflow. The API was operating properly at the time of the incident. Once the overflowed ceased to continue to overflow, a vacuum truck was deployed in order to remove contaminated liquids from the API and surrounding Baker Tank containment areas. The maximum design flow rating is 500 gpm. If during an excessive rain event that the influx to the API exceeds the design flow, water will be diverted to and overflow into the Baker Frac Tanks. The baker tank system is designed to accommodate these excessive rain events. During this event, the influx of stormwater exceeded the capacity of the API. The overflow frac tanks could only receive an estimated 50 to 60 % of the total volume of the frac tanks. Therefore, the API influent was forced out of the API vents. At the end of the event, all oily water mixtures within the berms, containment areas, and around the API were removed by the afternoon of Sunday, August 1, 2010, using a vacuum truck. It was estimated that approximately 230 bbls of oily-water mixture was released to the ground. It was further determined that approximately 205

bbls of oil-water mixture was recovered during this overflow. No watercourse or overflows to the Aeration Ponds occurred during this event.

On August 2, 2010 another heavy rain event occurred that once again caused the API to overflow. The API began to overflow to the Baker Tanks from about 1825 to 2330 hrs (5 hrs, 5 minutes) The API continued to overflow until about 1905 hrs. (80 minutes). Once again notifications were made on August 3 to both NMED (HWB) and OCD as required. The overflow was localized to a small area around the API and the containment area surrounding the Baker Frac Tanks that are used for overflow. Once again, the API was operating properly at the time of the incident. Once the overflowed ceased a vacuum truck was deployed in order to remove contaminated liquids from the API and surrounding baker tank containment areas. The maximum design flow rating is 500 gpm. If during an excessive rain event that the influx to the API exceeds the design flow, water will be diverted to and overflow into the frac tanks. The baker tank system is designed to accommodate these excessive rain events. During this event, the influx of stormwater exceeded the capacity of the API. The overflow frac tanks could only receive an estimated 50 to 60 % of the total volume of the frac tanks. Therefore, the API influent was forced out of the API vents. All oily water liquid mixtures within the berms, containment areas, and around the API were removed by the afternoon of Sunday, August 4, 2010, using a vacuum truck. This time, it was estimated that approximately 159 bbls of oily-water mixture was released to the ground. It was determined that approximately 149 bbls of oil-water mixture was recovered during this overflow. No watercourse or overflows to the Aeration Ponds were impacted during this event.

Due to the grade around the API and around the containment areas leading to the frac tanks, the Area of Contamination (AOC) for both events was localized to include a small area around the API, and the containment areas around the Baker Tanks.

Sample Activity- Sample collection was performed using a clean stainless steel trowel. Using this trowel, the sampler digs to about 6 to 12 inches before collecting the sample. He would collect each sample location in a clean 8 oz glass jar that will be sent to Hall Environmental Laboratory. Decontamination procedures are implemented between sample locations using water with an Alconox solution followed by a de-ionized water rinse. After samples are collected, they are stored in a refrigerator prior to shipment to Hall Environmental Laboratories.

Initial Sampling- Initial sampling was conducted on July 22 which was prior to the event of July 30 and August 2, 2010. The sample locations were chosen based on a "Sampling Plan" (Figure 1) that has been previously submitted to and approved by the agency. These locations were chosen based on prior overflow events and due to the drainage around the API. The initial sampling results prior to the overflow at the API area indicated TPH levels above the 200 mg/kg limits established by the Agency. Samples were initially and analyzed for TPH (Method 418.1), BTEX (Method 8021B). These contaminated areas noted are as follows: API-E-2, API-E-3, API-W-5, BKT-E-7, BKT-S-8, BKT-W-9, CHN-C-10, CHN-C-11, NBT-N-13, and NBT-E-14.

Initial Remedial Activities- Remedial activities commenced on August 3 until August 18, 2010. Approximately 48 yards of contaminated soil was excavated from the API containment areas and

put in a roll-off bin pending shipment offsite disposal as hazardous waste under F037, F038, K049, and K051 waste codes.

Confirmation Sampling- Confirmation samples were collected on September 14, 2010. Confirmation sample locations around the API and Baker Tanks include locations API-N-1, API-E-2, API-E-3, API-S-4, API-W-5, API-W-6, BKT-E-7, BKT-S-8, and BKT-W-9. These samples were analyzed under Hall Environmental Laboratory report (# 1009668). Addition conformational sampling was also conducted on September 14 for the locations CHN-C-10, CHN-C-11, NBT-W-12, NBT-N-13, and NBT-E-14. A composite was also collected for analysis. Each an aliquot of soil from each location was collected in order to compile a composite for analysis. The composite sample was analyzed for the following parameters: RCI, TPH (Method 418.1), BTEX (Method 8021B), RCRA 8 Metals, Anions (F, Cl), Volatiles (Method 8260B), and Semi-volatiles (Method 8270). These samples were analyzed under Hall Environmental Laboratory report (#1009667).

Summary: All BTEX values for the sampling events are below the regulatory levels. In comparison between the initial sampling (July 22, Report # 1007915) and the confirmation sampling events (August 14, Report 1009667 / 1009668), there is a reduction in TPH values. However, based on analytical comparison between initial and confirmation sampling, additional remedial activities and confirmation sampling may be required.

If you require additional information concerning this matter, please contact me at (505) 722-0258.

Sincerely

Environmental Engineer

Western Refining (Gallup Refinery)

File:

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

State of New Mexico Energy Minerals and Natural Resources

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

Revised October 10, 2003

Form C-141

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

Release Notification and Corrective Action

					OPERATOR Initial Report Final Report					Final Report		
Name of Co	mpany W	estern Refini	ng			Contact Beck Larsen						
Address I-40						Telephone No.(505) 722-0258						
Facility Nan	ne Wester	n Refining (0	Gallup)		F	Facility Typ	e Refinery					
Surface Ow	ner			Mineral O	wner	r Lease No.						
				LOCA	TION	OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/West	Line	County		
	28	15 N	15 W							McKinley		
	· · · · · · · · · · · · · · · · · · ·	<u> </u>	L	atitude_35° 29'	030"	Longitude	e 108° 24' 040)"				
						– ° OF RELI		_				
Type of Relea	ase Oily W	ater Mixture				-	Release 230 bbls	V	olume F	Recovered 20)5 bbls	
Source of Re						Date and H 7/30/2010;	lour of Occurrence	e Da	ate and	Hour of Dis 0: 1800		
Was Immedia	ate Notice (Given?	· ·		******	If YES, To				3, 1000		
		\boxtimes	Yes	No Not Red	quired	NMED (H	WB) Christiansen	/Van Horn/	Monze	glio; OCD (1	Powell))
By Whom? Beck Larsen						Date and Hour 7/31 (1315,1320,1324,1327 hrs); 8/2 (0745 hrs)						
Was a Water	course Read		Yes 🗵	No .		If YES, Vo	lume Impacting t	he Waterco	urse.			
If a Watercou	irse was Im	pacted, Descr	ibe Fully.	* N/A		<u> </u>						
Deccriba Cau	se of Probl	em and Reme	dial Actio	n Taken.* Refer t	o Initial	1 C141 for de	ecription of event	This over	How ev	ont occurred	prior t	o the
overflow ever	nt of Augus	st 2, 2010. Oil	y-water li	quids were remove	d aroun	d the API and	d containment are	as using a v	acuum/	truck. (Refe	r to Ini	itial C-141
Describe Are	a Affected			cen.* The affected								
containments	of all five	baker tanks. C	leanup ac	tivities began from	Augus	t 3 through A	ugust 18, 2010 u	sing excava	tion me	thodology.	Sample	s were
				yards of contamin ation may be requi					cavated	and put in i	oll-off	bins for
I hereby certi	fy that the i	information gi	ven above	is true and comple	ete to th	e best of my	knowledge and u	nderstand tl	nat purs	uant to NM	OCD ru	ules and
regulations al	loperators	are required to	o report ar	nd/or file certain re	lease no	otifications ar	nd perform correc	tive actions	for rela	eases which	may er	ndanger
				ce of a C-141 repor investigate and re								
or the enviror	iment. In a	iddition, NMC	CD accer	nivestigate and re stance of a C-141 re	eport de	pes not reliev	e the operator of	responsibili	ty for c	ompliance wa	ith any	other
federal, state,	or local la	ws and/or regi	ılations.		·							
	1		7				OIL CON:	SERVA]	<u> </u>	DIVISIO	<u>N</u>	1
Signature:	- / J											
					1	Approved by	District Supervise	or:				
Printed Name	: Beck La	irsen										
Title: Enviro	nmental En	gineer			F	Approval Dat	e:	Exp	iration	Date:		
E-mail Addre	ss: Thurma	ın.larsen@wnı	.com		(Conditions of	Approval:			Attached		
D . 10/00/	2010	· The	hana: (50:	s) 722 0259						/ Ittacheu	لــا	
Date: 10/29/	2010	P.	none: (50:	5) 722-0258						1		

^{*} Attach Additional Sheets If Necessary

Larsen, Thurman

From: Van Horn, Kristen, NMENV [Kristen.VanHorn1@state.nm.us]

Sent: Wednesday, August 04, 2010 12:11 PM

To: Larsen, Thurman

Cc: Cobrain, Dave, NMENV; Monzeglio, Hope, NMENV

Subject: API Overflows

Beck, I got your message RE: the API overflow – you all are getting pounded by these storms. Continue to report any overflows by phone in accordance with the 24 hour reporting requirements of Section II.F.2 of the Post-Closure Care Permit (Permit) and continue to send me an email regarding each event(s) in accordance with Section II.F.2 (c) of the Permit (overflow, similar to the one you sent yesterday). A formal report must be submitted, which can be in letter format regarding each incident and the cleanup that details each incident separately (include all details, amount of soil removed, confirmation sampling, laboratory results, volume of liquids overflowed etc. Hope spoke to you today about what to include). The formal report must be submitted to NMED on or before Oct 31. Contact me if you have any questions.

Emails sent to me have been bouncing back to the sender. IT is working on it, but I may not get your message. Please cc: Katie Roberts and Dave Cobrain on messages. Thanks!

Kristen Van Horn NMED Hazardous Waste Bureau 2905 Rodeo Park Drive East Building 1 Santa Fe, NM 87505 Phone: 505-476-6046

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Larsen, Thurman

From: Larsen, Thurman

Sent: Saturday, July 31, 2010 1:49 PM

To: Van Horn, Kristen, NMENV; 'Monzeglio, Hope, NMENV'

Subject: API Overfow NOTIFICATION

Dear Ms Van Horn and Ms Monzeglio.

This e-mail is to act as a notification of an API overflow incident that occurred yesterday, Friday, July 30.

At about 1745 hrs (545 PM) the API began to overflow due to a heavy rain. It continued to overflow until 1905 hrs (705PM). Crews were immediately dispatched to begin cleanup efforts as soon as the API stopped overflowing. It is estimated to be 5 bbls but the exact quantity is still under investigation.

Notifications: Verbal Notifications were given to the following:

E-form Notification: submitted at 1315 hrs, Saturday, July 31

Verbal (Msg); Brandon Christenson at 1320 hrs, Saturday, July 31, 2010 Verbal (Msg): Kristen Van Horn at 1324 hrs, Saturday, July 31, 2010 Verval (Msg): Hope Monzelglio at 1327 hrs, Saturday, July 31, 2010

Follow-up e-mail submitted to Kristen Van Horn and Hope Monzeglio at 1345 hrs, Saturday, July 31

If you need to contact me or require additional information, please feel free to contact me at (505) 722-0258 A C-141 will follow.

Sincerely, Beck Larsen Environmental Engineer Western Refining (Gallup Refinery). District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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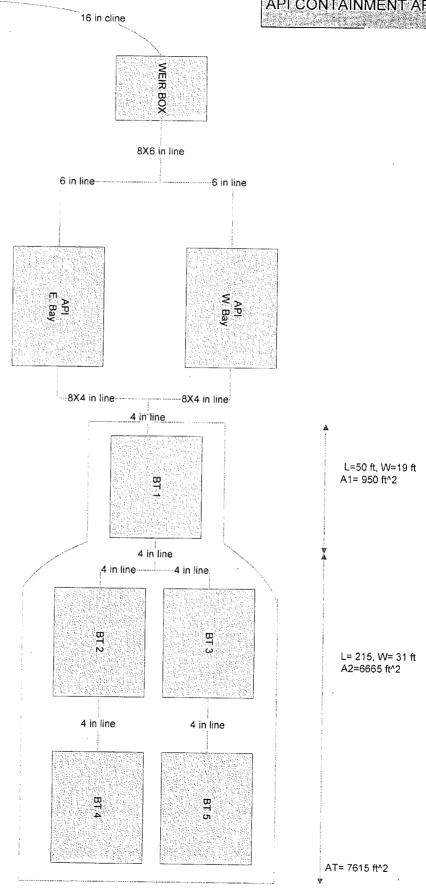
Release Notification and Corrective Action

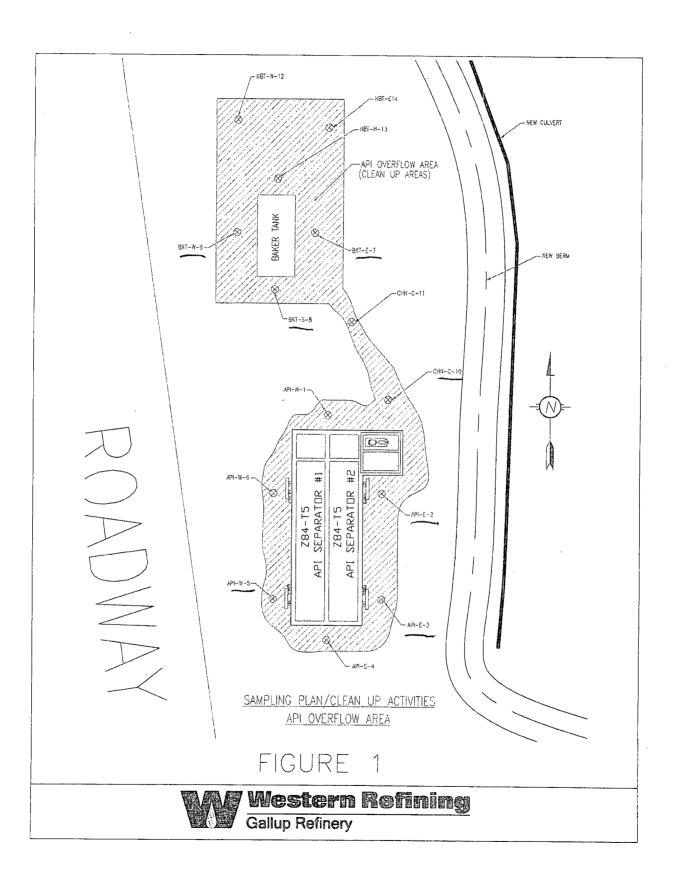
						OPERA'	TOR	 ⊠ In	itial Report		
Name of Co	mpany Wo	estern Refin	ng			Contact Beck Larsen					
Address I-4							No.(505) 722-02	.58			
Facility Nar	ne Westeri	n Refining (Gallup)			Facility Type Refinery					
Surface Ow	ner			Mineral O	wner			Leas	e No.		
						LOBBE					
TT 'A I -A4	Carrian	T1.1	D			OF RE		F ./N/ . I :			
Unit Letter	Section	Township	Range	Feet from the	North/	South Line	Feet from the	East/West Lin	e County		
	28	15 N	15 W						McKinley		
			L	atitude_35° 29'	030"	Longitud	e 108° 24' 040)"			
				_		OF REL		About			
Type of Relea		ater Mixture				Volume of	Release 230 bbls		e Recovered 205 bbls		
Source of Re	ease API				_	Date and F 7/30/2010;	lour of Occurrenc 1745		nd Hour of Discovery 010; 1800		
Was Immedia	ite Notice C		Vac [No Not Re	auirad	If YES, To		Man Harn/Mar	zeglio; OCD (Powell)		
By Whom? B	eck Larsen		103		quired	Date and H			7 hrs); 8/2 (0745 hrs)		
Was a Water		hed?					lume Impacting t				
			Yes 🗵	No			, ,				
If a Watercou	rse was Im	pacted, Descr	ibe Fully.	' N/A				· · · · · · · · · · · · · · · · · · ·			
was operating excess will be be discharged tank volume to the discribe Area	y rain even g properly a e sent to the into the fiv filled to 50-	t the API begs t the time of t baker tanks. We baker tanks 60 percent of and Cleanup A	an overflo he inciden The baker . Howeve total capa	w at 1745 hrs and t. The maximum a tank system is de- to, the influx of stor- city.	API des signed t rmwater	ign flow ratin o accommoda to the API e	g is 500 gpm. If a te excessive rain acceded the effluence.	rain event exce events by allow ent from API. B	p the contaminated area. The API eds the design flow rating, any ing any API overflow volumes to y the end of the event, the baker		
baker tanks. 7	his oily wa	ter mixture w	ill be sent	back to the API v	ia a pro	cess sewer fo	r oil/water separa	tion. All aqueou	s liquids were removed by August		
regulations al public health should their o	l operators or the enviruperations had been to be the perations had been to be the perations and the perations are the peraturations re the peraturations are the peraturations are the peraturation are the peraturation are the peraturations are the peraturation are the per	are required to conment. The ave failed to a ddition, NMC	report ar acceptance dequately CD accep	id/or file certain re te of a C-141 repo investigate and re	elease no rt by the emediate	otifications are NMOCD me contaminati	nd perform correctarked as "Final Record that pose a three	tive actions for eport" does not a ground wa	ursuant to NMOCD rules and releases which may endanger relieve the operator of liability ster, surface water, human health recompliance with any other		
	1	2/	\rightarrow				OIL CONS	SERVATIO	N DIVISION		
Signature:	/ 1		ans	<u>.</u>							
Printed Name	: Beck La	rsen				Approved by	District Superviso	or:			
Title: Enviror	mental Eng	ineer				Approval Dat	e:	Expiration	on Date:		
E-mail Addre						Conditions of Approval:			Attached		
Date: 8/13/20)10	Pho	one: (505)	722-0258							

^{*} Attach Additional Sheets If Necessary

API PROCESS LINES

API CONTAINMENT AREAS





HALL ENVIRONMENTAL LABORATORY DATA SUMMARY

(API Spill on 07/3-8/2/10)

AXMUM WINED SOIL (2006) WHED SOIL (2009) CLEANUP AMINATION SCREENING SCREENING FOUND 5000 200 CONTAMINATION 5000 200 CONTAMINATION	86.4 © O.K.i. 57900 © O.K.i. 388 © O.K.ii.		200 Co	57900 O.K.I. 57900 O.K.I. 385 O.K.I. 3610 O.K.I.
MED SOIL (2006) 1 SCREENING LEVELS (mg/Kg) 200	258 (25,8) 252 128	82 MMED SOIL (2006) SCREENING	200	258 (25.8) 252 128 128 82
MAXIMUM N ONTAMINATION FOUND 5300	1.8 2.8 2.8	170 MAXIMUM N ONTAMINATION FOUND	5700	0.79 2.3 1.2 6.5
W.12 NBT-N-13 NBT-E-14 COVTAMINATION SCREENING SCHEENING SCREENING SCR	10 0 10 128 22 00 22 00	Sample ID: 1009667 Sample ID: 1009667 MAXIMUM NMED SOIL (2006) NMED SOIL	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
CHN-C-10 CHN-C-11 NBT-W-12		CHN-C:10	P 10 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	0 0 0
VENT) API: Composite	730 110 85 85 00 00 00	API- Composite	No Composite	36.610
FIRMATION SAMPLING EVENT) BKT-E-7 BKT-S-9 BKT-W-9 Com 1200: 550 3900 9	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 31 31 Sample ID: 1009668 (SOIL CONFIRMATION SAMPLING EVENT) API-S-4 API-S-4 API-W-6 BKT-E-7 BKT-E-7 BKT-S-3* BKT-W-9	7100 (1100	0 0
SOIL CON	0.00	CONFIRMATION	49	9000
Sample ID: 1007915 (SOIL CONFIRMA) API.E.3 API-S-4 API-W-5 API-W-5 BKT-E- \$559 40 1590 1200		8 (SOIL CON	40 890	0.00
API-N-1 API-E.2 API-E.3 API-S-4 API-W-5 API-W-5 BKT-E.	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sample ID: 1009668 (SOIL API-N-1 API-E-2: API-E-3	286 5700	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
nits	mg/Kg mg/Kg mg/Kg mg/Kg	nits	mg/Kg mg/Kg mg/Kg mg/Kg	mg/Kg mg/Kg mg/Kg mg/Kg
ANALYTES	DRO MRO GRO VOLATILES Toluene Ethylbenzene	xylene, Total ANALYTES	TPH DRO MRO GRO VOLATILES	benzene Toluene Ethylbenzene Xylene, Total

NOTE BLANKS Indicate a Non-detect (ND)

Telbux Cost are highlights (DRY PEQUIRED). IE DRO-200 ppm. 8270 method was to be run However, Method 8270 (Semi-voidities was run on ALL sample points).

Telbux Cost are highlights the maximum contaminant for a particular sample ID above.

Scheen? highlights the NAED Soil Screen Levels (mgKq) for industrial Facilities for a particular contaminant.

Brown: (CLEANUP, STATUS) indicates that cleanup was sufficient or insufficient based on NMED Soil Screening Levels for industrial Facilities.

NOTE: SCREENING GUIDELINES BASED ON AUGUST 2009 NMED TABLE

CALLUP

October 29, 2010

New Mexico Environmental Department (NMED) Hazardous Waste Bureau (HWB) 2905 Rodeo Park Drive East- Building 1 Santa Fe, New Mexico 87505 Attention: Ms Kristen Van Horn

New Mexico Energy Minerals and Natural Resources Department New Mexico Oil Conservation Division (NMOCD) 1220 South St. Francis Drive Santa Fe, New Mexico 87505 Attention: Mr. Carl J, Chavez

Reference:

CLEANUP STATUS and FINAL REPORT for Western Refining (Gallup Refinance) for the API OVEREL OW of July 20, 2010 and of April 22, 2010

Refinery) for the API OVERFLOW of July 30, 2010 and of August 2, 2010

EPA ID NO. NMD000333211

HWB-GRCC-MISC

Dear Ms Van Horn and Mr. Chavez:

Please accept the following letter as a status report describing the API overflow events that occurred on July 30 and August 2, 2010. These two events even though separate should be treated as one event due to the chronological separation between the two and due to the same extent of Area of Contamination (AOC) that occurred. The following describes the cause of the problem, remedial and cleanup actions taken, and areas affected.

On July 30, 2010 a heavy rain came through the area. At approximately 1745 hrs due to this rain, the API began to overflow. The API continued to overflow until about 1905 hrs. (80 minutes). Notifications were made on July 31, 2010 to both NMED (HWB) and OCD as required. The overflow was localized to a small area around the API and the containment area surrounding the Baker Frac Tanks that are used for overflow. The API was operating properly at the time of the incident. Once the overflowed ceased to continue to overflow, a vacuum truck was deployed in order to remove contaminated liquids from the API and surrounding Baker Tank containment areas. The maximum design flow rating is 500 gpm. If during an excessive rain event that the influx to the API exceeds the design flow, water will be diverted to and overflow into the Baker Frac Tanks. The baker tank system is designed to accommodate these excessive rain events. During this event, the influx of stormwater exceeded the capacity of the API. The overflow frac tanks could only receive an estimated 50 to 60 % of the total volume of the frac tanks. Therefore, the API influent was forced out of the API vents. At the end of the event, all oily water mixtures within the berms, containment areas, and around the API were removed by the afternoon of Sunday, August 1, 2010, using a vacuum truck. It was estimated that approximately 230 bbls of oily-water mixture was released to the ground. It was further determined that approximately 205

bbls of oil-water mixture was recovered during this overflow. No watercourse or overflows to the Aeration Ponds occurred during this event.

On August 2, 2010 another heavy rain event occurred that once again caused the API to overflow. The API began to overflow to the Baker Tanks from about 1825 to 2330 hrs (5 hrs, 5 minutes) The API continued to overflow until about 1905 hrs. (80 minutes). Once again notifications were made on August 3 to both NMED (HWB) and OCD as required. The overflow was localized to a small area around the API and the containment area surrounding the Baker Frac Tanks that are used for overflow. Once again, the API was operating properly at the time of the incident. Once the overflowed ceased a vacuum truck was deployed in order to remove contaminated liquids from the API and surrounding baker tank containment areas. The maximum design flow rating is 500 gpm. If during an excessive rain event that the influx to the API exceeds the design flow, water will be diverted to and overflow into the frac tanks. The baker tank system is designed to accommodate these excessive rain events. During this event, the influx of stormwater exceeded the capacity of the API. The overflow frac tanks could only receive an estimated 50 to 60 % of the total volume of the frac tanks. Therefore, the API influent was forced out of the API vents. All oily water liquid mixtures within the berms, containment areas, and around the API were removed by the afternoon of Sunday, August 4, 2010, using a vacuum truck. This time, it was estimated that approximately 159 bbls of oily-water mixture was released to the ground. It was determined that approximately 149 bbls of oil-water mixture was recovered during this overflow. No watercourse or overflows to the Aeration Ponds were impacted during this event.

Due to the grade around the API and around the containment areas leading to the frac tanks, the Area of Contamination (AOC) for both events was localized to include a small area around the API, and the containment areas around the Baker Tanks.

Sample Activity- Sample collection was performed using a clean stainless steel trowel. Using this trowel, the sampler digs to about 6 to 12 inches before collecting the sample. He would collect each sample location in a clean 8 oz glass jar that will be sent to Hall Environmental Laboratory. Decontamination procedures are implemented between sample locations using water with an Alconox solution followed by a de-ionized water rinse. After samples are collected, they are stored in a refrigerator prior to shipment to Hall Environmental Laboratories.

Initial Sampling- Initial sampling was conducted on July 22 which was prior to the event of July 30 and August 2, 2010. The sample locations were chosen based on a "Sampling Plan" (Figure 1) that has been previously submitted to and approved by the agency. These locations were chosen based on prior overflow events and due to the drainage around the API. The initial sampling results prior to the overflow at the API area indicated TPH levels above the 200 mg/kg limits established by the Agency. Samples were initially and analyzed for TPH (Method 418.1), BTEX (Method 8021B). These contaminated areas noted are as follows: API-E-2, API-E-3, API-W-5, BKT-E-7, BKT-S-8, BKT-W-9, CHN-C-10, CHN-C-11, NBT-N-13, and NBT-E-14.

Initial Remedial Activities- Remedial activities commenced on August 3 until August 18, 2010. Approximately 48 yards of contaminated soil was excavated from the API containment areas and

put in a roll-off bin pending shipment offsite disposal as hazardous waste under F037, F038, K049, and K051 waste codes.

Confirmation Sampling- Confirmation samples were collected on September 14, 2010. Confirmation sample locations around the API and Baker Tanks include locations API-N-1, API-E-2, API-E-3, API-S-4, API-W-5, API-W-6, BKT-E-7, BKT-S-8, and BKT-W-9. These samples were analyzed under Hall Environmental Laboratory report (# 1009668). Addition conformational sampling was also conducted on September 14 for the locations CHN-C-10, CHN-C-11, NBT-W-12, NBT-N-13, and NBT-E-14. A composite was also collected for analysis. Each an aliquot of soil from each location was collected in order to compile a composite for analysis. The composite sample was analyzed for the following parameters: RCI, TPH (Method 418.1), BTEX (Method 8021B), RCRA 8 Metals, Anions (F, Cl), Volatiles (Method 8260B), and Semi-volatiles (Method 8270). These samples were analyzed under Hall Environmental Laboratory report (#1009667).

Summary: All BTEX values for the sampling events are below the regulatory levels. In comparison between the initial sampling (July 22, Report # 1007915) and the confirmation sampling events (August 14, Report 1009667 / 1009668), there is a reduction in TPH values. However, based on analytical comparison between initial and confirmation sampling, additional remedial activities and confirmation sampling may be required.

If you require additional information concerning this matter, please contact me at (505) 722-0258.

Sincerely

Environmental Engineer

Western Refining (Gallup Refinery)

File:

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Revised October 10, 2003 Submit 2 Copies to appropriate

Form C-141

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

Attached

Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company Western Refining Contact Beck Larsen Address I-40 / Exit 39 Telephone No.(505) 722-0258 Facility Name Western Refining (Gallup) Facility Type Refinery Surface Owner Mineral Owner Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County 15 W 28 15 N McKinley Latitude_35° 29' 030" __Longitude__108° 24' 040"

NATURE OF RELEASE Type of Release Oily Water Mixture Volume of Release 159 bbls Volume Recovered 149 bbls Source of Release API Date and Hour of Occurrence Date and Hour of Discovery 8/02/2010; 1725 8/02/2010; 1800 Was Immediate Notice Given? If YES, To Whom? NMED (HWB) Christiansen/Van Horn/Monzeglio; OCD (Powell) By Whom? Beck Larsen Date and Hour 8/3 (1010 (Msg),1012 (Msg),1020 hrs); 8/3 (1028 hrs) Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ⊠ No If a Watercourse was Impacted, Describe Fully.* N/A Describe Cause of Problem and Remedial Action Taken.* Refer to Initial C-141 for description of event. This overflow occurred immediately after the overflow that occurred on July 30, 2010. Oily-water liquids were removed around the API and containment areas of all five baker tanks. This oily water mixture will be sent back to the API via a process sewer for oil/water separation. All aqueous liquids were removed by August 4, 2010. Refer to Initial C-141 for further details. Describe Area Affected and Cleanup Action Taken.* The Area of Contamination (AOC) included the area surrounding the API and the containment around the frac tanks. Cleanup activities began from august 3 through august 18, 2010 using excavation methodology. Samples were collected and analyzed. Approximately 48 cubic yards of contaminated soil around the API and baker tanks were excavated and put in roll-off bins for disposal as a hazardous waste. Additional excavation and sampling may be required. Refer to Initial C-141 for further details. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Beck Larsen Approval Date: Title: Environmental Engineer **Expiration Date:**

Conditions of Approval:

* Attach Additional Sheets If Necessary

Date: 10/29/2010

E-mail Address: Thurman.larsen@wnr.com

Phone: (505) 722-0258

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Attached []

Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company Western Refining Contact Beck Larsen Address I-40 / Exit 39 Telephone No.(505) 722-0258 Facility Name Western Refining (Gallup) Facility Type Refinery Mineral Owner Lease No. Surface Owner LOCATION OF RELEASE Unit Letter North/South Line East/West Line Section Township Range Feet from the Feet from the County 28 15 N 15 W McKinley Latitude 35° 29' 030" Longitude 108° 24' 040" NATURE OF RELEASE Type of Release Oily Water Mixture Volume of Release 159 bbls Volume Recovered 149 bbls Source of Release API Date and Hour of Occurrence Date and Hour of Discovery 8/02/2010: 1725 8/02/2010: 1800 Was Immediate Notice Given? If YES, To Whom? NMED (HWB) Christiansen/Van Horn/Monzeglio; OCD (Powell) By Whom? Beck Larsen Date and Hour 8/3 (1010 (Msg), 1012 (Msg), 1020 hrs); 8/3 (1028 hrs) Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes 🖾 No If a Watercourse was Impacted, Describe Fully.* N/A Describe Cause of Problem and Remedial Action Taken.* Due to heavy rain event; the API began overflowing to the baker tanks from 1825 to 2330 hrs. The vacuum truck had begun vacuuming up the contaminated area. The API was operating properly at the time of the incident. The maximum API design flow rating is 500 gpm. If a rain event exceeds the design flow rating, any excess will be sent to the baker tanks. The baker tank system is designed to accommodate excessive rain events by allowing any API overflow volumes to be discharged into five baker tanks. However, the influx of stormwater to the API exceeded the effluent from API. By the end of the event, the baker tank volume filled to 50-60 percent of total capacity. Describe Area Affected and Cleanup Action Taken.* Around the API and within the containments of all five baker tanks. The vacuum truck is removing the oily water contamination within the berm and all baker tanks. This oily water mixture will be sent back to the API via a process sewer for oil/water separation. All aqueous liquids were removed by August 4, 2010. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Beck Larsen Title: Environmental Engineer Approval Date: Expiration Date:

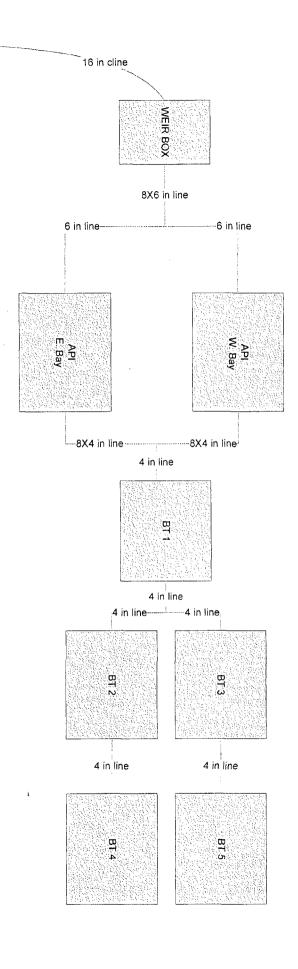
Conditions of Approval:

Date: 8/13/2010

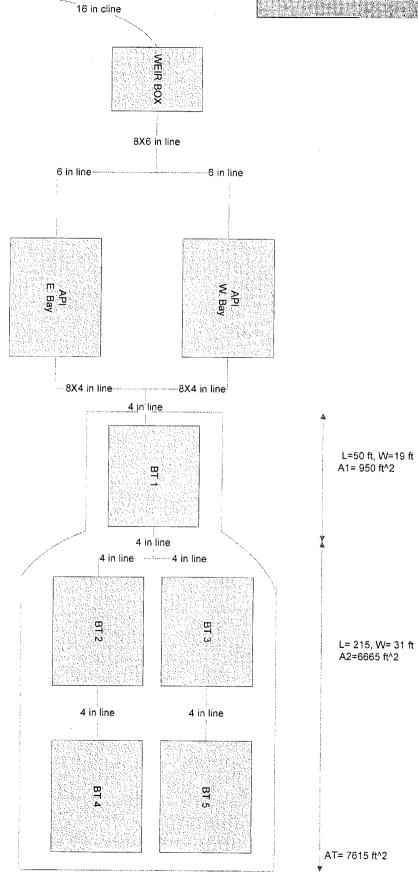
E-mail Address: Thurman.larsen@wnr.com

Phone: (505) 722-0258

^{*} Attach Additional Sheets If Necessary



API PROCESS LINES



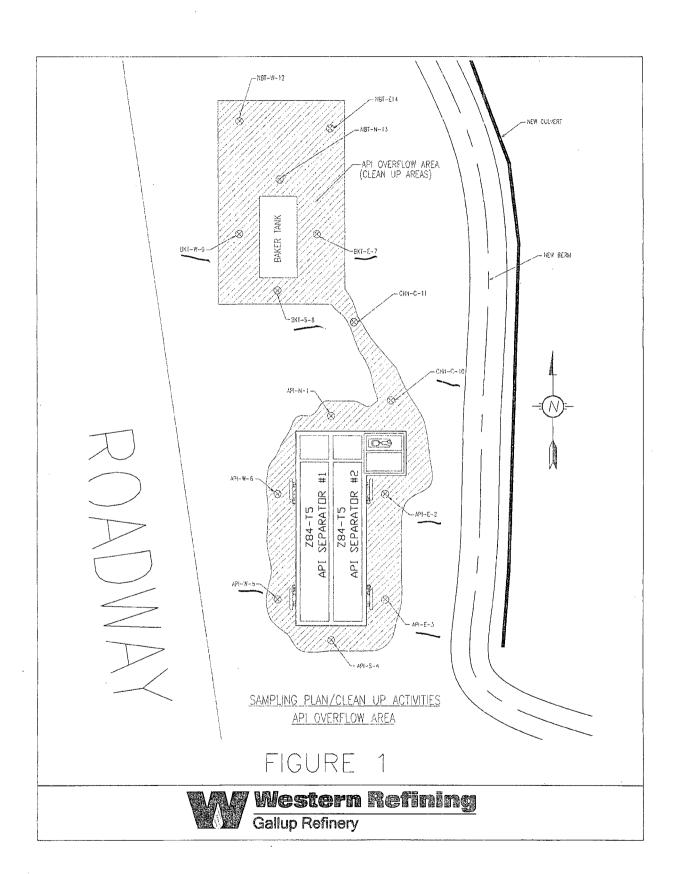


FIG 3

HALL ENVIRONMENTAL LABORATORY DATA SUMMARY

(API Spill on 07/3-8/2/10)

NMED SOL. (2009) CLEANUP SCREENING STATUS STATUS	200 Contaminated	85.4 O.K.I. 57300 O.K.I. 385 O.K.I. 3610	WRED SOIL (2009) CLEANUP SCREENING STATUS LEVELS (mg/Kg)	200 Contaminated	85.4 O.K.(57900 O.K.(385 O.K.() 3610 O.K.()
MAXIMUM NMED SOIL (2006) NMED SOIL (2009) TYAMINATION SCREENING SCREENING FOUND LEVELS MAKEN	200	258 (25.8) 252 128 82	MAXIMUM NINED SOIL (2008) NINED SOIL (2009) NITAMINATION SCREENING SCREENING FOUND. LEVELS (MINKG) LEVELS (MINKG)		258 (25.8) 252 128 82
MAXIMUM N CONTAMINATION FOUND	0000	1.8 28 2.8 170	MAXIMUM A CONTAMINATION FOUND	2500	0.79 2.3 1.2 6.5
CHN-C-10 CHN-C-11 NBT-W-12 :NBT-M-13 :NBTE-14 CONTAMINATION SCREENING SCREEN	6200 1100	1.0 28 1.9 2.2 0.5 170 5.8	Sample ID: 1009667 MAXIMUM NIED SOIL (2008) CHN-C-11 NBT-W-12 NBT-N-13 NBT-E-14 CONTAMINATION SCREENING FOUND LEVELS (mg/Kg)	0.001	0 0
II NBT-W-12 IN	0	0000	Sample ID: 1009667 -C-11 NBT-W-12 NBT	100	0 0 0 0 0 0
CHN-C-10 CHN-C-1	330 220	0	Sa CHN-C-10 CHN-C-1	.450	0.000
ENT) API:	925 730 730 110 85	0.35 0.35 0.081	API- Composite	No Composite	
VEIRMATION SAMPLING EVENT) A BKTE-7 BKT-S-8 BKT-W-9 Com	1200 580 3900	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sample ID: 1009668 (SOIL CONFIRMATION SAMPLING EVENT) 1 APIEZ APIEZ APIEZ APIEZ APIEZ APIEZ APIEZ BKT-K-	2100 1100 1100	
7915 (SOIL CON API-W-5 API-W-6	110	00.2.4	CONFIRMATION ARI-W-5 API-W-6	49	2 2 8 8 2 2 8 5 1 3
Sample ID: 1007915 (SOIL CONFIRM API-W-5 BKT	40 1900	0000	SB (SOIL CON API-S-4 API-W	40 990	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Sample 2 API-E-3	5300	1.8 3.2 2.8 13	D: 10096	5700	0 0 78 0 14 0 12 0 42
APIE	550	0000	ample API-E	260	
Sample ID: 100 API-N-1 APIE-2 APIE-3 API-S-4	035 0	0000	Sample ID: 1009668 (SOIL API-N-1 API-E-2 API-E-3 API-S-4	100 260	0000
Units API-N-1 API-E	1 250 1 250 1 250 1 250 1 250 1 250 1 250 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	mg/Kg 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Sample		туку 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

NOTE BLANKS indicate a Non-detect (ND)

"Light Blue; close are a hoping (PRO-REQUIRED). If DRO-200 ppin; 8270, method was to be run However, Method 8270 (Semi-volatiles was run on ALL sample points)

"Yellow, close a hoping the maximum contaminant for a particular sample. D above

"Zetect hoping the maximum contaminant for a particular sample in a particular contaminant

"Egets, hoping is the NNED Soil Screen Levis (mg/Kg) for Industrial Facilities for, a particular contaminant

"Erect hoping is a NNED Soil Screen Levis (mg/Kg) for Industrial Facilities for, a particular contaminant based on NNED Soil Screening Levels for Industrial Facilities

"Brown (CLEANUP STATUS) indicates that cleanup was sufficient based on NNED Soil Screening Levels for Industrial Facilities

NOTE: SCREENING GUIDELINE'S BASED ON AUGUST 2009 NMED TABLE



COVER LETTER

Tuesday, August 10, 2010

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: API Overflow Sample Points & Roll Offs

Dear Thurman B. Larsen:

Order No.: 1007915

Hall Environmental Analysis Laboratory, Inc. received 16 sample(s) on 7/26/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 10-Aug-10

CLIENT: Lab Order:

Project:

Lab ID:

Western Refining Southwest, Gallup

1007915

1007915-01

API Overflow Sample Points & Roll Offs

Client Sample ID: API-N-1

Collection Date: 7/22/2010 8:30:00 AM

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES				همسمو کان اب زیر میبادید. واست	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	7/28/2010 1:56:02 PM
Benzene	ND	0.050	mg/Kg	1	7/28/2010 1:56:02 PM
Toluene	ND	0.050	mg/Kg	1	7/28/2010 1:56:02 PM
Ethylbenzene	ND	0.050	mg/Kg	1	7/28/2010 1:56:02 PM
Xylenes, Total	ND	0.10	mg/Kg	1	7/28/2010 1:56:02 PM
Surr: 4-Bromofluorobenzene	125	64.7-120	S %REC	. 1	7/28/2010 1:56:02 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order: 1007915

API Overflow Sample Points & Roll Offs

Project: API Overflow Sample Lab ID: 1007915-02

Client Sample ID: API-E-2

Collection Date: 7/22/2010 8:45:00 AM

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.20	m	g/Kg	2	7/31/2010 7:28:50 AM
Benzene	ND	0.10	m	g/Kg	2	7/31/2010 7:28:50 AM
Toluene	ND	0.10	m	g/Kg	2	7/31/2010 7:28:50 AM
Ethylbenzene	ND	0.10	m	g/Kg	2	7/31/2010 7:28:50 AM
Xylenes, Total	ND	0.20	m	g/Kg	2	7/31/2010 7:28:50 AM
Surr: 4-Bromofluorobenzene	140	64.7-120	S %	REC	2	7/31/2010 7:28:50 AM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	550	20	m	g/Kg	1	7/29/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 2 of 24

Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-E-3

Lab Order:

1007915

Collection Date: 7/22/2010 8:55:00 AM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-03

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES		** <u>***********************************</u>			· · · · · · · · · · · · · · · · · · ·	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	10	7/31/2010 8:59:29 AM
Benzene	1.8	0.50		mg/Kg	10	7/31/2010 8:59:29 AM
Toluene	3.2	0.50		mg/Kg	10	7/31/2010 8:59:29 AM
Ethylbenzene	. 2.8	0.50		mg/Kg	10	7/31/2010 8:59:29 AM
Xylenes, Total	13	1.0		mg/Kg	10	7/31/2010 8:59:29 AM
Surr: 4-Bromofluorobenzene	132	64.7-120	S	%REC	10	7/31/2010 8:59:29 AM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	5300	200		mg/Kg	10	7/29/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

Page 3 of 24

Date: 10-Aug-10

CLIENT: Lab Order: Western Refining Southwest, Gallup

Client Sample ID: API-S-4

1007915

Collection Date: 7/22/2010 9:15:00 AM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Matrix: SOIL

1007915-04 Lab ID:

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	7/31/2010 9:29:40 AM
Benzene	ND	0.050	mg/Kg	1	7/31/2010 9:29:40 AM
Toluene	ND	0.050	mg/Kg	1	7/31/2010 9:29:40 AM
Ethylbenzene	ND	0.050	mg/Kg	1	7/31/2010 9:29:40 AM
Xylenes, Total	ND	0.10	mg/Kg	1	7/31/2010 9:29:40 AM
Surr: 4-Bromofluorobenzene	118	64.7-120	%REC	1	7/31/2010 9:29:40 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	30	20	mg/Kg	1	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

Client Sample ID: API-W-5

Collection Date: 7/22/2010 9:21:00 AM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID: 1007915-05

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	<u> </u>		O and the same of		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.20	mg/Kg	2	7/31/2010 9:59:40 AM
Benzene	ND	0.10	mg/Kg	2	7/31/2010 9:59:40 AM
Toluene	ND	0.10	mg/Kg	2	7/31/2010 9:59:40 AM
Ethylbenzene	0.14	0.10	mg/Kg	2	7/31/2010 9:59:40 AM
Xylenes, Total	0.44	0.20	mg/Kg	2	7/31/2010 9:59:40 AM
Surr: 4-Bromofluorobenzene	1.17	64.7-120	%REC	2	7/31/2010 9:59:40 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	1900	200	mg/Kg	10	7/29/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

Page 5 of 24

Date: 10-Aug-10

CLIENT: Lab Order: Western Refining Southwest, Gallup

1007915

API Overflow Sample Points & Roll Offs

Project: Lab ID:

1007915-06

Client Sample ID: API-W-6

Collection Date: 7/22/2010 9:37:00 AM

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES				···.	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	7/31/2010 10:29:52 AM
Benzene	ND	0.050	mg/Kg	1	7/31/2010 10:29:52 AM
Toluene	ND	0.050	mg/Kg	1	7/31/2010 10:29:52 AM
Ethylbenzene	ND	0.050	mg/Kg	1	7/31/2010 10:29:52 AM
Xylenes, Total	ND	0.10	mg/Kg	1	7/31/2010 10:29:52 AM
Surr: 4-Bromofluorobenzene	114	64.7-120	%REC	1	7/31/2010 10:29:52 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	110	20	mg/Kg	1	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

1007915-07

Client Sample ID: BKT-E-7

Collection Date: 7/22/2010 9:52:00 AM

Project: Lab ID:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSE
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/Kg	2	8/2/2010 3:45:08 PM
Benzene	ND	0.10		mg/Kg	2	8/2/2010 3:45:08 PM
Toluene	ND	0.10		mg/Kg	2	8/2/2010 3:45:08 PM
Ethylbenzene	ND	0.10		mg/Kg	2	8/2/2010 3:45:08 PM
Xylenes, Total	ND	0.20		mg/Kg	2	8/2/2010 3:45:08 PM
Surr: 4-Bromofluorobenzene	124	64.7-120	S	%REC	2	8/2/2010 3:45:08 PM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	1200	100		ma/Ka	5	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

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Client Sample ID: BKT-S-8

Lab Order:

1007915

Collection Date: 7/22/2010 10:15:00 AM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-08

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			· · · · · · · · · · · · · · · · · · ·		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.20	mg/Kg	2	7/31/2010 11:30:35 AM
Benzene	ND	0.10	mg/Kg	2	7/31/2010 11:30:35 AM
Toluene	1.0	0.10	mg/Kg	2	7/31/2010 11:30:35 AM
Ethylbenzene	0.26	0.10	mg/Kg	2	7/31/2010 11:30:35 AM
Xylenes, Total	3.1	0.20	mg/Kg	2	7/31/2010 11:30:35 AM
Surr: 4-Bromofluorobenzene	124	64.7-120	S %REC	2	7/31/2010 11:30:35 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	580	20	mg/Kg	1	7/29/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

Client Sample ID: BKT-W-9

Collection Date: 7/22/2010 12:30:00 PM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-09

Matrix: SOIL

Analyses	Result	PQL	Qual U	nits	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	''				***************************************	Analyst: NSB
Methyl tert-butyl ether (MTBE)	· ND	0.50	mg	g/Kg	5	7/29/2010 2:37:39 PM
Benzene	ND	0.25	mg	g/Kg	5	7/29/2010 2:37:39 PM
Toluene	0.33	0.25	mg	g/Kg	5	7/29/2010 2:37:39 PM
Ethylbenzene	ND	0.25	mç	g/Kg	5	7/29/2010 2:37:39 PM
Xylenes, Total	3.1	0.50	mç	g/Kg	5	7/29/2010 2:37:39 PM
Surr: 4-Bromofluorobenzene	127	64.7-120	S %I	REC	5	7/29/2010 2:37:39 PM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	3900	200	mg	g/Kg	10	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Project:

Lab ID:

Western Refining Southwest, Gallup

Lab Order:

1007915

API Overflow Sample Points & Roll Offs

1007915-10

Client Sample ID: CHN-C-10

Collection Date: 7/22/2010 1:25:00 PM

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			·			Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	7/29/2010 3:07:49 PM
Benzene	ND	0.050		mg/Kg	1	7/29/2010 3:07:49 PM
Toluene	ND	0.050		mg/Kg	1	7/29/2010 3:07:49 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/29/2010 3:07:49 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/29/2010 3:07:49 PM
Surr: 4-Bromofluorobenzene	157	64.7-120	S	%REC	1	7/29/2010 3:07:49 PM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	330	20		mg/Kg	1	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ē Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

Client Sample ID: CHN-C-11

Project:

API Overflow Sample Points & Roll Offs

Collection Date: 7/22/2010 1:35:00 PM

Date Received: 7/26/2010

Lab ID:

1007915-11

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES		···.				Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	7/29/2010 3:38:12 PM
Benzene	ND	0.050		mg/Kg	1	7/29/2010 3:38:12 PM
Toluene	ND	0.050		mg/Kg	1	7/29/2010 3:38:12 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/29/2010 3:38:12 PM
Xylenes, Total	ND	0.10		mg/Kg	1 .	7/29/2010 3:38:12 PM
Surr: 4-Bromofluorobenzene	129	64.7-120	S	%REC.	1	7/29/2010 3:38:12 PM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	220	20		mg/Kg	1	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: NBT-W-12

Lab Order:

1007915

Collection Date: 7/22/2010 2:15:00 PM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-12

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	7/29/2010 4:08:35 PM
Benzene	ND	0.050		mg/Kg	1	7/29/2010 4:08:35 PM
Toluene	ND	0.050		mg/Kg	1	7/29/2010 4:08:35 PM
Ethylbenzene	ND	0.050		mg/Kg	1	7/29/2010 4:08:35 PM
Xylenes, Total	ND	0.10		mg/Kg	1	7/29/2010 4:08:35 PM
Surr: 4-Bromofluorobenzene	130	64.7-120	S	%REC	1	7/29/2010 4:08:35 PM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	ND	20		mg/Kg	1	7/29/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

1007915-13

Client Sample ID: NBT-N-13

Collection Date: 7/22/2010 2:30:00 PM

Project: Lab ID: API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0	mg/Kg	10	7/29/2010 4:38:51 PM
Benzene	1.0	0.50	mg/Kg	10	7/29/2010 4:38:51 PM
Toluene	28	0.50	mg/Kg	10	7/29/2010 4:38:51 PM
Ethylbenzene	2.2	0.50	mg/Kg	10	7/29/2010 4:38:51 PM
Xylenes, Total	170	5.0	mg/Kg	50	7/31/2010 12:00:43 PM
Surr: 4-Bromofluorobenzene	113	64.7-120	%REC	50	7/31/2010 12:00:43 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	6200	200	mg/Kg	10	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: NBT-E-14

Lab Order:

1007915

Collection Date: 7/22/2010 2:45:00 PM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID: 1007915-14 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	 					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.50		mg/Kg	5	7/29/2010 5:09:03 PM
Benzene	ND	0.25		mg/Kg	5	7/29/2010 5:09:03 PM
Toluene	1.9	0.25		mg/Kg	5	7/29/2010 5:09:03 PM
Ethylbenzene	0.60	0.25		mg/Kg	5	7/29/2010 5:09:03 PM
Xylenes, Total	5.8	0.50		mg/Kg	5	7/29/2010 5:09:03 PM
Surr: 4-Bromofluorobenzene	141	64.7-120	S	%REC	5	7/29/2010 5:09:03 PM
EPA METHOD 418.1: TPH						Analyst: JB
Petroleum Hydrocarbons, TR	1100	100		mg/Kg	5	7/29/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-Composite

Lab Order:

1007915

Collection Date: 7/22/2010 3:00:00 PM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-15

Matrix: SOIL

Lab ID: 100/915-15						
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS		**************************************			Analyst: JB
Diesel Range Organics (DRO)	730	10		mg/Kg	1	8/3/2010 1:58:55 PM
Motor Oil Range Organics (MRO)	110	50		mg/ K g	1	8/3/2010 1:58:55 PM
Surr: DNOP	106	61.7-135		%REC	1	8/3/2010 1:58:55 PM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	85	25		mg/Kg	5	7/29/2010 5:39:32 PM
Surr: BFB	164	55.2-107	S	%REC	5	7/29/2010 5:39:32 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	П	0.50		mg/Kg	5	7/29/2010 5:39:32 PM
Benzene	ND	0.25		mg/Kg	5	7/29/2010 5:39:32 PM
Toluene	0.35	0.25		mg/Kg	5	7/29/2010 5:39:32 PM
Ethylbenzene	ND	0.25		mg/Kg	5	7/29/2010 5:39:32 PM
Xylenes, Total	0.81	0.50		mg/Kg	5	7/29/2010 5:39:32 PM
Surr: 4-Bromofluorobenzene	131	64.7-120	S	%REC	5	7/29/2010 5:39:32 PM
EPA METHOD 300.0: ANIONS						Analyst: LJB
Fluoride	14	3.0		mg/Kg	10	7/31/2010 8:47:27 PM
Chloride	49	15		mg/Kg	10	7/31/2010 8:47:27 PM
EPA METHOD 7471: MERCURY						Analyst: IC
Mercury	ND	0.033		mg/Kg	1	8/4/2010 3:47:46 PM
EPA METHOD 6010B: SOIL METALS						Analyst: SNV
Arsenic	4.5	2.5		mg/Kg	1	8/3/2010 2:25:05 PM
Barium	440	1.0		mg/Kg	10	8/5/2010 10:14:18 AM
Cadmium	ND	0.10		mg/Kg	1	8/3/2010 2:25:05 PM
Chromium	5.8	0.30		mg/Kg	1	8/3/2010 2:25:05 PM
Lead	1.2	0.25		mg/Kg	1	8/3/2010 2:25:05 PM
Selenium	ND	2.5		mg/Kg	1	8/3/2010 2:25:05 PM
Silver	ND	0.25		mg/Kg	1	8/3/2010 2:25:05 PM
EPA METHOD 8270C: SEMIVOLATIL	ES					Analyst: JDC
Acenaphthene	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM
Acenaphthylene	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM
Aniline	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM
Anthracene	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM
Azobenzene	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM
Benz(a)anthracene	ND	0.20		mg/Kg	٦	7/29/2010 11:55:13 AM
Benzo(a)pyrene	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	7/29/2010 11:55:13 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

Client Sample ID: API-Composite

Collection Date: 7/22/2010 3:00:00 PM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-15

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLAT	TILES			* _ * . * . * . * . * . * . * . * . * .	Analyst: JDC
Benzo(g,h,i)perylene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Benzoic acid	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN
Benzyl alcohol	ИD	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Bis(2-chloroethoxy)methane	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Bis(2-chloroethyl)ether	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Bis(2-ethylhexyl)phthalate	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN
4-Bromophenyl phenyl ether	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Carbazole	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN
4-Chloroaniline	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AM
2-Chloronaphthalene	ND	0.25	mg/Kg	1	7/29/2010 11:55:13 AN
2-Chlorophenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Chrysene	· ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AM
Di-n-octyl phthalate	ND	0.25	mg/Kg	1	7/29/2010 11:55:13 AM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Dibenzofuran	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	7/29/2010 11:55:13 AN
Diethyl phthalate	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Dimethyl phthalate	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	7/29/2010 11:55:13 AM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	7/29/2010 11:55:13 AN
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	7/29/2010 11:55:13 AN
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN
Fluoranthene	МD	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Fluorene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Hexachlorobenzene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Hexachlorobutadiene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Hexachloroethane	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Indeno(1,2,3-cd)pyrene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AN
Isophorone	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AN

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

API Overflow Sample Points & Roll Offs

Collection Date: 7/22/2010 3:00:00 PM

Date Received: 7/26/2010 Matrix: SOIL

Client Sample ID: API-Composite

Project: Lab ID:

1007915-15

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE:	S			سيره ديده بحديد بمريدة بين يسبوقه عن	Analyst: JDC
2-Methylnaphthalene	0.21	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
2-Methylphenol	ND	. 0.50	mg/Kg	1	7/29/2010 11:55:13 AM
3+4-Methylphenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Naphthalene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
2-Nitroaniline	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
3-Nitroaniline	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
4-Nitroaniline	ND	0.25	mg/Kg	1	7/29/2010 11:55:13 AM
Nitrobenzene	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AM
2-Nitrophenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
4-Nitrophenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Pentachlorophenol	ND	0.40	mg/Kg	1	7/29/2010 11:55:13 AM
Phenanthrene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Phenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Pyrene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Pyridine	ND	0.50	mg/Kg	1	7/29/2010 11:55:13 AM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	7/29/2010 11:55:13 AM
Surr: 2,4,6-Tribromophenol	60.4	28.4-132	%REC	1	7/29/2010 11:55:13 AM
Surr: 2-Fluorobiphenyl	57.3	37.4-123	%REC	1	7/29/2010 11:55:13 AM
Surr: 2-Fluorophenol	63.2	28.6-110	%REC	1	7/29/2010 11:55:13 AM
Surr: 4-Terphenyl-d14	44.6	29.2-111	%REC	1	7/29/2010 11:55:13 AM
Surr: Nitrobenzene-d5	58.8	33.8-126	%REC	1	7/29/2010 11:55:13 AM
Surr: Phenol-d5	62.8	35.3-110	%REC	1	7/29/2010 11:55:13 AM
EPA METHOD 8260B; VOLATILES					Analyst: MMS
Benzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Toluene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Ethylbenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Methyl tert-butyl ether (MTBE)	ND	0.25	mg/Kg	.5	8/5/2010 11:22:26 AM
1,2,4-Trimethylbenzene	0.44	0.25	mg/Kg	.5	8/5/2010 11:22:26 AM
1,3,5-Trimethylbenzene	0.31	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,2-Dichloroethane (EDC)	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,2-Dibromoethane (EDB)	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Naphthalene	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
1-Methylnaphthalene	ND	1.0	mg/Kg	5	8/5/2010 11:22:26 AM
2-Methylnaphthalene	ND	1.0	mg/ Kg	5	8/5/2010 11:22:26 AM
Acetone	ND	3.8	mg/Kg	5	8/5/2010 11:22:26 AM
Bromobenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:28 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Project:

Lab ID:

Western Refining Southwest, Gallup

Lab Order:

1007915

API Overflow Sample Points & Roll Offs

1007915-15

Client Sample ID: API-Composite

Collection Date: 7/22/2010 3:00:00 PM

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: MM:
Bromodichloromethane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Bromoform	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Bromomethane	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
2-Butanone	ND	2.5	mg/Kg	5 .	8/5/2010 11:22:26 AM
Carbon disulfide	ND	2.5	mg/Kg	5	8/5/2010 11:22:26 AM
Carbon tetrachloride	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
Chlorobenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Chloroethane	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
Chloroform	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Chloromethane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
2-Chlorotoluene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
4-Chlorotoluene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
cis-1,2-DCE	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
cis-1,3-Dichloropropene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,2-Dibromo-3-chloropropane	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
Dibromochloromethane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Dibromomethane	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
1,2-Dichlorobenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,3-Dichlorobenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,4-Dichlorobenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Dichlorodifluoromethane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,1-Dichloroethane	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
1,1-Dichloroethene	ND	0.25	· mg/Kg	5	8/5/2010 11:22:26 AM
1,2-Dichloropropane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,3-Dichloropropane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
2,2-Dichloropropane	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
1,1-Dichloropropene	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
Hexachlorobutadiene	ND	0.50	mg/Kg	5	8/5/2010 11:22:26 AM
2-Hexanone	ND	2.5	mg/Kg	5	8/5/2010 11:22:26 AM
isopropylbenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
4-Isopropyltoluene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
4-Methyl-2-pentarione	ND	2.5	mg/Kg	5	8/5/2010 11:22:26 AM
Methylene chloride	ND	0.75	mg/Kg	5	8/5/2010 11:22:26 AM
n-Butylbenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
n-Propylbenzene	ИD	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
sec-Butylbenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
Styrene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
tert-Butylbenzene	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,1,1,2-Tetrachloroethane	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM
1,1,2,2-Tetrachloroethane	ND	0.25	m g /Kg	5	8/5/2010 11:22:26 AM
Tetrachloroethene (PCE)	ND	0.25	mg/Kg	5	8/5/2010 11:22:26 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-Composite

Lab Order:

1007915

Collection Date: 7/22/2010 3:00:00 PM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-15

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					هبواه واحروا النبوكا الماء	Analyst: MMS
trans-1,2-DCE	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
trans-1,3-Dichloropropene	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
1,2,3-Trichlorobenzene	ND	0.50		mg/Kg	5	8/5/2010 11:22:26 AM
1,2,4-Trichlorobenzene	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
1,1,1-Trichloroethane	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
1,1,2-Trichloroethane	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
Trichloroethene (TCE)	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
Trichlorofluoromethane	ND	0.25		m g/Kg	5	8/5/2010 11:22:26 AM
1,2,3-Trichloropropane	ПО	0.50		mg/Kg	5	8/5/2010 11:22:26 AM
Vinyl chloride	ND	0.25		mg/Kg	5	8/5/2010 11:22:26 AM
Xylenes, Total	ND	0.50		mg/Kg	5	8/5/2010 11:22:26 AM
Surr: 1,2-Dichloroethane-d4	103	60.1-112		%REC	5	8/5/2010 11:22:26 AM
Surr: 4-Bromofluorobenzene	104	79.4-113		%REC	5	8/5/2010 11:22:26 AM
Surr: Dibromofluoromethane	109	70.2-111		%REC	5	8/5/2010 11:22:26 AM
Surr: Toluene-d8	112	78.4-110	S	%REC	5	8/5/2010 11:22:26 AM

Qualifiers:

- Value exceeds Maximum Contaminant, Level
- E Estimated value
- Analyte detected below quantitation limits Ĵ
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded H
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

Client Sample ID: API-Rolloff Bins

Collection Date: 7/22/2010 8:00:00 AM

Project:

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-16

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS	**************************************	····			Analyst: JB
Diesel Range Organics (DRO)	3800	200		mg/Kg	20	8/3/2010 3:06:55 PM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	8/3/2010 3:06:55 PM
Surr: DNOP	0	61.7-135	s	%REC	20	8/3/2010 3:06:55 PM
EPA METHOD 8015B: GASOLINE RAN	IGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	7/29/2010 6:09:50 PM
Surr: BFB	124	55.2-107	S	%REC	10	7/29/2010 6:09:50 PM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0		mg/Kg	10	7/29/2010 6:09:50 PM
Benzene	ND	0.50		mg/Kg	10	7/29/2010 6:09:50 PM
Toluene	ND	0.50		mg/Kg	10	7/29/2010 6:09:50 PM
Ethylbenzene	ND	0.50		mg/Kg	10	7/29/2010 6:09:50 PM
Xylenes, Total	ND	1.0		mg/Kg	10	7/29/2010 6:09:50 PM
Surr: 4-Bromofluorobenzene	117	64.7-120		%REC	10	7/29/2010 6:09:50 PM
EPA METHOD 300.0: ANIONS						Analyst: LJB
Fluoride	13	3.0		mg/Kg	10	7/31/2010 9:04:51 PM
Chloride	1000	30		mg/Kg	20	8/1/2010 7:27:31 PM
EPA METHOD 7471: MERCURY						Analyst: IC
Mercury	0.051	0.033		mg/Kg	1	8/4/2010 3:49:32 PM
EPA METHOD 6010B: SOIL METALS						Analyst: SNV
Arsenic	2.8	2.5		mg/Kg	1	8/3/2010 2:32:26 PM
Barium	460	1.0		mg/Kg	10	8/5/2010 10:16:41 AM
Cadmium	ND	0.10		mg/Kg	1	8/3/2010 2:32:26 PM
Chromium	10	0.30		mg/Kg	1	8/3/2010 2:32:26 PM
Lead	5.2	0.25		mg/Kg	1	8/3/2010 2:32:26 PM
Selenium	ND	2.5		mg/Kg	1	8/3/2010 2:32:26 PM
Silver	ND	0.25		mg/Kg	1	8/3/2010 2:32:26 PM
EPA METHOD 8270C: SEMIVOLATILES	S					Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Acenaphthylene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Aniline	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Anthracene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Azobenzene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	7/29/2010 12:25:11 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT: Lab Order:

Project:

Lab ID:

Western Refining Southwest, Gallup

1007915

API Overflow Sample Points & Roll Offs

1007915-16

Client Sample ID: API-Rolloff Bins

Collection Date: 7/22/2010 8:00:00 AM

Date Received: 7/26/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	ILES		<u> </u>	iliya ili iliyo miliyeye waxa	Analyst: JD0
Benzo(g,h,i)perylene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Benzo(k)fluoranthene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Benzoic acid	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM
Benzyl alcohol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Bis(2-chloroethoxy)methane	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Bis(2-chloroethyl)ether	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Bis(2-chloroisopropyl)ether	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Bis(2-ethylhexyl)phthalate	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM
4-Bromophenyl phenyl ether	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Butyl benzyl phthalate	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Carbazole	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
4-Chloro-3-methylphenol	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM
4-Chloroaniline	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PN
2-Chloronaphthalene	ND	1.3	mg/Kg	1	7/29/2010 12:25:11 PM
2-Chlorophenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
4-Chlorophenyl phenyl ether	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Chrysene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Di-n-butyl phthalate	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM
Di-n-octyl phthalate	ND	1.3	mg/Kg	1	7/29/2010 12:25:11 PN
Dibenz(a,h)anthracene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Dibenzofuran	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
1,2-Dichlorobenzene	, ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
1,3-Dichlorobenzene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
1,4-Dichlorobenzene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
3,3'-Dichlorobenzidine	ND	1.3	mg/Kg	1	7/29/2010 12:25:11 PN
Diethyl phthalate	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Dimethyl phthalate	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	7/29/2010 12:25:11 PN
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	7/29/2010 12:25:11 PN
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	7/29/2010 12:25:11 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PN
2,6-Dinitrotoluene	DN	2.5	mg/Kg	1	7/29/2010 12:25:11 PN
Fluoranthene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Fluorene	DN	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Hexachlorobenzene	DN	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Hexachlorobutadiene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN
Hexachloroethane	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Indeno(1,2,3-cd)pyrene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM
Isophorone	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order: Project:

1007915

API Overflow Sample Points & Roll Offs

Client Sample ID: API-Rolloff Bins

Collection Date: 7/22/2010 8:00:00 AM

Date Received: 7/26/2010

Lab ID: 1007915-16		Matrix: SOIL							
Analyses	Result	PQL	Qual Units	DF	Date Analyzed				
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: JDC				
2-Methylnaphthalene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
2-Methylphenol	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM				
3+4-Methylphenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Naphthalene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
2-Nitroaniline	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
3-Nitroaniline	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
4-Nitroaniline	ND	1.3	mg/Kg	1	7/29/2010 12:25:11 PM				
Nitrobenzene	ND	2.5	mg/Kg	1	7/29/2010 12:25:11 PM				
2-Nitrophenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
4-Nitrophenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Pentachlorophenol	ND	2.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Phenanthrene	1.7	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Phenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Pyrene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Pyridine	ND	2.5	mg/Kg	1	7/29/2010 12:25;11 PM				
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PN				
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	7/29/2010 12:25:11 PM				
Surr: 2,4,6-Tribromophenol	38.9	28.4-132	%REC	1	7/29/2010 12:25:11 PM				
Surr: 2-Fluorobiphenyl	55.3	37.4-123	%REC	1	7/29/2010 12:25:11 PM				
Surr: 2-Fluorophenol	58.4	28.6-110	%REC	1	7/29/2010 12:25:11 PM				
Surr: 4-Terphenyl-d14	54.8	29.2-111	%REC	1	7/29/2010 12:25:11 PM				
Surr: Nitrobenzene-d5	60.7	33.8-126	%REC	1	7/29/2010 12:25:11 PN				
Surr: Phenol-d5	53.0	35.3-110	%REC	1	7/29/2010 12:25:11 PM				
EPA METHOD 8260B: VOLATILES					Analyst: MM S				
Benzene	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
Toluene	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
Ethylbenzene	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				
Naphthalene	ND	0.10	mg/Kg	1	8/3/2010 5:47:26 AM				
1-Methylnaphthalene	0.40	0.20	mg/Kg	1	8/3/2010 5:47:26 AM				
2-Methylnaphthalene	0.44	0.20	mg/Kg	1	8/3/2010 5:47:26 AM				
Acetone	ND	0.75	mg/Kg	1	8/3/2010 5:47:26 AM				
Bromobenzene	ND	0.050	mg/Kg	1	8/3/2010 5:47:26 AM				

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1007915

Client Sample ID: API-Rolloff Bins

Project:

API Overflow Sample Points & Roll Offs

Collection Date: 7/22/2010 8:00:00 AM Date Received: 7/26/2010

Lab ID:

1007915-16

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	· · · · · · · · · · · · · · · · · · ·					Analyst: MMS
Bromodichloromethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Bromoform	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Bromomethane	ND	0.10		mg/Kg	1	8/3/2010 5;47:26 AM
2-Butanone	ND	0.50		mg/Kg	1	8/3/2010 5:47:26 AM
Carbon disulfide	ND	0.50		mg/Kg	1	8/3/2010 5:47:26 AM
Carbon tetrachloride	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
Chlorobenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Chloroethane	ND	0,10		mg/Kg	1	8/3/2010 5:47:26 AM
Chloroform	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Chloromethane	0.11	0.050	В	mg/Kg	1	8/3/2010 5:47:26 AM
2-Chlorotoluene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
4-Chiorotoluene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
cis-1,2-DCE	ND	0.050		mg/Kg	. 1	8/3/2010 5:47:26 AM
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
Dibromochloromethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Dibromomethane	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,1-Dichloroethane	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
1,1-Dichloroethene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,2-Dichloropropane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,3-Dichloropropane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
2,2-Dichloropropane	ND	0.10		mg/ Kg	1	8/3/2010 5:47:26 AM
1,1-Dichloropropene	ND	0.10		mg/Kg	1	8/3/2010 5:47;26 AM
Hexachlorobutadiene	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
2-Hexanone	ND	0.50		mg/Kg	1	8/3/2010 5:47:26 AM
Isopropylbenzene	ND	0.050		mg/Kg	1.	8/3/2010 5:47:26 AM
4-isopropyltoluene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	8/3/2010 5:47:26 AM
Methylene chloride	ND	0.15		mg/Kg	1	8/3/2010 5:47:26 AM
n-Butylbenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
n-Propylbenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
sec-Butylbenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Styrene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
tert-Butylbenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,1,1,2-Tetrachloroethane	, ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Tetrachloroethene (PCE)	П	0.050		mg/Kg	1	8/3/2010 5:47:26 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 10-Aug-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-Rolloff Bins

Lab Order:

1007915

Project:

Collection Date: 7/22/2010 8:00:00 AM

API Overflow Sample Points & Roll Offs

Date Received: 7/26/2010

Lab ID:

1007915-16

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES		· · · · · · · · · · · · · · · · · · ·				Analyst: MMS
trans-1,2-DCE	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Trichlorofluoromethane	ND	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
Vinyl chloride	П	0.050		mg/Kg	1	8/3/2010 5:47:26 AM
Xylenes, Total	ПИ	0.10		mg/Kg	1	8/3/2010 5:47:26 AM
Surr: 1,2-Dichloroethane-d4	82.5	60.1-112		%REC	1	8/3/2010 5:47:26 AM
Surr: 4-Bromofluorobenzene	5.29	79.4-113	S	%REC	1	8/3/2010 5:47:26 AM
Surr: Dibromofluoromethane	89.0	70.2-111		%REC	1	8/3/2010 5:47:26 AM
Surr: Toluene-d8	91.7	78.4-110		%REC	1	8/3/2010 5:47:26 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank В
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

1007915

Lab ID:

B10072603-001

Client Sample ID 1007915-15C, API-Composite

Report Date: 08/06/10

Collection Date: 07/22/10 15:00

DateReceived: 07/28/10

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY							
Flash Point (Ignitability)	>200	°F		30		SW1010M	08/02/10 10:30 / jh
CORROSIVITY							
pH of Soil and Waste	8.36	s.u.		0.10		SW9045D	07/30/10 13:00 / jh
REACTIVITY							
Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	08/02/10 15:47 / kjp
Sulfide, Reactive	ND	mg/kg		20	500	SW846 Ch 7	08/02/10 14:30 / jh

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

1007915

Lab ID:

B10072603-002

Client Sample ID 1007915-16B, API-Rolloff Bins

Report Date: 08/06/10

Collection Date: 07/22/10 08:00

DateReceived: 07/28/10

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY							
Flash Point (Ignitability)	>200	%		30		SW1010M	08/02/10 10:30 / jh
CORROSIVITY							
pH of Soil and Waste	7.76	s.u.		0.10		SW9045D	07/30/10 13:00 / jh
REACTIVITY	•						
Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	08/02/10 15:49 / kjp
Sulfide, Reactive	ND	mg/kg		20	500	SW846 Ch 7	08/02/10 14:30 / jh

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Hall Environmental

Project: 1007915

Report Date: 08/06/10

Work Order: B10072603

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW1010M								Batch:	R151644
Sample ID: LCS-R151644	Laboratory Contr	rol Sample			Run: PENS	KY MARTEN C	LOSED C	08/02	2/10 10:30
Flash Point (Ignitability)	90.0	۴	30	100	98	102			
Sample ID: LCSD-R151644	Laboratory Contr	ol Sample Duplica	ate		Run: PENS	KY MARTEN C	LOSED C	07/27	7/10 10:00
Flash Point (Ignitability)	90.0	°F	30	100	98	102			



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QA/QC Summary Report

Client: Hall Environmental

Project: 1007915

Report Date: 08/06/10

Work Order: B10072603

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW846 Ch 7								Bat	ch: 48025
Sample ID: MB-48025	Method Blank				Run: AUTC	DAN201-B_1008	02C	08/02	2/10 16:01
Cyanide, Reactive	DИ	mg/kg	0.05						
Method: SW846 Ch 7								Batch	: R151695
Sample ID: MB-R151695	Method Blank				Run: MISC	-HZW_100802E		08/0	2/10 14:30
Sulfide, Reactive	ND	mg/kg	10						
Sample ID: LCS-R151695	Laboratory Conf	trol Sample			Run: MISC	-HZW_100802E		08/0	2/10 14:30
Sulfide, Reactive	26	mg/kg	20	90	50	150			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



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QA/QC Summary Report

Client: Hall Environmental

Report Date: 08/06/10

Project: 1007915

Work Order: B10072603

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW9045D						Analy	tical Run:	PH METER	100730B
Sample ID: ICV pH of Soil and Waste	Initial Calibration 4.02	verification	on Standard 0.10	100	98	102		07/30	0/10 13:00
Method: SW9045D								Batch	: R151564
Sample ID: B10072925-001ADUP pH of Soil and Waste	Sample Duplicat 6.65	te s.u.	0.10		Run: PH M	ETER_100 7 30E	0.9	07/30 10	0/10 13:00

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points & Roll Offs

Work Order:

1007915

Analyte	Result	Units	PQL	SPK Va S	SPK ref	%Rec L	owLimit Hi	ghLimit %RPD	RPDLimit Qual
Method: EPA Method 300.0; An	nions					m / 1 1m			~~~~~
Sample ID: MB-23211		MBLK				Batch ID:	23211	Analysis Date:	7/31/2010 4:43:43 PM
Fluoride	ND	mg/Kg	0.30						
Chloride	ND	mg/Kg	1.5			D. I. I. ID		A 1 1 B 1	7/04/0040 5 04 07 734
Sample ID: LCS-23211		LCS				Batch ID:	23211	Analysis Date:	7/31/2010 5:01:07 PM
Fluoride	1.549	mg/Kg	0.30.	1.5	0	103	90	110	
Chloride	14.58	mg/Kg	1.5	15	0	97.2	90	110	
Method: EPA Method 418.1: TP	т								
Sample ID: MB-23178		MBLK				Batch ID:	23178	Analysis Date:	7/29/2010
Petroleum Hydrocarbons, TR	ND	mg/Kg	20						
Sample ID: LCS-23178		LCS				Batch ID:	23178	Analysis Date:	7/29/2010
Petroleum Hydrocarbons, TR	87.72	mg/Kg	20	100	0	87.7	86.8	116	
Sample ID: LCSD-23178		LCSD				Batch ID:	23178	Analysis Date:	7/29/2010
Petroleum Hydrocarbons, TR	93.80	mg/Kg	20	100	0	93.8	86.8	116 6.70	20
Method: EPA Method 8015B: D	iesel Range	Organics							
Sample ID: MB-23230		MBLK				Batch ID:	23230	Analysis Date:	8/3/2010 12:17:23 PM
Diesel Range Organics (DRO)	ND	mg/Kg	10						
Motor Oil Range Organics (MRO)	ND	mg/Kg	50						
Sample ID: LCS-23230		LCS				Batch ID:	23230	Analysis Date:	8/3/2010 12:51:13 PM
Diesel Range Organics (DRO)	44.88	mg/Kg	10	50	0	89.8	64.6	116	
Sample ID: LCSD-23230		LCSD				Batch ID:	23230	Analysis Date:	8/3/2010 1:25:05 PM
Diesel Range Organics (DRO)	44.91	mg/Kg	10	50	0	89.8	64.6	116 0.0780	17.4
	asoline Rai								
Method: EPA Method 8015B: G		-				Batch ID:	23173	Analysis Date:	7/28/2010 12:25:17 PM
Method: EPA Method 8015B: G Sample ID: MB-23173		MBLK							
Sample ID: MB-23173	ND		5.0					, , , , , , , , , , , , , , , , , , , ,	
	ND	MBLK mg/Kg LCS	5.0			Batch ID:	23173	Analysis Date:	7/30/2010 5:48:54 PN

Qu	a	łi	fi	e	r	s	

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project: API Overflow Sample Points & Roll Offs

Work Order:

1007915

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8021B: \	Volatiles										
Sample ID: 1007915-02A MSD		MSD				Batch ID:	23173	Analys	is Date:	7/31/2010	8:29:22 AM
Methyl tert-butyl ether (MTBE)	1.299	mg/Kg	0.20	1	0	130	67.9	135	6.14	28	
Benzene	0.9670	mg/Kg	0.10	1	0	96.7	78. 8	132	5.05	27	
Toluene	1.035	mg/Kg	0.10	1	0.061	97.4	78.9	112	3.76	19	
Ethylbenzene	1.058	mg/Kg	0.10	1	0.0232	103	69.3	125	3.27	10	
Xylenes, Total	3.229	mg/Kg	0.20	3	0	108	73	128	3.53	13	
Sample ID: MB-23173		MBLK				Batch ID:	23173	Analys	is Date:	7/28/2010 1:	2:25:17 PM
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10								
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-23173		LCS				Batch ID:	23173	Analys	is Date:	7/28/2010	8:59:51 PM
Methyl tert-butyl ether (MTBE)	1.553	mg/Kg	0.10	1	0	155	67.9	135			S
Benzene	0.9269	mg/Kg	0.050	1	0	92.7	78.8	132			
Toluene	0.9273	mg/Kg	0.050	1	0	92.7	78.9	112			
Ethylbenzene	0.9764	mg/Kg	0.050	1	0	97.6	69.3	125			
Xylenes, Total	2.974	mg/Kg	0.10	3	0	99.1	73	128			
Sample ID: 1007915-02A MS		MS				Batch ID:	23173	Analys	is Date:	7/31/2010	7:59:04 AM
Methyl tert-butyl ether (MTBE)	1.221	mg/Kg	0.20	1	0	122	67.9	135			
Benzene	0.9194	mg/Kg	0.10	1	0	91.9	78.8	132			
Toluene	0.9972	mg/Kg	0.10	. 1	0.061	93.6	78.9	112			
Ethylbenzene	1.024	mg/Kg	0.10	1	0.0232	100	69.3	125			
Xylenes, Total	3.117	mg/Kg	0.20	3	0	104	73	128			

Qualifiers:

ND Not Detected at the Reporting Limit

R RPD outside accepted recovery limits

E Estimated value

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points & Roll Offs

Work Order:

1007915

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec Lo	wLimit Hig	ghLimit ————	%RPD	RPDLimit	Qual
Method: EPA Method 8260B:	VOLATILES									
Sample ID: mb-23173		MBLK			Batch (D:	23173	Analys	sis Date:	8/2/2010 1	0:46:30 P
Benzene	ND	mg/Kg	0.050							
Toluene	ND	mg/Kg	0.050							
Ethylbenzene	ND	mg/Kg	0.050							
Methyl tert-butyl ether (MT8E)	ND	mg/Kg	0.050							
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050							
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050							
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050							
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050							
Naphthalene	ND	mg/Kg	0.10							
1-Methylnaphthalene	ND	mg/Kg	0.20							
2-Methylnaphthalene	ND	mg/Kg	0.20							
Acetone	ND	mg/Kg	0.75							
Bromobenzene	ND	mg/Kg	0.050							
Bromodichloromethane	ND	mg/Kg	0.050							
Bromoform	ND	mg/Kg	0.050							
Bromomethane	ND	mg/Kg	0.10							
2-Butanone	ND	mg/Kg	0.50							
Carbon disulfide	ND	mg/Kg	0.50							
Carbon tetrachloride	ND	mg/Kg	0.10							
Chlorobenzene	ND	mg/Kg	0.050							
Chloroethane	ND	mg/Kg	0.10							
Chloroform	ND	mg/Kg	0.050							
Chloromethane	0.1198	mg/Kg	0.050							
2-Chlorotoluene	ND	mg/Kg	0.050							
4-Chlorotoluene	ND	mg/Kg	0.050							
cis-1,2-DCE	ND	mg/Kg	0.050							
cis-1,3-Dichloropropene	ND	mg/Kg	0.050							
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.10							
Dibromochloromethane	ND	mg/Kg	0.050							
Dibromomethane	ND	mg/Kg	0.10							
1,2-Dichlorobenzene	ND	mg/Kg	0.050							
1,3-Dichlorobenzene	ND	mg/Kg	0.050							
1,4-Dichlorobenzene	ND	mg/Kg	0.050							
Dichlorodifluoromethane	ND	mg/Kg	0.050							
1,1-Dichloroethane	ND	mg/Kg	0.10							
1,1-Dichloroethene	ND	mg/Kg	0.050							
1,2-Dichloropropane	ND	mg/Kg	0.050							
1,3-Dichloropropane	ND	mg/Kg	0.050							
2,2-Dichloropropane	ND	mg/Kg	0.10							
1,1-Dichloropropene	ND	mg/Kg	0.10							
Hexachlorobutadiene	ND	mg/Kg	0.10							
2-Hexanone	ND	mg/Kg	0.50							
Isopropylbenzene	ND	mg/Kg	0.050							
4-Isopropyitoluene	ND	mg/Kg	0.050							

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points & Roll Offs

Work Order:

1007915

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec L	owLimit Hi	ghLimit %RPD	RPDLimit Qual
Method: EPA Method 8260	B: VOLATILES					<u> </u>		
Sample ID: mb-23173		MBLK			Batch ID:	23173	Analysis Date:	8/2/2010 10:46:30 PM
4-Methyl-2-pentanone	ND	mg/Kg	0.50					
Methylene chloride	ND	mg/Kg	0.15					
n-Butylbenzene	ND	mg/Kg	0.050					
n-Propylbenzene	ND	mg/Kg	0.050					
sec-Butylbenzene	ND	mg/Kg	0.050					
Styrene	ND	mg/Kg	0.050					
tert-Butylbenzene	ND	mg/Kg	0.050					
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050					
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050					
Tetrachloroethene (PCE)	ND	mg/Kg	0.050					
trans-1,2-DCE	ND	mg/Kg	0.050					
trans-1,3-Dichloropropene	ND	mg/Kg	0.050					
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10					
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050					
1,1,1-Trichloroethane	ND	mg/Kg	0.050					
1,1,2-Trichloroethane	ND	mg/Kg	0.050					
Trichloroethene (TCE)	ND	mg/Kg	0.050					
Trichlorofluoromethane	ND	mg/Kg	0.050					
1,2,3-Trichloropropane	ND	mg/Kg	0.10					
Vinyl chloride	ND	mg/Kg	0.050					
Xylenes, Total	ND	mg/Kg	0.10					
Sample ID: lcs-23173		LCS			Batch ID:	23173	Analysis Date:	8/2/2010 9:50:15 PM
Benzene	0.9774	mg/Kg	0.050	1 0	97.7	80.7	112	
Toluene	1.086	mg/Kg	0.050	1 0	109	86.1	126	

Qualifiers

E Estimated value

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

J Analyte detected below quantitation limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points & Roll Offs

Work Order:

1007915

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec Lov	vLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8270C	: Semivolatile:	s								
Sample ID: mb-23187		MBLK			Batch ID:	23187	Analys	is Date:	7/29/2010 1	D:11:17 AN
Acenaphthene	ND	mg/Kg	0.20							
Acenaphthylene	ND	mg/Kg	0.20							
Aniline	ND	mg/Kg	0.20							
Anthracene	ND	mg/Kg	0.20							
Azobenzene	ND	mg/Kg	0.20							
Benz(a)anthracene	ND	mg/Kg	0.20							
Benzo(a)pyrene	ND	mg/Kg	0.20							
Benzo(b)fluoranthene	ND	mg/Kg	0.20							
Benzo(g,h,i)perylene	ND	mg/Kg	0.20							
Benzo(k)fluoranthene	ND	mg/Kg	0.20							
Benzoic acid	ND	mg/Kg	0.50							
Benzyl alcohol	ND	mg/Kg	0.20							
Bis(2-chloroethoxy)methane	ND	mg/Kg	0.20							
Bis(2-chloroethyl)ether	ND	mg/Kg	0.20							
Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.20							
Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.50							
4-Bromophenyl phenyl ether	ND	mg/Kg	0.20							
Butyl benzyl phthalate	ND	mg/Kg	0.20							
Carbazole	ND	mg/Kg	0.20							
4-Chloro-3-methylphenol	ND	mg/Kg	0.50							
4-Chloroaniline	ND	mg/Kg	0.50							
2-Chloronaphthalene	ND	mg/Kg	0.25							
2-Chlorophenol	ND	mg/Kg	0.20							
4-Chlorophenyl phenyl ether	ND	mg/Kg	0.20							
Chrysene	ND	mg/Kg	0.20							
Di-n-butyl phthalate	ND	mg/Kg	0.50							
Di-n-octyl phthalate	ND	mg/Kg	0.25							
Dibenz(a,h)anthracene	ND	mg/Kg	0.20							
Dibenzofuran	ND	mg/Kg	0.20							
1,2-Dichlorobenzene	ND	mg/Kg	0.20							
1,3-Dichlorobenzene	ND	mg/Kg	0.20							
1,4-Dichlorobenzene	ND	mg/Kg	0.20							
3,3'-Dichlorobenzidine	ND	mg/Kg	0.25							
Diethyl phthalate	ND	mg/Kg	0.20							
Dimethyl phthalate	ND	mg/Kg	0.20							
2,4-Dichlorophenol	ND	mg/Kg	0.40							
2,4-Dimethylphenol	ND	mg/Kg	0.30							
4,6-Dinitro-2-methylphenol	DN	mg/Kg	0.50							
2,4-Dinitrophenol	ND	mg/Kg	0.40							
2,4-Dinitrotoluene	ND	mg/Kg	0.50							
2,6-Dinitrotoluene	ND	mg/Kg	0.50							
Fluoranthene	ND	mg/Kg	0.20							
Fluorene	ND	mg/Kg	0.20							
Hexachlorobenzene	ND	mg/Kg	0.20							

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project: API Overflow Sample Points & Roll Offs

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Work Order:

1007915

Page б

Method: EPA Method 8270C: S Sample ID: mb-23187 Hexachlorobutadiene Hexachlorocyclopentadiene	Semivolatiles								
Hexachlorobutadiene Hexachlorocyclopentadiene		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
Hexachlorocyclopentadiene		MBLK				Batch ID:	23187	Analysis Date:	7/29/2010 10:11:17 AM
- ·	ND	mg/Kg	0.20						
Unverblereethere	ND	mg/Kg	0.20						
Hexachloroethane	ND	mg/Kg	0.20						
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.20						
Isophorone	ND	mg/Kg	0.50						
2-Methylnaphthalene	ND	mg/Kg	0.20						
2-Methylphenol	ND	mg/Kg	0.50						
3+4-Methylphenol	ND	mg/Kg	0.20						
N-Nitrosodi-n-propylamine	ND	mg/Kg	0.20						
N-Nitrosodiphenylamine	ND	mg/Kg	0.20						
Naphthalene	ND	mg/ Kg	0.20						
2-Nitroaniline	ND	mg/Kg	0.20						
3-Nitroaniline	ND	mg/Kg	0.20						
4-Nitroaniline	ND	mg/Kg	0.25						
Nitrobenzene	ND	mg/Kg	0.50						
2-Nitrophenol	ND	mg/Kg	0.20						
4-Nitrophenol	ND	mg/Kg	0.20				•		
Pentachlorophenol .	ND	mg/Kg	0.40						
Phenanthrene	ND	mg/Kg	0.20						
Phenol	ND	mg/Kg	0.20						
Pyrene	DN	mg/Kg	0.20						
Pyridine	ND	mg/Kg	0.50						
1,2,4-Trichlorobenzene	ND	mg/Kg	0.20						
2,4,5-Trichlorophenol	ND	mg/Kg	0.20						
2,4,6-Trichlorophenol	ND	mg/Kg	0.20						
Sample ID: Ics-23187		LCS				Batch ID:	23187	Analysis Date:	7/29/2010 10:55:34 AN
Acenaphthene	1.215	mg/Kg	0.20	1.67	0	72.8	39.4	101	
4-Chloro-3-methylphenol	2.737	mg/Kg	0.50	3.33	0	82.2	40.1	96.6	
2-Chlorophenol	2.296	mg/Kg	0.20	3.33	0	69.0	32.2	94.6	
1,4-Dichlorobenzene	1.067	mg/Kg	0.20	1.67	0	63.9	32.2	96.7	
2,4-Dinitrotoluene	1.292	mg/Kg	0.50	1.67	0	77.3	39.4	111	
N-Nitrosodi-n-propylamine	1.245	mg/Kg	0.20	1.67	0	74.6	41.1	89.8	
4-Nitrophenol	1.869	mg/Kg	0.20	3.33	0	56.1	18.1	122	
Pentachlorophenol	1.845	mg/Kg	0.40	3.33	0	55.4	37.5	98.8	
Phenol	2.311	mg/Kg	0.20	3.33	0	69.4	29	96	
Pyrene	1.453	mg/Kg	0.20	1.67	0	87.0	37.7	94.4	
1,2,4-Trichlorobenzene	1.157	mg/Kg	0.20	1,67	0	69.3	35.6	101	
Method: EPA Method 7471: Me	ercury								
Sample ID: MB-23264	-	MBLK				Batch ID:	23264	Analysis Date:	8/4/2010 3:42:29 PN
Mercury	ND	mg/Kg	0.033						
Sample ID: LCS-23264		LCS				Batch ID:	23264	Analysis Date:	8/4/2010 3:44:14 PN
Mercury	0.1660	mg/Kg	0.033	0.167	0	99.6	80	120	

R

Non-Chlorinated

RPD outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points & Roll Offs

Work Order:

1007915

Analyte	Result	Units	PQL	SPK Va SPK re	f %Rec Lo	owLimit Hi	ghLimit	%RPD	RPDLimit Qual
Method: EPA Method 6010B:	Soil Metals								
Sample ID: MB-23233		MBLK			Batch ID:	23233	Analysi	s Date:	8/3/2010 11:50:39 A
Arsenic	ND	mg/Kg	2.5						
Barium	ND	mg/Kg	0.10						
Cadmium	ND	mg/Kg	0.10						
Chromium	ND	mg/Kg	0.30						
Lead	ND	mg/Kg	0.25						
Selenium	ND	mg/Kg	2.5						
Silver	ND	mg/Kg	0.25						
Sample ID: LCS-23233		LCS			Batch ID:	23233	Analysis	Date:	8/3/2010 11:53:03 A
Arsenic	27.52	mg/Kg	2.5	25 0	110	80	120		
Barium	25.60	mg/Kg	0.10	25 0	102	80	120		
Cadmium	25.85	mg/Kg	0.10	25 0	103	80	120		
Chromium	25.91	mg/Kg	0.30	25 0	104	80	120		
Lead	25.37	mg/Kg	0.25	25 0	101	80	120		
Selenium	27.04	mg/Kg	2.5	25 0	108	80	120		
Silver	26.33	mg/Kg	0.25	25 0	105	80	120		

ND

Holding times for preparation or analysis exceeded Η

NC Non-Chlorinated

R RPD outside accepted recovery limits

Ε Estimated value

Analyte detected below quantitation limits Not Detected at the Reporting Limit

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU		Date Rec	eived:	7/26/2010
Work Order Number 1007915		Receive	d by: AT	
Checklist completed by:		Sample 7/26 // () Date	ID labels checked by	Initials
Matrix: Car	rier name <u>Client c</u>	drop-off		
Shipping container/cooler in good condition?	Yes 🖢	Ø No □	Not Present	
Custody seals intact on shipping container/cooler?	Yes [□ No □	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes 🛚	No 🗆	N/A	
Chain of custody present?	Yes 🖢	No 🗆		
Chain of custody signed when relinquished and received?	Yes 🖸	No 🗌		
Chain of custody agrees with sample labels?	Yes 🖢	Ø No □		
Samples in proper container/bottle?	Yes 🖢	No □		
Sample containers intact?	Yes 🖢	No 🗌		
Sufficient sample volume for indicated test?	Yes 5	Ø No □		
All samples received within holding time?	Yes 🖢	No 🗆		Number of preserved
Water - VOA vials have zero headspace? No VOA	vials submitted	Yes 🗌	No 🗀	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes [No □	N/A	
Water - pH acceptable upon receipt?	Yes 🗆	□ No □	N/A 🔽	<2 >12 unless noted
Container/Temp Blank temperature?	5.6	<6°C Acce	ptable	below.
COMMENTS:		If given suffi	cient time to cool.	
Client contacted Date cont	acted:		Person contacted	
Contacted by: Regarding	j :			
Comments:				
	and the second of the second o			
		·		
Corrective Action	and a common part of the African case of the African party	managar (A. S. C. Fall Copy Manager S.), and do a Chamber S. S.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Regirate	TPH (Method 418.1) EDB (Method 504.1) 8310 (PNA or PAH) RCRA 8 Metals Anions (F,Cl,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8260B (VOA) 8270 (Semi-VOA)	
4901 His	BTEX + MTBE + TPH (Gas only)	Remarks:
Row Rolloffs	A LATSEN LATSEN LATSEN Alot La Dorsel Yes Day Preservative HEALNS Type HEALNS EXAMPLES Type HEALNS HEALNS Type HEALNS HEALN	Date Time
Turn-Around Time: A Standard Froject Name: APT CVEL F SBMDR PO Project #:	Project Manager: Thurman LATSEN Sample: Alora Do Onlog: XYes Sample Temperature: Container Preservative Type and # Type	802 -1 N/B 802 -1 N/B
Chain-of-Custody Record Client: WESTERN - Re FINING Gallup Refirery Mailing Address: RT 3 BOX 9 Gallup NM 87301 Phone #: 505 722 3833	Other S. Krix S.	57-22-10 0830 soll API - N - 1 57-22-10 0845 soll API - E - 2 57-27-10 0845 soll API - E - 3 57-27-10 0845 soll API - W - 5 57-27-10 0841 soll API - W - 5 57-27-10 08421 soll API - W - 5 57-27-10 08421 soll API - W - 5 57-27-10 08421 soll BRT - S - 8 57-27-10 08422 soll BRT - S - 8 57-27-10 08422 soll BRT - S - 8 57-27-10 08423 soll BRT - S - 8 57-

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Air Bubbles (Y or N)



COVER LETTER

Wednesday, September 22, 2010

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: API Overflow Sample Points

Dear Thurman B. Larsen:

Order No.: 1009668

Hall Environmental Analysis Laboratory, Inc. received 9 sample(s) on 9/15/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 22-Sep-10

CLIENT:

Lab ID:

Western Refining Southwest, Gallup

Lab Order:

1009668

1009668-01

Client Sample ID: API-N-1

Collection Date: 9/14/2010 7:30:00 AM

Project:

API Overflow Sample Points

Date Received: 9/15/2010

Matrix: SOIL

Analyses .	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/20/2010 3:39:54 PM
Benzene	ND	0.050	mg/Kg	1	9/20/2010 3:39:54 PM
Toluene	ND	0.050	mg/Kg	1	9/20/2010 3:39:54 PM
Ethylbenzene	ND ·	0.050	mg/Kg	1	9/20/2010 3:39:54 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/20/2010 3:39:54 PM
Surr: 4-Bromofluorobenzene	120	88.9-151	%REC	1	9/20/2010 3:39:54 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	100	20	mg/Kg	1	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 1 of 9

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009668

1009668-02

Client Sample ID: API-E-2

Collection Date: 9/14/2010 7:40:00 AM

Project: Lab ID: API Overflow Sample Points

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			The state of the s		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/20/2010 4:10:21 PM
Benzene	ND	0.050	mg/Kg	1	9/20/2010 4:10:21 PM
Toluene	ND	0.050	mg/Kg	1	9/20/2010 4:10:21 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 4:10:21 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/20/2010 4:10:21 PM
Surr: 4-Bromofluorobenzene	111	88.9-151	%REC	1	9/20/2010 4:10:21 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	260	20	mg/Kg	1	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL. Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 2 of 9

API Overflow Sample Points

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009668

Client Sample ID: API-E-3

Collection Date: 9/14/2010 7:50:00 AM

Project:

Date Received: 9/15/2010

Lab ID:

1009668-03

Matrix: SOIL

Analyses	Result	PQL Qu	al Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			ور زوین الکشتی رسی کا کشتی و این المینیا و این المینیا	194-1-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1-194-1	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0	mg/Kg	10	9/20/2010 4:40:51 PM
Benzene	0.79	0.50	mg/Kg	10	9/20/2010 4:40:51 PM
Toluene	1.4	0.50	mg/Kg	10	9/20/2010 4:40:51 PM
Ethylbenzene	1.2	0.50	mg/Kg	10	9/20/2010 4:40:51 PM
Xylenes, Total	4.2	1.0	mg/Kg	10	9/20/2010 4:40:51 PM
Surr: 4-Bromofluorobenzene	129	88.9-151	%REC	10	9/20/2010 4:40:51 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	5700	200	mg/Kg	10	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 3 of 9

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

1009668

Client Sample ID: API-S-4

Lab Order:

Collection Date: 9/14/2010 8:15:00 AM

Project:

API Overflow Sample Points

Date Received: 9/15/2010

Lab ID:

1009668-04

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	Transfer de la constitución de l		The latest transfer to the second second second second second second second second second second second second	THE PERSON NAMED IN COLUMN TWO	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/20/2010 5:11:05 PM
Benzene	ND	0.050	mg/Kg	1	9/20/2010 5:11:05 PM
Toluene	ND	0.050	mg/Kg	1	9/20/2010 5:11:05 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 5:11:05 PM
Xylenes, Total	0.13	0.10	mg/Kg	1	9/20/2010 5:11:05 PM
Surr: 4-Bromofluorobenzene	109	88.9-151	%REC	1	9/20/2010 5:11:05 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	40	20	mg/Kg	1	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Non-Chlorinated NC.
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded H
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery fimits

Page 4 of 9

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009668

Client Sample ID: API-W-5

Collection Date: 9/14/2010 8:21:00 AM

Project:

API Overflow Sample Points

Date Received: 9/15/2010

Matrix: SOIL

Lab ID:

1009668-05

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	5	9/21/2010 12:45:34 AM
Benzene	0.48	0.25	mg/Kg	5	9/21/2010 12:45:34 AM
Toluene	2.3	0.25	mg/Kg	5	9/21/2010 12:45:34 AM
Ethylbenzene	1.1	0.25	mg/Kg	5	9/21/2010 12:45:34 AM
Xylenes, Total	6.5	0.50	mg/Kg	5	9/21/2010 12:45:34 AM
Surr: 4-Bromofluorobenzene	127	88.9-151	%REC	5	9/21/2010 12:45:34 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	990	20	mg/Kg	1	9/20/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MC1. Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009668

1009668-06

Client Sample ID: API-W-6

Collection Date: 9/14/2010 8:35:00 AM

Project: Lab ID: API Overflow Sample Points

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/21/2010 1:15:51 AM
Benzene	ND	0.050	mg/Kg	1	9/21/2010 1:15:51 AM
Toluene	ND	0.050	mg/Kg	1	9/21/2010 1:15:51 AM
Ethylbenzene	ND	0.050	mg/Kg	1	9/21/2010 1:15:51 AM
Xylenes, Total	ND	0.10	mg/Kg	1	9/21/2010 1:15:51 AM
Surr: 4-Bromofluorobenzene	124	88.9-151	%REC	1	9/21/2010 1:15:51 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	49	20	mg/Kg	1	9/20/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- 11 Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Date: 22-Sep-10

CLIENT:

Project:

Lab ID:

Western Refining Southwest, Gallup

Lab Order:

1009668

1009668-07

Client Sample ID: BKT-E-7

Collection Date: 9/14/2010 8:55:00 AM

API Overflow Sample Points Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	····				Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0	mg/Kg	10	9/21/2010 1:46:01 AM
Benzene	ND	0.50	mg/Kg	10	9/21/2010 1:46:01 AM
Toluene	ND	0.50	mg/Kg	10	9/21/2010 1:46:01 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/21/2010 1:46:01 AM
Xylenes, Total	ND	1.0	mg/Kg	10	9/21/2010 1:46:01 AM
Surr: 4-Bromofluorobenzene	102	88.9-151	%REC	10	9/21/2010 1:46:01 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	2100	200	mg/Kg	10	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E. Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL. Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL. Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 7 of 9

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

allun

Client Sample ID: BKT-S-8

Lab Order:

1009668

Collection Date: 9/14/2010 9:15:00 AM

Project:

API Overflow Sample Points

Date Received: 9/15/2010

Lab ID:

1009668-08

Matrix: SOIL

Analyses	Result	PQL Qual	Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0	mg/Kg	10	9/21/2010 2:16:16 AM
Benzene	ND	0.50	mg/Kg	10	9/21/2010 2:16:16 AM
Toluene	ND	0.50	mg/Kg	10	9/21/2010 2:16:16 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/21/2010 2:16:16 AM
Xylenes, Total	ND	1.0	mg/Kg	10	9/21/2010 2:16:16 AM
Surr: 4-Bromofluorobenzene	119	88.9-151	%REC	10	9/21/2010 2:16:16 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	1100	200	mg/Kg	10	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL. Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- 11 Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 8 of 9

Date: 22-Sep-10

CLIENT:

Western Refining Southwest, Gallup

1009668

Client Sample ID: BKT-W-9

Lab Order:

Collection Date: 9/14/2010 9:40:00 AM

Project:

API Overflow Sample Points

Date Received: 9/15/2010

Lab ID:

1009668-09

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	1.0	mg/Kg	10	9/21/2010 2:46:35 AM
Benzene	ND	0.50	mg/Kg	10	9/21/2010 2:46:35 AM
Toluene	ND	0.50	mg/Kg	10	9/21/2010 2:46:35 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/21/2010 2:46:35 AM
Xylenes, Total	ND	1.0	mg/Kg	10	9/21/2010 2:46:35 AM
Surr: 4-Bromofluorobenzene	114	88.9-151	%REC	10	9/21/2010 2:46:35 AM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	1100	200	mg/Kg	10	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- F. Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MC1. Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Client:

Western Refining Southwest, Gallup

Project: API Overflow Sample Points

Work Order:

1009668

										~	
Analyte	Result	Units	PQL	SPK V	al SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 418.1: T	PH										
Sample ID: MB-23800		MBLK				Batch ID:	23800	Analys	sis Date:		9/20/2010
Petroleum Hydrocarbons, TR	ND	mg/Kg	20								
Sample ID: LCS-23800		LCS				Batch ID:	23800	Analys	sis Date:		9/20/201
Petroleum Hydrocarbons, TR	97.10	mg/Kg	20	100	0	97.1	86.8	116			
Sample ID: LCSD-23800		LCSD				Batch ID:	23800	Analys	sis Date:		9/20/201
Petroleum Hydrocarbons, TR	101.4	mg/Kg	20	100	0	101	86.8	116	4.31	16.2	
Method: EPA Method 8021B: V	Volatiles										
Sample ID: 1009668-01A MSD		MSD				Batch ID:	23783	Analys	sis Date:	9/17/2010	7:55:14 PN
Methyl tert-butyl ether (MTBE)	1.319	mg/Kg	0.10	1	0	132	61.3	215	3.44	19.6	
Benzene	0.9070	mg/Kg	0.050	1	0	90.7	67.2	113	4.15	14.3	
Toluene	0.8438	mg/Kg	0.050	1	0	84.4	62.1	116	4.56	15.9	
Ethylbenzene	0.9174	mg/Kg	0.050	1	0	91.7	67.9	127	5.87	14.4	
Xylenes, Total	2.805	mg/Kg	0.10	3	0	93.5	60.6	134	3.56	12.6	
Sample ID: MB-23783		MBLK				Batch ID:	23783	Analys	sis Date:	9/17/2010	8:57:20 PN
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10						•		
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-23783		LCS				Batch ID:	23783	Analys	is Date:	9/17/2010	3:25:32 PN
Methyl tert-butyl ether (MTBE)	1.339	mg/Kg	0.10	1	0	134	65.5	229			
Benzene	0.9632	mg/Kg	0.050	1	0.0167	94.7	83.3	107			
Toluene	0.8771	mg/Kg	0.050	1	0	87.7	74.3	115			
Ethylbenzene	0.9372	mg/Kg	0.050	1	0.0119	92.5	80.9	122			
Xylenes, Total	2.863	mg/Kg	0.10	3	0	95.4	85.2	123			
Sample ID: 1009668-01A MS		MS				Batch ID:	23783	Analys	is Date:	9/17/2010	7:24:47 PN
Methyl tert-butyl ether (MTBE)	1.275	mg/Kg	0.10	1	0	127	61.3	215			
Benzene	0.8701	mg/Kg	0.050	1	0	87.0	67.2	113			
Toluene	0.8062	mg/Kg	0.050	1	0	80.6	62.1	116			
Ethylbenzene	0.8651	mg/Kg	0.050	1	0	86.5	67.9	127			
Xylenes, Total	2.707	mg/Kg	0.10	3	0	90.2	60.6	134			

Qualifiers:

Page 1

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU		Date Received:		9/15/2010
Work Order Number 1009668		Received by:	TLS	()
Checklist completed by: Signature		12 10	els checked by:	initials
Matrix: Carrier na	me <u>FedEx</u>			
Shipping container/cooler in good condition?	Yes 🗹	No 🗀	Not Present	
Custody seals intact on shipping container/cooler?	Yes 🗹	No 🗌 :	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes 🗹	No 🗌	N/A	
Chain of custody present?	Yes 🗹	No 🗌		
Chain of custody signed when relinquished and received?	Yes 🗹	No 🗆		
Chain of custody agrees with sample labels?	Yes 🗹	No 🗆		
Samples in proper container/bottle?	Yes 🗹	No 🗌		
Sample containers intact?	Yes 🗹	No 🗌		
Sufficient sample volume for indicated test?	Yes 🗹	No 🗌		
All samples received within holding time?	Yes 🗹	No 🗆		Number of preserved
Water - VOA vials have zero headspace? No VOA vials	submitted 🗹	Yes 🗌	No 🗌	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes 🗌	No 🗌	N/A 🗹	
Water - pH acceptable upon receipt?	Yes 🗌	No 🗆	N/A 🔽	<2 >12 unless noted
Container/Temp Blank temperature?	3.9°	<6° C Acceptable	•	below.
COMMENTS:		If given sufficient t	ime to cool.	
Client contacted Date contacted:		Perso	n contacted	
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Comments:				
Odminents.	·			
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0821 soil βρΓ-S-H 8-02-1 μ/β 5 X X C835 soil βρΓ-W-5 8-02-1 μ/β 5 X X C835 soil βρΓ-W-6 8-02-1 μ/β 7 X X C855 soil βλΓ-Ε-7 8-02-1 μ/β 7 X X C940 soil βλΓ-Σ-8 8-02-1 μ/β 3 X C940 soil βλΓ-Σ-8 8-02-1 μ/β 3 X C940 soil βλΓ-Ψ-9 8-02-1 μ/β 3 X C940 soil βλΓ-W-9 8-02-1 μ/β 7 X X X CM CM CM CM CA CA CA CA CA CM CM CA CA CA CA CA CA CA CA CA CA CA CA CA	Soil API - E-3		8	×	X							
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COVER LETTER

Thursday, October 07, 2010

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX: (505) 722-0210

RE: API Overflow Sample Points

Dear Thurman B. Larsen:

Order No.: 1009667

Hall Environmental Analysis Laboratory, Inc. received 6 sample(s) on 9/15/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology.

Please do not hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009667

API Overflow Sample Points

Project: Lab ID:

1009667-01

Client Sample ID: CHN-C-10

Collection Date: 9/14/2010 11:00:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	The second secon		and a second section of the section of the second section of the s		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/17/2010 2:21:49 PM
Benzene	ND	0.050	mg/Kg	1	9/17/2010 2:21:49 PM
Toluene	ND	0.050	mg/Kg	1	9/17/2010 2:21:49 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/17/2010 2:21:49 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/17/2010 2:21:49 PM
Surr: 4-Bromofluorobenzene	128	88.9-151	%REC	1	9/17/2010 2:21:49 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	450	200	mg/Kg	10	9/20/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 1 of 10

Date: 07-Oct-10

CLIENT: Lab Order: Western Refining Southwest, Gallup

1009667

Client Sample ID: CHN-C-11

Collection Date: 9/14/2010 11:20:00 AM

API Overflow Sample Points

Date Received: 9/15/2010

Project: Lab ID:

1009667-02

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/20/2010 2:08:56 PM
Benzene	ND	0.050	mg/Kg	1	9/20/2010 2:08:56 PM
Toluene	ND	0.050	mg/Kg	1	9/20/2010 2:08:56 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 2:08:56 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/20/2010 2:08:56 PM
Surr: 4-Bromofluorobenzene	124	88.9-151	%REC	1	9/20/2010 2:08:56 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	79	20	mg/Kg	1	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 2 of 10

Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order: Project:

1009667

API Overflow Sample Points

Lab ID:

1009667-03

Client Sample ID: NBT-W-12

Collection Date: 9/14/2010 10:00:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES			transki kalanda popuju di katalanda kalanda kalanda katalanda katalanda kalanda kalanda kalanda kalanda kaland	A STATE OF THE PARTY OF THE PAR	Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/20/2010 2:39:13 PM
Benzene	ND	0.050	mg/Kg	1	9/20/2010 2:39:13 PM
Toluene	ND	0.050	mg/Kg	1	9/20/2010 2:39:13 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 2:39:13 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/20/2010 2:39:13 PM
Surr: 4-Bromofluorobenzene	112	88.9-151	%REC	1	9/20/2010 2:39:13 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	100	20	mg/Kg	1	9/20/2010

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits J
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 3 of 10

Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009667

API Overflow Sample Points

Project: Lab ID:

1009667-04

Client Sample ID: NBT-N-13

Collection Date: 9/14/2010 10:20:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/17/2010 3:52:45 PM
Benzene	ND	0.050	mg/Kg	1	9/17/2010 3:52:45 PM
Toluene	ND	0.050	mg/Kg	1	9/17/2010 3:52:45 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/17/2010 3:52:45 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/17/2010 3:52:45 PM
Surr: 4-Bromofluorobenzene	112	88.9-151	%REC	1	9/17/2010 3:52:45 PM
EPA METHOD 418.1: TPH			,		Analyst: JB
Petroleum Hydrocarbons, TR	100	20	mg/Kg	1	9/20/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

Page 4 of 10

Date: 07-Oct-10

CLIENT: Lab Order:

Project:

Western Refining Southwest, Gallup

1009667

API Overflow Sample Points

Lab ID: 1009667-05 Client Sample ID: NBT-E-14

Collection Date: 9/14/2010 10:25:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	***************************************		n persit (riggiet list dem 2000), color i lista (rich de 1000), como en 1000 (1000).		Analyst: NSB
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/17/2010 4:23:00 PM
Benzene	ND	0.050	mg/Kg	1	9/17/2010 4:23:00 PM
Toluene	ND	0.050	mg/Kg	1	9/17/2010 4:23:00 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/17/2010 4:23:00 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/17/2010 4:23:00 PM
Surr: 4-Bromofluorobenzene	113	88.9-151	%REC	1	9/17/2010 4:23:00 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	ND	20	mg/Kg	1	9/20/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits J
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 5 of 10

Date: 07-Oct-10

CLIENT:

Lab ID:

Western Refining Southwest, Gallup

Lab Order:

1009667

1009667-06

Client Sample ID: API-Composite

Collection Date: 9/14/2010 11:00:00 AM

Project: API Overflow Sample Points Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8021B: VOLATILES	**************************************			CHAPTER STATE COMMENTS OF THE COMMENTS	Analyst: NS B
Methyl tert-butyl ether (MTBE)	ND	0.10	mg/Kg	1	9/20/2010 3:09:23 PM
Benzene	ND	0.050	mg/Kg	1	9/20/2010 3:09:23 PM
Toluene	ND	0.050	mg/Kg	1	9/20/2010 3:09:23 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 3:09:23 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/20/2010 3:09:23 PM
Surr: 4-Bromofluorobenzene	120	88.9-151	%REC	1	9/20/2010 3:09:23 PM
EPA METHOD 300.0: ANIONS					Analyst: SRM
Fluoride	10	1.5	mg/Kg	5	9/23/2010 8:46:26 PM
Chloride	41	7.5	mg/Kg	5	9/23/2010 8:46:26 PM
EPA METHOD 7471: MERCURY					Analyst: RAGS
Mercury	0.059	0.033	mg/Kg	1	9/24/2010 2:55:39 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	50	mg/Kg	20	9/28/2010 12:01:22 PM
Barium	700	2.0	mg/Kg	20	9/28/2010 12:01:22 PM
Cadmium	ND	0.10	mg/Kg	1	9/21/2010 6:15:56 PM
Chromium	8.3	0.30	mg/Kg	1	9/21/2010 6:15:56 PM
Lead	1.3	0.25	rng/Kg	1	9/21/2010 6:15:56 PM
Selenium	ND	13	mg/Kg	5	9/21/2010 6:19:50 PM
Silver	ND	0.25	mg/Kg	1	9/21/2010 6:15:56 PM
EPA METHOD 8270C: SEMIVOLATILES					Analyst: MAW
Acenaphthene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Acenaphthylene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Aniline	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Anthracene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Azobenzene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Benz(a)anthracene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Benzo(a)pyrene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Benzo(b)fluoranthene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Benzo(g,h,i)perylene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Benzo(k)fluoranthene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Benzoic acid	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
Benzyl alcohol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Bis(2-ethylhexyl)phthalate	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
4-Bromophenyl phenyl ether	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- В Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

Page 6 of 10

Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009667

API Overflow Sample Points

Project: Lab ID:

1009667-06

Client Sample ID: API-Composite

Collection Date: 9/14/2010 11:00:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES		The Barreys Price of the Artist Control		and the second s	Analyst: MAW
Butyl benzyl phthalate	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Carbazole	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
4-Chloro-3-methylphenol	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
4-Chloroaniline	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
2-Chloronaphthalene	ND	0.50	mg/Kg	1	9/28/2010 3:56:14 PM
2-Chlorophenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
4-Chlorophenyl phenyl ether	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Chrysene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Di-n-butyl phthalate	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
Di-n-octyl phthalate	ND	0.50	mg/Kg	1	9/28/2010 3:56:14 PM
Dibenz(a,h)anthracene	ND	0.40	mg/ Kg	1	9/28/2010 3:56:14 PM
Dibenzofuran	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
1,2-Dichlorobenzene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
1,3-Dichlorobenzene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
1,4-Dichlorobenzene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
3,3'-Dichlorobenzidine	ND	0.50	mg/Kg	1	9/28/2010 3:56:14 PM
Diethyl phthalate	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Dimethyl phthalate	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
2,4-Dichlorophenol	ND	0.80	mg/Kg	1	9/28/2010 3:56:14 PM
2,4-Dimethylphenol	ND	0.60	mg/Kg	1	9/28/2010 3:56:14 PM
4,6-Dinitro-2-methylphenol	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
2,4-Dinitrophenol	ΝD	0.80	mg/Kg	1	9/28/2010 3:56:14 PM
2,4-Dinitrotoluene	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
2,6-Dinitrotoluene	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
Fluoranthene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Fluorene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Hexachlorobenzene	ND	0.40	mg/Kg	1	. 9/28/2010 3:56:14 PM
Hexachlorobutadiene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Hexachlorocyclopentadiene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Hexachloroethane	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Indeno(1,2,3-cd)pyrene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Isophorone	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
2-Methylnaphthalene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
2-Methylphenol	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
3+4-Methylphenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
N-Nitrosodiphenylamine	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Naphthalene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
2-Nitroaniline	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
3-Nitroaniline	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
4-Nitroaniline	ND	0.80	mg/Kg	1	9/28/2010 3:56:14 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
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- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009667

API Overflow Sample Points

Project: Lab ID:

1009667-06

Client Sample ID: API-Composite

Collection Date: 9/14/2010 11:00:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES)				Analyst: MAV
Nitrobenzene	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
2-Nitrophenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
4-Nitrophenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Pentachlorophenol	ND	0.80	mg/Kg	1	9/28/2010 3:56:14 PM
Phenanthrene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Phenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Pyrene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Pyridine	ND	1.0	mg/Kg	1	9/28/2010 3:56:14 PM
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
2,4,5-Trichlorophenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
2,4,6-Trichlorophenol	ND	0.40	mg/Kg	1	9/28/2010 3:56:14 PM
Surr: 2,4,6-Tribromophenol	49.7	28.4-132	%REC	1	9/28/2010 3:56:14 PM
Surr: 2-Fluorobiphenyl	52.5	37.4-123	%REC	1	9/28/2010 3:56:14 PM
Surr: 2-Fluorophenol	51.8	28.6-110	%REC	1	9/28/2010 3:56:14 PM
Surr: 4-Terphenyl-d14	49.9	29.2-111	%REC	1	9/28/2010 3:56:14 PM
Surr: Nitrobenzene-d5	51.2	33.8-126	%REC	1	9/28/2010 3:56:14 PM
Surr: Phenol-d5	53.4	35.3-110	%REC	1	9/28/2010 3:56:14 PM
EPA METHOD 8260B: VOLATILES					Analyst: MMS
Benzene	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Toluene	ND .	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Ethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Naphthalene	ND	0.10	mg/Kg	1	9/20/2010 9:53:31 PM
1-Methylnaphthalene	ND	0.20	mg/Kg	1	9/20/2010 9:53:31 PM
2-Methylnaphthalene	ND	0.20	mg/Kg	1	9/20/2010 9:53:31 PM
Acetone	ND	0.75	mg/Kg	1	9/20/2010 9:53:31 PM
Bromobenzene	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Bromodichloromethane	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Bromoform	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Bromomethane	ND	0.10	mg/Kg	1	9/20/2010 9:53:31 PM
2-Butanone	ND	0.50	mg/Kg	1	9/20/2010 9:53:31 PM
Carbon disulfide	ND	0.50	mg/Kg	1	9/20/2010 9:53:31 PM
Carbon tetrachloride	ND	0.10	mg/Kg	1	9/20/2010 9:53:31 PM
Chlorobenzene	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Chloroethane	ND	0.10	mg/Kg	1	9/20/2010 9:53:31 PM
Chloroform	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits

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Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009667

API Overflow Sample Points

Project: Lab ID:

1009667-06

Client Sample ID: API-Composite

Collection Date: 9/14/2010 11:00:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PA METHOD 8260B: VOLATILES	en artika en en en en en en en en en en en en en				CONTRACTOR STORMS AND AND AND AND AND AND AND AND AND AND	Analyst: MM
Chloromethane	0.14	0.050	В	mg/Kg	1	9/20/2010 9:53:31 PM
2-Chlorotoluene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
4-Chlorotoluene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
cis-1,2-DCE	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
Dibromochloromethane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
Dibromomethane	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
Dichlorodifluoromethane	ND	0.050		mg/ K g	1	9/20/2010 9:53:31 PM
1,1-Dichloroethane	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
1,1-Dichloroethene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,2-Dichloropropane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,3-Dichloropropane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
2,2-Dichloropropane	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
1,1-Dichloropropene	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
Hexachlorobutadiene	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
2-Hexanone	ND	0.50		mg/Kg	1	9/20/2010 9:53:31 PM
Isopropylbenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
4-Isopropyltoluene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	9/20/2010 9:53:31 PM
Methylene chloride	ND	0.15		mg/Kg	1	9/20/2010 9:53:31 PM
n-Butylbenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
n-Propylbenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
sec-Butylbenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
Styrene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
tert-Butylbenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
trans-1,2-DCE	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
Trichlorofluoromethane	ND	0.050		mg/Kg	1	9/20/2010 9:53:31 PM
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	9/20/2010 9:53:31 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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Date: 07-Oct-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1009667

API Overflow Sample Points

Project: Lab ID:

1009667-06

Client Sample ID: API-Composite

Collection Date: 9/14/2010 11:00:00 AM

Date Received: 9/15/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES				- con in the second of the	Analyst: MMS
Vinyl chloride	ND	0.050	mg/Kg	1	9/20/2010 9:53:31 PM
Xylenes, Total	ND	0.10	mg/Kg	1	9/20/2010 9:53:31 PM
Surr: 1,2-Dichloroethane-d4	78.4	60.1-112	%REC	1	9/20/2010 9:53:31 PM
Surr: 4-Bromofluorobenzene	79.5	79.4-113	%REC	1	9/20/2010 9:53:31 PM
Surr: Dibromofluoromethane	89.2	70.2-111	%REC	1	9/20/2010 9:53:31 PM
Surr: Toluene-d8	96.5	78.4-110	%REC	1	9/20/2010 9:53:31 PM
EPA METHOD 418.1: TPH					Analyst: JB
Petroleum Hydrocarbons, TR	300	20	mg/Kg	1	9/20/2010

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NC Non-Chlorinated
- PQL Practical Quantitation Limit

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

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LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

1009667

Lab ID:

B10091522-001

Client Sample ID 1009667-06C, API-Composite

Report Date: 09/23/10

Collection Date: 09/14/10 11:00

DateReceived: 09/16/10

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ GCL	Method	Analysis Date / By
IGNITABILITY Flash Point (Ignitability)	>200	٥F		30		SW1010M	09/23/10 08:19 / mgs
CORROSIVITY pH of Soil and Waste	8.27	s.u.		0.10		SW9045D	09/22/10 14:30 / jh
REACTIVITY Cyanide, Reactive Sulfide, Reactive	ND 20	mg/kg mg/kg		0.05 20	250 500	SW846 Ch 7 SW846 Ch 7	09/22/10 12:47 / kjp 09/21/10 13:30 / jh

Report Definitions: RL - Analyte reporting limit. QCL - Quality control limit.

MCL - Maximum contaminant level.



Helena, MT. 877-472-0711 → Billings, MT. 800-735-4489 ← Casper, WY 888-235-0515 ← Gillette, WY 826-888-7175 → Repid City, SD 888-672-1225 ← College Station, TX 888-690-2218

QA/QC Summary Report

Client: Hall Environmental

Report Date: 09/23/10

Project: 1009667

Work Order: B10091522

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW1010M					,				Batch	: R154318
Sample ID: LCS-R154318	Lab	oratory Con	trol Sample			Run: PENSI	KY MARTEN CI	OSED C	09/23	3/10 08:19
Flash Point (Ignitability)		90.0	of:	30	100	98	102			
Sample ID: LCS-R154318	Lab	oratory Con	trol Sample Duplicate			Run: PENSI	KY MARTEN CI	LOSED C	09/23	3/10 08:19
Flash Point (Ignitability)		90.0	°F	30	100	98	102	0	10	

Qualifiers:

RL - Analyte reporting limit.



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QA/QC Summary Report

Client: Hall Environmental

Project: 1009667

Report Date: 09/23/10

Work Order: B10091522

Analyte	Count Result	Units	AL	%REC Low I	lmit High Limit	RPD	RPDLimit	Qual
Method: SW846 Ch 7							Ba	tch: 4918
Sample ID: MB-49186	Method Blank			Run: A	UTOAN201-B_1009	22A	09/22	2/10 12:51
Cyanide, Reactive	ND	mg/kg	0.05					
Method: SW846 Ch 7					**************************************	rigiti aliante e Pallicana de la como	Batch	: R15419
Sample ID: MB-R154194	Method Blank			Run: N	MISC-HZW_1009210		09/21	/10 13:30
Sulfide, Reactive	ND	mg/kg	10					
Sample ID: LCS-R154194	Laboratory Cor	ntrol Sample	•	Run: N	MISC-HZW_100921C		09/21	/10 13:30
Sulfide, Reactive	38	mg/kg	20	140	50 150			

Qualifiers:

RL - Analyte reporting limit.

QA/QC Summary Report

Ctient: Hall Environmental

Report Date: 09/23/10

Project: 1009667

Work Order: B10091522

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW9045D				······································			Analytica	I Run: BA	L-P0108175	_100922E
Sample ID: ICV	Initi	ial Calibration	n Verification S	Standard					09/22	2/10 14:30
pH of Soil and Waste		3.97	s.u.	0.10	99	98	102			
Method: SW9045D								·	Batch	: R154291
Sample ID: B10091522-001ADUP	Sar	mple Duplica	te			Run: BAL-P	0108175_10092	2B	09/22	2/10 14:30
pH of Soil and Waste		8.44	s.u.	0.10				2	10	

Qualifiers:

RL - Analyte reporting limit.

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1009667

Analyte	Result	Units	PQL	SPK Va	I SPK ref	%Rec L	owLìmit Hig	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 300.0:	Anions										
Sample ID: LCS-23838		LCS				Batch ID:	23836	Analys	is Date:	9/21/2010	2:22:27 AN
Fluoride	1.418	mg/Kg	0.30	1.5	0	94.6	90	110			
Chloride	13.94	mg/Kg	1.5	15	0	92.9	90	110			
Method: EPA Method 418.1:	ТРН										
Sample ID: MB-23800		MBLK				Batch ID:	23800	Analys	is Date:		9/20/2010
Petroleum Hydrocarbons, TR	ND	mg/Kg	20								
Sample ID: LCS-23800		LCS				Batch ID:	23800	Analys	is Date:		9/20/2010
Petroleum Hydrocarbons, TR	97.10	mg/Kg	20	100	0	97.1	86.8	116			
Sample ID: LCSD-23800		LCSD				Batch ID:	23800		is Date:		9/20/2010
Petroleum Hydrocarbons, TR	101.4	mg/Kg	20	100	0	101	86.8	116	4.31	16.2	
Method: EPA Method 8021B:	Valatilan										
Sample ID: MB-23783	voiatiles	MBLK				Batch ID:	23783	Analys	sis Date:	9/17/2010	8:57:20 PN
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.10			00,011,10.	20.00	,a.y.	no Bato.	0,1,7,2010	0.01.2011
Benzene	· ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Xylenes, Total	ND	mg/Kg	0.10								
Sample ID: LCS-23783	110	LCS	0.10			Batch ID:	23783	Analys	is Date:	9/17/2010	8:25:32 PN
Methyl tert-butyl ether (MTBE)	1.339	mg/Kg	0.10	1	0	134	65.5	229			
Benzene	0.9632	mg/Kg	0.050	1		94.7	83.3	107			
Toluene	0.8771	mg/Kg	0.050	1	0.0107	87.7	74.3	115			
Ethylbenzene	0.9372	mg/Kg	0.050	1	0.0119	92.5	80.9	122			
Xylenes, Total	2.863	mg/Kg	0.10	3	0	95.4	85.2	123			
Method: EPA Method 8260B:	VOLATILES	· · · · · · · · · · · · · · · · · · ·									
Sample ID: Ics-23783	VOLATILLO	LCS				Batch ID:	23783	Analys	sis Date:	9/17/2010	8:27:17 PN
Benzene	0.9243	mg/Kg	0.050	1	0	92.4	80.7	112			
Toluene	1.071	mg/Kg	0.050	1	0	107	86.1	126			
Chlorobenzene	1.065	mg/Kg	0.050	1	0	106	87.7	120			
1,1-Dichloroethene	1.078	mg/Kg	0.050	1	0	108	77.9	133			
Trichloroethene (TCE)	0.8552	mg/Kg	0.050	1	0	85.5	74.6	120			
Sample ID: lcsd-23783		LCSD				Batch ID:	23783	Analys	sis Date:	9/17/2010	8:55:37 PA
Benzene	0.9296	mg/Kg	0.050	1	0	93.0	80.7	112	0.575	20	
Toluene	1.042	mg/Kg	0.050	1	0	104	86.1	126	2.68	20	
Chlorobenzene	1.031	mg/Kg	0.050	1	0	103	87.7	120	3.17	20	
1,1-Dichloroethene	1.060	mg/Kg	0.050	1	0	106	77.9	133	1.65	20	
Trichloroethene (TCE)	0.8341	mg/Kg	0.050	1	0	83.4	74.6	120	2.50	20	

Qual	ifiers:

E Estimated value

Page 1

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Client:

Western Refining Southwest, Gallup

Project: API Overflow Sample Points

Work Order:

1009667

Analyte	Result	Units	PQL	SPK Val SPK ref	%Rec Lo	wLimit Hig	hLimit	%RPD	RPDLimit	Qual
Method: EPA Method 82700	: Semivolatiles									
Sample ID: mb-23910		MBLK			Batch ID:	23910	Analys	is Date:	9/28/2010	2:54:09 Pf
Acenaphthene	ND	mg/Kg	0.20							
Acenaphthylene	ND	mg/Kg	0.20							
Aniline	ND	mg/Kg	0.20							
Anthracene	ND	mg/Kg	0.20							
Azobenzene	ND	mg/Kg	0.20							
Benz(a)anthracene	ND	mg/Kg	0.20							
Benzo(a)pyrene	ND	mg/Kg	0.20							
Benzo(b)fluoranthene	ND	mg/Kg	0.20							
Benzo(g,h,i)perylene	ND	mg/Kg	0.20							
Benzo(k)fluoranthene	ND	mg/Kg	0.20							
Benzoic acid	ND	mg/Kg	0.50							
Benzyl alcohol	ND	mg/ K g	0.20							
Bis(2-chloroethoxy)methane	ND	mg/Kg	0.20							
Bis(2-chloroethyl)ether	ND	mg/Kg	0.20							
Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.20							
Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.50							
4-Bromophenyl phenyl ether	ND	mg/Kg	0.20							
Butyl benzyl phthalate	ND	mg/Kg	0.20							
Carbazole	ND	mg/Kg	0.20							
4-Chloro-3-methylphenol	ND	mg/Kg	0.50							
4-Chloroaniline	ND	mg/Kg	0.50							
2-Chloronaphthalene	ND	mg/Kg	0.25							
2-Chlorophenol	ND	mg/Kg	0.20							
4-Chlorophenyl phenyl ether	ND	mg/Kg	0.20							
Chrysene	ND	mg/Kg	0.20							
Di-n-butyl phthalate	ND	mg/Kg	0.50							
Di-n-octyl phthalate	ND	mg/Kg	0.25							
Dibenz(a,h)anthracene	ND	mg/Kg	0.20							
Dibenzofuran	ND	mg/Kg	0.20							
1,2-Dichlorobenzene	ND	mg/Kg	0.20							
1,3-Dichlorobenzene	ND	mg/Kg	0.20							
1,4-Dichlorobenzene	ND	mg/Kg	0.20							
3,3'-Dichlorobenzidine	ND	mg/Kg	0.25							
Diethyl phthalate	ND	mg/Kg	0.20							
Dimethyl phthalate	ND	mg/Kg	0.20							
2,4-Dichlorophenol	ND	mg/Kg	0.40							
2,4-Dimethylphenol	ND	mg/Kg	0.30							
4,6-Dinitro-2-methylphenol	ND	mg/Kg	0.50							
2,4-Dinitrophenol	ND	mg/Kg	0.40							
2,4-Dinitrotoluene	ND	mg/Kg	0.50							
2,6-Dinitrotoluene	ND	mg/Kg	0.50							
Fluoranthene	ND	mg/Kg	0.20							
Fluorene	ND	mg/Kg	0.20							
Hexachlorobenzene	ND	mg/Kg	0.20							

Qualifiers:

R RPD outside accepted recovery limits

Page 2

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1009667

Analyte	Result	Units	PQL	SPK Va	al SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8270C:	Semivolatiles					<u> </u>					
Sample ID: mb-23910		MBLK				Batch ID:	23910	Analys	is Date:	9/28/2010	2:54:09 PN
Hexachlorobutadiene	ND	mg/Kg	0.20								
Hexachlorocyclopentadiene	ND	mg/Kg	0.20								
Hexachloroethane	ND	mg/Kg	0.20								
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.20								
Isophorone	ND	mg/Kg	0.50								
2-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylphenol	ND	mg/Kg	0.50				•				
3+4-Methylphenol	ND	mg/Kg	0.20			•					
N-Nitrosodi-n-propylamine	ND	mg/Kg	0.20								
N-Nitrosodiphenylamine	ND	mg/Kg	0.20								
Naphthalene	ND	mg/Kg	0.20								
2-Nitroaniline	ND	mg/Kg	0.20								
3-Nitroaniline	ND	mg/Kg	0.20								
4-Nitroaniline	ND	mg/Kg	0.40								
Nitrobenzene	ND	mg/Kg	0.50								
2-Nitrophenol	ND	mg/Kg	0.20								
4-Nitrophenol	ND	mg/Kg	0.20								
Pentachlorophenol	ND	mg/Kg	0.40								
Phenanthrene	ND	mg/Kg	0.20								
Phenol	ND	mg/Kg	0.20								
Pyrene	ND	mg/Kg	0.20								
^o yridine	ND	mg/Kg	0.50								
1,2,4-Trichlorobenzene	ND	mg/Kg	0.20								
2,4,5-Trichlorophenol	ND	mg/Kg	0.20								
2,4,6-Trichlorophenol	ND	mg/Kg	0.20								
Sample ID: lcs-23910		LCS				Batch ID:	23910	Analysi	s Date:	9/28/2010	3:25:08 PN
Acenaphthene	1.193	mg/Kg	0.20	1.67	0	71.5	39.4	101			
4-Chioro-3-methylphenol	2.401	mg/Kg	0.50	3.33	0	72.1	40.1	96.6			
2-Chlorophenol	2,472	mg/Kg	0.20	3.33	0	74.2	32.2	94.6			
1,4-Dichlorobenzene	1,204	mg/Kg	0.20	1.67	0	72.1	32.2	96.7			
2,4-Dinitrotoluene	1.617	mg/Kg	0.50	1.67	0	96.8	39.4	111			
N-Nitrosodi-n-propylamine	1.071	mg/Kg	0.20	1.67	0	64.2	41.1	89.8			
4-Nitrophenol	2.796	mg/Kg	0.20	3.33	0	84.0	18.1	122			
Pentachlorophenol	1.945	mg/Kg	0.40		0.0447	57.1	37.5	98.8			
Phenol	2.367	mg/Kg	0.20	3.33	0	71.1	29	96			
Pyrane	1.062	mg/Kg	0.20	1.67	0	63.6	37.7	94.4			
1,2,4-Trichlorobenzene	1.147	mg/Kg	0.20	1.67	0	68.7	35.6	101			
Method: EPA Method 7471: N	lercury										
Sample ID: MB-23885		MBLK				Batch ID:	23885	Analysi	s Date:	9/24/2010	2:40:33 PM
Mercury	ND	mg/Kg	0.033								
Sample ID: LCS-23885		LCS				Batch ID:	23885	Analysi	s Date;	9/24/2010	2:42:21 PM
Mercury	0.1721	mg/Kg	0.033	0.167	0	103	80	120			

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

R RPD outside accepted recovery limits

Client:

Western Refining Southwest, Gallup

Project: API Overflow Sample Points

Work Order:

1009667

Analyte	Result	Units	PQL	SPK Val	SPK ref	%Rec LowLimit HighLimit			%RPD	RPDLimit Qual
Method: EPA Method 6010	B: Soil Metals									
Sample ID: MB-23828		MBLK				Batch ID:	23828	Analysi	s Date:	9/21/2010 3:55:21 PM
Arsenic	ND	mg/Kg	2.5							
Barium	ND	mg/Kg	0.10						,	
Cadmium	ND	mg/Kg	0.10							
Chromium	ND	mg/Kg	0.30							
Lead	ND	mg/Kg	0.25							
Selenium	ND	mg/Kg	2.5							
Silver	ND	mg/Kg	0.25							
Sample ID: LCS-23828		LCS				Batch ID:	23828	Analysi	s Date:	9/21/2010 3:58:12 PM
Arsenic	25.04	mg/Kg	2.5	25	0	100	80	120		
Barium	24.16	mg/Kg	0.10	25	0	96.6	80	120		
Cadmium	24.65	mg/Kg	0.10	25	0	98.6	80	120		
Chromium	24.79	mg/Kg	0.30	25	0	99.2	80	120		
Lead	24.76	mg/Kg	0.25	25	0	99.1	80	120		
Selenium	23.59	mg/Kg	2.5	25 (0.6209	91.9	80	120		
Silver	25.01	mg/Kg	0.25	25	0	100	80	120		

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1 3	ua	11	71	•	75	٠.

E Estimated value

R RPD outside accepted recovery limits

Page 4

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

H Holding times for preparation or analysis exceeded

NC Non-Chlorinated

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU	Date Received) :	9/15/2010								
Work Order Number 1009667			Received by:	TLS .	e.						
Checklist completed by:		Q 15	Sample ID la	bels checked by:	Initials						
Matrix:	Carrier name	FedEx									
Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present	·						
Custody seals intact on shipping container/coole	er?	Yes 🗸	No 🗌	Not Present	Not Shipped						
Custody seals intact on sample bottles?		Yes 🗹	No 🗌	N/A]						
Chain of custody present?		Yes 🗹	No 🗌								
Chain of custody signed when relinquished and	received?	Yes 🗹	No 🗌	•							
Chain of custody agrees with sample labels?		Yes 🗹	No 🗌								
Samples in proper container/bottle?		Yes 🗹	No 🗌								
Sample containers intact?		Yes 🗹	No 🗌								
Sufficient sample volume for indicated test?	-	Yes 🗹	No 🗌								
All samples received within holding time?		Yes 🗹	No 🗌	•	Number of preserved bottles checked for						
Water - VOA vials have zero headspace?	No VOA vials sub	mitted 🗹	Yes	No 🗌	pH:						
Water - Preservation labels on bottle and cap m	atch?	Yes 🗌	No 🗌	N/A 🗹							
Water - pH acceptable upon receipt?		Yes 🗌	No 🗌	N/A <table-cell></table-cell>	<2 >12 unless noted below.						
Container/Temp Blank temperature?		3.9°	<6° C Acceptable		2010.						
COMMENTS:			If given sufficient	time to cool.							
			<u> </u>	= == == =							
Client contacted	Date contacted:		Person contacted								
Contacted by:	Regarding:										
Comments:											
Corrective Action											

H. W. and the C. W. and H. W. D. W. W. W. W. A. H. J. J. J. J. W. W. W. W. W. D. W.	ANALYSIS LABORATORY	www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109		Analysis Request	*(*(os"	'0d	8085 (1)	.81 -1A9 ::	4 both both both both both both both both	EDB (Metho 8310 (PNA o RCRA 8 Me Anions (F,Cl 8081 Pestici 8260B (VOA 8270 (Semi-		×	×	×	×	X X X X			
			4901	Tel. 5		(λ ι	s or	_ස ට)	Hd.	<u> </u>	38	BTEX + MTI BTEX + MTI DOMETHOO	×	×	×	×	×	×		Remarks:	
le:	□ Rush	rFlow	Points					LBrsen	u Dorsey		ature. 18.1	Preservative HEAL No Type NO GILD 77	₩/~	W/M	N/A 3	1/2 U	N/n S	3		Date Time Date Time	Date Time
Turn-Around Time:	X Standard	Project Name:	Sample	Project #:		Project Manager:		Thurman LARSEN	Sampler: Alviu	On Ice: ⊹ ttt/yes	Sample Temperature:	Container Pr. Type and #	802-1					8 02-4		Received by:	Received by:
Chain-of-Custody Record	Client: WESTELD - Re RIDIUG	wery.	0,	Gollyn NM 87301	Phone #: 505 727 3833	722 0210	QAQC Package:	☐ Standard ☐ Level 4 (Full Validation)	uo	□ Other	☐ EDD (Type)	Date Time Matrix Sample Request ID.*	09-140 1100 501 CHU-C-10	Squard 1120 501 CHN -C-11	71-M-1000 SOIL NBT-W-12	- NBT - N-13	50K NBT- F-14	OF HAND 100 SOIL API- COMPOSTIG		Date: Time: Relinquished by: 6-1440 12:00 (1.6.1)	Relinquished by:

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Thursday, October 28, 2010 4:05 PM

To: 'Larsen, Thurman'

Cc: Van Horn, Kristen, NMENV; Riege, Ed; VonGonten, Glenn, EMNRD

Subject: RE: Gallup Refinery (GW-032)- Re: Tank 116 Ultra-Low sulfur Diesel; Release and Air Quality

Approval for Corrective Action (Letter of October 14, 2010) using a Passive Bioremediation

(Ventilation) System

Beck:

Good afternoon. I discussed the schedule for implementation of the above subject corrective action with the NMED. The corrective action is taken due to the infrastructure present in the area of the original release(s).

The agencies have the following comments and/or requirements:

- 1) The placement of pipe 2 ft. below ground seems to position the vent pipe in the former excavation backfill. A deeper depth into the contaminated soils to facilitate more efficient venting is needed. Based on this, the agencies request the most efficient depth from Western and will there be peastone backfilled around the pipe?
- 2) A diagram(s) to scale with the pipe design and construction layout is requested to assess the actual aerial extent of the passive vent system and orientation of piping. Will there be vertical and radial and horizontal orientation of pipes from vertical?
- 3) At least 72 hr. notification when construction work and/or FID monitoring is performed.
- 4) A report submitted within 30 days of construction and/or activation of the system which should contain a brief summary of work with photos of the installation and field analytical FID monitoring results should be included for the baseline and rationale for establishment of contamination levels with table of monitoring data and rationale for derivation. The agencies would expect concentrations to increase during the warmer summer months.
- 5) The agencies request a summary of how the FID monitoring will be conducted. I believe you provided the model, but we need to make sure there will be QA/QC with calibration documentation before monitoring, where exactly the sample will be taken and how? Will there also be ambient downwind monitoring close to ground level with a description of weather conditions (10 mph winds toward the SE and temperature during each sample events?
- 6) Once the contamination level is established from the initial installation report, monitoring will need to occur, especially in the warm season months to help document the success of the passive vent system. The agencies are not comfortable with the language provided in the e-mail about monitoring to some point. Western will need to describe in the report a proposed end of monitoring or verification of remediation, i.e., monthly monitoring during the summer months that confirm FID concentrations have diminished to an acceptable level. Perhaps Western at the appropriate time it feels remediation is complete, may submit the data with concentration charts supporting a request to stop monitoring. Also, the monitoring results should be submitted to the agencies with a chart within 30 days of monitoring. This can be done via e-mail. The agencies should be notified when monitoring will be performed in order to witness the monitoring with the FID, etc. and the agencies may upon site inspection or request for suspension of monitoring visit the corrective action area in the summer months to witness Western's determination.

The agencies will expect to receive notification of install the system within the next 30 days or by 11/25/2010. A report within 30 days of install or by 12/23/2010 with documentation as described above. Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Tuesday, October 26, 2010 4:08 PM

To: Chavez, Carl J, EMNRD

Cc: Van Horn, Kristen, NMENV; Riege, Ed

Subject: Gallup Refinery (GW-032)- Re: Tank 116 Ultra-Low sulfur Diesel; Release and Air Quality Approval for

Corrective Action (Letter of October 14, 2010) using a Passive Bioremediation (Ventilation). System

Dear Mr. Chavez,

Installation:

As per your e-mail and the recently approved NSR Permit # (0633-M8-R3, A214 A.), Western Refining (Gallup) will proceed with installation of the Passive Bioremediation (Ventilation) System for Tank 116 area is estimated to be within the next thirty to forty-five days. This should allow enough time for the fabrication and installation of the ventilation network There will be approximately 10 to 15 ventilation or perforated pipes that will be installed at 6 to 8 ft centers. The exact quantity of perforated pipe will vary depending on the extent of the contaminated area (1000 sq ft) as required. These pipes will be inserted to a depth of approximately one to two feet.

Fabrication:

The pipe will be as specified and manufactured as follows: Piping: ID: 2 inch X 2 ft long, Holes: 24 holes drilled at 90 apart with 2 inch spacing between rows.

Monitoring and Recordkeeping Requirements:

The NSR Permit No (0633-M8-R3, Section A.214 A. 3) specifies the monitoring requirements for passive bioremediation system at any ULSD spill sites. An estimate of the quantity of VOC and HAP compounds will be reported on an annual basis. Records shall be maintained for each petroleum liquid spilled. Such records will include date, time, and quantity of any unrecovered liquids. Analysis will be performed initially to determine the presence of benzene. Records shall be maintained for each ULSD Passive Network installed. Vapor monitoring will be conducted by an outside contractor (EMS) that will be using a vapor detection instrument (TVA-1000B), a flame ionization detector (FID). It is expected that microbial activity will reduce the VOC concentration over time. Monitoring of these standpipes will initially be conducted upon installation of these ventilation pipes in order to establish a monitoring baseline. Upon establishing a baseline, VOC monitoring will first be conducted on a quarterly schedule for several quarters. Western will then modify the monitoring schedule in order to monitory VOC concentrations on a semi-annual timeframe.

If you should have any questions concerning this matter, please feel free to contact me at the number listed below or Mr. Ed Riege at (505) 722-0217.

Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210 Cell: (505) 862-1749

Email: thurman.larsen@wnr.com

Safety starts with "S", but always begins with YOU"!

Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, October 14, 2010 6:12 AM Smith, Coleman, NMENV; 'Riege, Ed'

To: Cc:

Van Horn, Kristen, NMENV

Subject:

Gallup Refinery (GW-032) RE: Tank 116 Ultra-Low Sulfur Diesel Release & Air Quality

Approval for Corrective Action

Cole:

Good news if benzene doesn't become an issue.

By receipt of this e-mail, OCD and NMED- HWB can expect Western to move forward with corrective action.

Ed Riege, if you could please provide the agencies with a schedule for implementation of your corrective action by COB October 22, 2010.

Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From: Smith, Coleman, NMENV

Sent: Wednesday, October 13, 2010 4:59 PM **To:** Chavez, Carl J, EMNRD; 'Riege, Ed'

Cc: Van Horn, Kristen, NMENV

Subject: RE: Tank 116 Ultra-Low Sulfur Diesel Release & Air Quality Approval for Corrective Action

Carl.

The air quality permit NSR 0633M8R3 with Condition A214.A allowing passive bioremediation was issued on 10/6, and became effective today, 10/13 with Western's payment of the permit fee invoice. I believe the issue is considered closed on our end. Let me know if you have any questions – the permit allows passive bioremediation system(s) to be installed at any location of a ULSD on-site spill, as long as the benzene content is known or tested to be non-detect.

Thanks for reminding me to update you!

Cole

Coleman A. Smith, Ph.D.
Permit Specialist, Major Source Unit
Air Quality Bureau
New Mexico Environment Department
1301 Siler Road, Bldg. B
Santa Fe, NM 87507
voice: (505) 476-5550
fax: (505) 476-4375
AQB main: (505) 476-4300



From: Chavez, Carl J, EMNRD

Sent: Wednesday, October 13, 2010 4:53 PM

To: Riege, Ed

Cc: Van Horn, Kristen, NMENV; Smith, Coleman, NMENV

Subject: Tank 116 Ultra-Low Sulfur Diesel Release & Air Quality Approval for Corrective Action

Ed:

Do you know the status of the NMED- AQB on Western's proposed corrective action. The agencies want to make sure we can proceed or if not, Western needs to propose an alternative investigation with corrective action.

Thanks.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505 Office: (505) 476-3490

Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

Chavez, Carl J, EMNRD

From:

Smith, Coleman, NMENV

Sent:

Thursday, September 23, 2010 9:00 AM

To:

Chavez, Carl J, EMNRD; 'Riege, Ed'

Cc:

'Jason Swofford'; Van Horn, Kristen, NMENV; 'Larsen, Thurman'; VonGonten, Glenn,

EMNRD; Cobrain, Dave, NMENV

Subject:

RE: Gallup Admin Rev No. 0633M8R1

Carl.

The passive bioremediation activity will be incorporated into Gallup's NSR permit 0633-M8-R3 that must be issued on or before October 13, 2010. When this permit is issued, the activity will be approved. I will inform you of the issue date – should be within the next 2 weeks.

Cole

Coleman A. Smith, Ph.D.
Permit Specialist, Major Source Unit
Air Quality Bureau
New Mexico Environment Department
1301 Siler Road, Bldg. B
Santa Fe, NM 87507
voice: (505) 476-5550
fax: (505) 476-4375
AQB main: (505) 476-4300



Please consider the environment before printing this e-mail.

From: Chavez, Carl J, EMNRD

Sent: Thursday, September 23, 2010 8:55 AM **To:** Smith, Coleman, NMENV; 'Riege, Ed'

Cc: 'Jason Swofford'; Van Horn, Kristen, NMENV; 'Larsen, Thurman'; VonGonten, Glenn, EMNRD; Cobrain, Dave, NMENV

Subject: RE: Gallup Admin Rev No. 0633M8R1

Cole:

Good morning.

Could you please clarify this paragraph in your msg. below: "Therefore, the proposed exemption under 20.2.72.202.B.(2) NMAC has been denied. However, this activity will be incorporated as a regulated activity in the NSR Technical Revision Application No. 0633-M8-R3, received by the Department on September 13, 2010."

Does NSR mean Western can proceed with the passive remediation corrective action as a regulated activity under the NSR Technical Revision Application with the OCD and NMED- Hazardous Waste Bureau?

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm

(Pollution Prevention Guidance is under "Publications")

From: Smith, Coleman, NMENV

Sent: Thursday, September 23, 2010 8:45 AM

To: Riege, Ed

Cc: Jason Swofford; Chavez, Carl J, EMNRD; Van Horn, Kristen, NMENV; 'Larsen, Thurman'; VonGonten, Glenn, EMNRD;

Cobrain, Dave, NMENV

Subject: Gallup Admin Rev No. 0633M8R1

Ed.

The New Mexico Environment Department, Air Quality Bureau, has reviewed your request for Administrative Revision to the Gallup Refinery Air Quality Permit 0633-M8. The Notice of Exemption (Admin) was assigned File No. 0633-M8-R1. Due to the possible applicability to the provisions in the Amended Stipulated (ASFO) Final Order No. AQCA 02-09 dated 1/22/09, Section XIII.G, the passive bioremediation system proposed cannot be considered NSR exempt in a general way as applicable to all future Ultra Low Sulfur Diesel spills. The ASFO requires in Section XIII.G that all spills be evaluated for benzene content, and any detected benzene added to the annual refinery Total Annual Benzene (TAB) limit.

Therefore, the proposed exemption under 20.2.72.202.B.(2) NMAC has been denied. However, this activity will be incorporated as a regulated activity in the NSR Technical Revision Application No. 0633-M8-R3, received by the Department on September 13, 2010.

Attached is a scanned, signed copy of the Administrative Revision Denial letter. The original copy will be sent to you by Certified Mail.

I should have a draft permit 0633M8R3 that incorporates the new wastewater/storm water tank Z84-T35 as well as provisions for the passive bioremediation system ready to send you today or tomorrow.

Thanks.

Cole

<< File: Admin Denial (0633M8R1).pdf >>

Coleman A. Smith, Ph.D.
Permit Specialist, Major Source Unit
Air Quality Bureau
New Mexico Environment Department
1301 Siler Road, Bldg. B
Santa Fe, NM 87507
voice: (505) 476-5550
fax: (505) 476-4375
AQB main: (505) 476-4300



Please consider the environment before printing this e-mail.

Chavez, Carl J, EMNRD

From: Smith, Coleman, NMENV

Sent: Thursday, September 23, 2010 8:45 AM

To: Riege, Ed

Cc: Jason Swofford; Chavez, Carl J, EMNRD; Van Horn, Kristen, NMENV; 'Larsen, Thurman';

VonGonten, Glenn, EMNRD; Cobrain, Dave, NMENV

Subject: Gallup Admin Rev No. 0633M8R1

Ed.

The New Mexico Environment Department, Air Quality Bureau, has reviewed your request for Administrative Revision to the Gallup Refinery Air Quality Permit 0633-M8. The Notice of Exemption (Admin) was assigned File No. 0633-M8-R1. Due to the possible applicability to the provisions in the Amended Stipulated (ASFO) Final Order No. AQCA 02-09 dated 1/22/09, Section XIII.G, the passive bioremediation system proposed cannot be considered NSR exempt in a general way as applicable to all future Ultra Low Sulfur Diesel spills. The ASFO requires in Section XIII.G that all spills be evaluated for benzene content, and any detected benzene added to the annual refinery Total Annual Benzene (TAB) limit.

Therefore, the proposed exemption under 20.2.72.202.B.(2) NMAC has been denied. However, this activity will be incorporated as a regulated activity in the NSR Technical Revision Application No. 0633-M8-R3, received by the Department on September 13, 2010.

Attached is a scanned, signed copy of the Administrative Revision Denial letter. The original copy will be sent to you by Certified Mail.

I should have a draft permit 0633M8R3 that incorporates the new wastewater/storm water tank Z84-T35 as well as provisions for the passive bioremediation system ready to send you today or tomorrow.

Thanks,

Cole



Admin Denial (0633M8R1).pdf

Coleman A. Smith, Ph.D.
Permit Specialist, Major Source Unit
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New Mexico Environment Department
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Santa Fe, NM 87507
voice: (505) 476-5550
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Please consider the environment before printing this e-mail.



BILL RICHARDSON Governor

DIANE DENISH
Lieutenant Governor

New Mexico ENVIRONMENT DEPARTMENT

Air Quality Bureau

1301 Siler Road, Building B Santa Fe, NM 87507-3113 Phone (505) 476-4300 Fax (505) 476-4375

www.nmenv.state.nm.us



SARAH COTTRELL Deputy Secretary

September 23, 2010

CERTIFIED MAIL NO. 7008 0500 0001 1249 0610 RETURN RECEIPT REQUESTED

Ed Riege Environmental Manager Western Refining Southwest Inc - Gallup Refinery Route 3 Box 7 Gallup, NM 87301

Re: Denial of Permit Application for Administrative Revision No. 0633-M8-R1 (TEMPO ID No. 888 - PRN20100002) - Gallup Refinery

Dear Mr. Riege:

This letter is in response to your air quality permit application dated July 22, 2010 to modify the Gallup Refinery located in Gallup, New Mexico. The Department received the application on August 12, 2010.

The Department has completed a review of the application for the proposed project and has determined that Administrative Revision to the permit cannot be issued. The review has determined that the exemption claimed under 20.2.72.202.B.(2) NMAC for passive bioremediation cannot be applied in a general way to all Ultra Low Sulfur Diesel spills at the refinery, due to the possible applicability of provisions in the Amended Stipulated Final Order No. AQCA 02-09, dated 1/22/09, Section XIII.G. Therefore, in accordance with 20.2.72 NMAC, Section 208.A the application for this permit revision is denied. However, this activity will be incorporated into Technical Permit Revision Application No. 0633-M8-R3, received on September 13, 2010.

APPEAL PROCEDURES

20.2.72 NMAC, Section 207, provides that any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a

Western Refining – Gallup Refinery Administrative Revision Application No. 0633M8R1 September 23, 2010 Page 2

petition for hearing before the Environmental Improvement Board. The petition shall be made in writing to the Environmental Improvement Board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered and attach a copy of the permitting action for which review is sought. Unless a timely request for hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to:

Secretary, New Mexico Environmental Improvement Board 1190 St. Francis Drive, Runnels Bldg. Rm N2153 P.O. Box 5469 Santa Fe, New Mexico 87502

If you have any questions, please call me in Santa Fe at 505-476-5550.

Sincerely,

Coleman Smith

Permit Specialist Major Source Unit

Air Quality Bureau

xc via e-mail: Jason Swofford, Trinity Consultants

From:

Riege, Ed [Ed.Riege@wnr.com]

Sent:

Tuesday, September 07, 2010 9:21 AM

To:

Chavez, Carl J, EMNRD

Subject:

RE: Sanitary Effluent Release- Pilot Travel Center

Hi Carl,

The first leak was diesel from an underground line located on Pilot property. The line has been shut down and flushed. The second leak was from a combined potable water and sanitary sewer underground leaks located on Pilot property which were surfacing on Pilot property and then flowing under the access road onto Western property. Not sure what the latest status of that leak is but will check today.

Ed

Ed Riege Environmental Manager

Western Refining Gallup Refinery Route 3 Box 7 Gallup, NM 87301 (505) 722-0217 ed.riege@wnr.com

Safety starts with "S", but always begins with "You"

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Thursday, September 02, 2010 8:10 AM

To: Riege, Ed

Subject: Sanitary Effluent Release- Pilot Travel Center

Ed:

Good morning.

I was contacted by HWB a couple weeks back about a possible gasoline release associated with the sanitary sewer system at the above subject facility. According to HWB, the NMED Petroleum Storage Tank Bureau (PSTB) was responding to a complaint or release on the facility property, which appeared to be gasoline.....? HWB informed OCD that we should wait to hear back from PSTTB on the release before involving Western..... OCD was good with that, but we haven't received any information.

Last Friday, we receive a call from NMED regarding a sanitary line breaking on the above subject facility property. OCD has not been able to confirm whether the above incidents were separate or related. NMED wanted to know if the release was covered by OCD under the GW-032 discharge permit, since as you know a couple of sanitary effluent lines are routed to Westerns AL for treatment and evaporation.

OCD informed NMED on 8/31 that since the release was on the facility property and not the refinery property, it was an NMED jurisdiction matter. Please confirm if there are any extenuating or unknown circumstances that would make the releases mentioned above Western's responsibility. Any other information you could share would be appreciated as OCD just wants to make sure we are communicating. Should have contacted you a couple weeks back.

Thanks.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From:

Deal, Kathie, NMENV

Sent:

Tuesday, August 31, 2010 4:20 PM

To:

Chavez, Carl J, EMNRD; VonGonten, Glenn, EMNRD

Subject:

RE: Pilot Travel Center Release, Gallup NM

Thanks! We will handle the domestic waste spill.

Kathie

From: Chavez, Carl J, EMNRD

Sent: Tuesday, August 31, 2010 3:37 PM

To: Deal, Kathie, NMENV; VonGonten, Glenn, EMNRD **Subject:** RE: Pilot Travel Center Release, Gallup NM

Kathie:

It is in NMED's jurisdiction on the pilot travel center property.

A little confusion, there was an alleged petroleum release at the travel center for which Hope Monzeglio a couple of weeks ago was awaiting NMED- PSTB's response to that incident. Just wondering if it is the same incident? If so, there was gasoline at surface according to Hope and we were going to wait until we heard more about this release.

Similar to PSTB taking the lead on the underground storage tanks on it's property, any sanitary release on their property with their treatment system would be the NMED's jurisdiction in this case. If the release had occurred from the any pipeline on the refinery property, OCD feels that this would fall under OCD jurisdiction in regulating the Waste Water treatment system on the refinery property.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From: Deal, Kathie, NMENV

Sent: Tuesday, August 31, 2010 3:29 PM

To: VonGonten, Glenn, EMNRD **Cc:** Chavez, Carl J, EMNRD

Subject: RE: Pilot Travel Center Release, Gallup NM

Glenn

I've been playing phone tag with your group about Pilot Travel Center. I think it's been decided that the spill originated on the property of the Pilot Travel Center. It is my understanding from talking to Hope (NMED-HWB) that OCD has jurisdiction over the lines sending the domestic wastewater to the refinery. I understand that Pilot Travel Center is the "responsible party", but I am trying to answer the question as to which agency is going to oversee clean-up of the spill? NMED has 20.6.2.1203 NMAC that covers this type of spill, however, we do not want to "muddy the waters" if OCD also has a rule that will handle this. When the call came into the field office, and Pilot was notified, Pilot was very clear that they are regulated by OCD. NMED will oversee spill clean-up if necessary, but doesn't want to interfere with your oversight if that's where the authority lies.

Please let me know if OCD is going to respond to ENTS #7343. Thanks!

Kathie J. Deal Environmental Scientist Ground Water Quality Bureau (505) 827-2713

New Mexico Environment Department 1190 St. Francis Drive P.O. Box 5469 Santa Fe, NM 87502-5469 www.nmenv.state.nm.us

From: Chavez, Carl J, EMNRD

Sent: Tuesday, August 31, 2010 2:40 PM

To: Deal, Kathie, NMENV

Subject: Pilot Travel Center Release, Gallup NM

Ms. Deal:

Sorry we're playing phone tag. Please contact Glenn von Gonten at 505-476-3488 to discuss jurisdiction on recent release at above facility. Thank you.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: <u>CarlJ.Chavez@state.nm.us</u>

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From: Smith, Coleman, NMENV

Sent: Thursday, August 26, 2010 4:29 PM

To: Chavez, Carl J, EMNRD

Cc: Van Horn, Kristen, NMENV; 'Larsen, Thurman'; 'Riege, Ed'; VonGonten, Glenn, EMNRD;

Cobrain, Dave, NMENV; Jason Swofford

Subject: RE: T-116 Passive Bio-venting Project Status- OCD RESP 082710

Carl,

I am waiting to confer with an AQB colleague, who returns from vacation on Sept. 1 and has a high level of knowledge on the Gallup Refinery. Western never requested an Air Quality exemption for the T-116 spill, which occurred in 2008 and was "remediated" during the ensuing year. However, the current request if for a "blanket" exemption to install similar vent pipes at any future spill site, as long as the spill is ULSD (or any petroleum distillate with a normal vapor pressure of 0.2 psig or less). The complication is that Western has an ongoing AQB Compliance Order that requires all spills containing benzene to be reported to us and included in a Total Annual Benzene (TAB) limit of 10 MT/y for all combined wastewater streams. Therefore, any spill containing any detectable level of benzene could not fall under an AQB exemption due to this applicable requirement.

Western's analysis for the T-116 spill showed Non-Detect (ND) benzene, so there is no violation of the Compliance Order associated with that spill. However, my personal inclination is to ask for an analysis for every spill, regardless of whether or not it is claimed to be ULSD (which I suppose is ND for benzene by definition, but I'm not positive about that).

The AQB Enforcement Section would not typically pursue any actions on unreported ULSD spills because the VOC air emission rate is very small.

That is the present status. I'll contact you towards the end of next week with our decision on the Air Quality exemption application.

Thanks.

Cole

Coleman A. Smith, Ph.D.
Permit Specialist, Major Source Unit
Air Quality Bureau
New Mexico Environment Department
1301 Siler Road, Bldg. B
Santa Fe, NM 87507
voice: (505) 476-5550
fax: (505) 476-4375
AQB main: (505) 476-4300

P Please consider the environment before printing this e-mail.

----Original Message---From: Chavez, Carl J, EMNRD
Sent: Thursday, August 26, 2010 3:56 PM
To: Smith, Coleman, NMENV
Cc: Van Horn, Kristen, NMENV; Larsen, Thurman; Riege, Ed; VonGonten, Glenn, EMNRD; Cobrain, Dave, NMENV
Subject: FW: T-116 Passive Bio-venting Project Status- OCD RESP 082710

Coleman:

I think NMED- Hazardous Waste Bureau (HWB) and OCD are awaiting NMED- AQB's approval of the corrective action.....

The OCD is concerned about migration of contamination to the water table near this location. Western will need to comply with the OCD's approval with conditions on the corrective actions.

OCD and NMED should be sharing information on this OCD corrective action/ RCRA- Area of Concern (AOC). It appears the contamination lies within a HWB AOC.

Please contact me if you have questions.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

----Original Message----

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Thursday, August 26, 2010 2:34 PM

To: Chavez, Carl J, EMNRD

Cc: Van Horn, Kristen, NMENV; Riege, Ed

Subject: T-116 Passive Bio-venting Project Status- OCD RESP 082710

<<OCD RESP 082710.pdf>> Dear Mr. Chavez,

The above attachment is in response to your e-mail from Agust 17, 2010 concerning the status of T-116 (Release of Ultra-Low Sulfur Diesel) spill and the Passive Bio-venting Remediation Project.

Regards,

Beck Larsen,
Environmental Egineer
Western Refining
The message is ready to be sent with the following file or link attachments:

OCD RESP 082710

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, August 26, 2010 3:56 PM

To:

Smith, Coleman, NMENV

Cc:

Van Horn, Kristen, NMENV; 'Larsen, Thurman'; Riege, Ed; VonGonten, Glenn, EMNRD;

Cobrain, Dave, NMENV

Subject:

FW: T-116 Passive Bio-venting Project Status- OCD RESP 082710

Attachments:

OCD RESP 082710.pdf

Coleman:

I think NMED- Hazardous Waste Bureau (HWB) and OCD are awaiting NMED- AQB's approval of the corrective action.....

The OCD is concerned about migration of contamination to the water table near this location. Western will need to comply with the OCD's approval with conditions on the corrective actions.

OCD and NMED should be sharing information on this OCD corrective action/ RCRA- Area of Concern (AOC). It appears the contamination lies within a HWB AOC.

Please contact me if you have questions.

Thank you.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

----Original Message----

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Thursday, August 26, 2010 2:34 PM

To: Chavez, Carl J, EMNRD

Cc: Van Horn, Kristen, NMENV; Riege, Ed

Subject: T-116 Passive Bio-venting Project Status- OCD RESP 082710

<<OCD RESP 082710.pdf>> Dear Mr. Chavez,

The above attachment is in response to your e-mail from Agust 17, 2010 concerning the status of T-116 (Release of Ultra-Low Sulfur Diesel) spill and the Passive Bio-venting Remediation Project.

Regards,

Beck Larsen, Environmental Egineer

Western Refining

The message is ready to be sent with the following file or link

attachments:

OCD RESP 082710

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.							
				·			

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Thursday, August 26, 2010 2:34 PM

To:

Chavez, Carl J, EMNRD

Cc:

Van Horn, Kristen, NMENV; Riege, Ed

Subject:

T-116 Passive Bio-venting Project Status- OCD RESP 082710

Attachments:

OCD RESP 082710.pdf

<<OCD RESP 082710.pdf>> Dear Mr. Chavez,

The above attachment is in response to your e-mail from Agust 17, 2010 concerning the status of T-116 (Release of Ultra-Low Sulfur Diesel) spill and the Passive Bio-venting Remediation Project.

Regards,

Beck Larsen, Environmental Egineer Western Refining The message is ready to be sent with the following file or link attachments:

OCD RESP 082710

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GALLUP

August 26, 2010

New Mexico Energy, Minerals & Natural Resources Dept Oil Conservation Division, Environmental Bureau (OCD) 1220 South St. Francis Drive Santa Fe, New Mexico 87505 Attention: Mr. Carl Chavez

Dear Mr. Chavez:

This letter is in response to your e-mail of August 17, 2010 addressing your concerns and further clarification about in-situ passive bio-venting remediation in the contaminated zone surrounding T-116.

In an e-mail of September 21, 2009, Western Refining obtained approval from the OCD to conduct a pilot test and to continue with a larger scale effort to bring down the levels of hydrocarbons in the soils to acceptable levels. The pilot study was initiated using one pipe. Analysis indicated that there was 6000 ppm in an area of 500 square feet and about 2 feet deep. This would equate to maximum of 0.17 TPY. Agency approval has to be received from both OCD and NMED prior to initiating a large scale bio-venting remediation project. Western Refining has been using Trinity Consultants in order to obtain approval from the NMED/ Air Quality Bureau (AQB) in order to proceed with this project. The AQB has contacted OCD for additional information as a result of a request which was submitted to the Agency in order to apply for an exemption to our current air quality permit that would allow us to proceed with this project. This project will not commence until Agency (NMED/AQB) permission has been granted. Once the Agency's approval has been granted, the passive bio-venting remediation project will commence on a larger scale by placing approximately 20 perforated pipes in the affected area according to the sampling plan. These pipes will be placed at uniform spacing of about 6 feet distance between the pipes and at 2 feet depth to the bottom of these pipes.

Volatile Organic Compound (VOC) Monitoring will be conducted using the using a leak detection device (Model # TVA-1000) that is currently utilized under the Leak Detection and Repair (LDAR) Program in order to detect hydrocarbons that may be present in the soil. Soil samples will be collected at the bottom of the pipes about every 6 months in order to determine any VOC reduction. A report will be submitted to the Agencies (OCD, the NMED / Hazardous Waste Bureau (HWB), and the NMED / Air Quality Bureau (AQB). Based on the pilot test, it is expected that the levels of hydrocarbons will be substantially reduced. If the VOC concentrations are not reduced below regulatory levels, the bio-venting process will continue until acceptable levels have been reached.

Remedial activities and soil cleanup have not been initiated for this area due to the proposed Passive Bioventing that was pending approval from NMED. The purpose of the in-situ Passive Bioventilation redial project is to remediate the soil in place. Contaminated soil has not been removed pending approval from the AQB.

The Area of Concern (AOC) for tank (T-116) is part of the Tank Farm System which includes a berm surrounding the tank and is not part of a SWMU. Enclosed is a copy of the Final Report including the C-141 (Final) and the Sampling Plan that was previously submitted to the Agency.

We look forward to a successful conclusion to this effort, recognizing that this approach has many benefits to the environment and to the safe operation of the refinery.

Beck Larsen

Best regards

Environmental Engineer Western Refining (Gallup)

Enc: C-141 (Final) with Sampling Plan

Riege, Ed

From:

Chavez, Carl J, EMNRD [CarlJ.Chavez@state.nm.us]

Sent:

Tuesday, August 17, 2010 2:57 PM

To:

Riege, Ed

Cc:

Coleman.Simth@state.nm.us; Van Horn, Kristen, NMENV; VonGonten, Glenn, EMNRD

Subject: Initial C-141 T-116 Release Ultra-Low Sulfur Diesel Signed 8/20/2009 & Corrective Action (CA) Update (GW-

032)

Ed:

Re: C-141 Tk-116 Ultra-Low Sulfur Diesel Release Follow-Up

OCD received a call from Cole Smith (NMED- AQB) regarding the above release that occurred in April 24, 2008. According to Cole, he is assessing this remediation in consideration of the existing facility air quality permit from NMED to determine whether the facility has or is exceeding its allowed air quality emission under the permit. Preliminarily, it appears that Western is just now seeking an exemption from the AQB permit to install the passive bio-vent system and AQB is seeking more details to assess whether Western would exceed its existing Air Quality Emission Permit?

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http://ocdimage.emnrd.state.nm.us/lmaging/FileStore/SantaFeAdmin/AO/63592/pENV000GW00033_115_AO.tif (see pages 265-299 and 309 – 362).

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A preliminary response is requested by next Friday COB 8/27/2010 and/or a proposed schedule for receipt of report on CA Project may be approved by the OCD. Please contact Cole Smith at (505) 476-5550 and me to discuss. Thank you.

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

Subject:

GW-32 Response to E-mail requested by COB today.

Location:

TBC

Start: End: Fri 8/27/2010 2:00 PM Fri 8/27/2010 2:30 PM

Recurrence:

(none)

Organizer:

Chavez, Carl J, EMNRD

Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Tuesday, August 17, 2010 2:57 PM

To:

'Riege, Ed'

Cc: Subject: 'Coleman.Simth@state.nm.us'; Van Horn, Kristen, NMENV; VonGonten, Glenn, EMNRD Initial C-141 T-116 Release Ultra-Low Sulfur Diesel Signed 8/20/2009 & Corrective Action

(CA) Update (GW-032)

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Larsen, Thurman

From: Rajen, Gaurav

Sent: Friday, October 23, 2009 7:29 AM

To: 'Wendy Alexander'

Cc: Riege, Ed

Subject: Your questions re AQB and remediation

Do write to me with specific questions – we also need a generic determination regarding remediation projects, not a site specific determination – what are the quantities involved, for example, etc., before AQB regs, kick in?

From: Chavez, Carl J, EMNRD [mailto:Carl].Chavez@state.nm.us]

Sent: Monday, September 21, 2009 10:59 AM **To:** Rajen, Gauray; Monzeglio, Hope, NMENV

Cc: Riege, Ed

Subject: RE: Final report - Tank 116 spill

Raj:

Re: Final Report Section 4.0 Conclusions below.

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 – 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

Approved. Please provide a schedule for installing the perforated pipes as proposed and notify the agencies when the pipes are installed in accordance with the schedule.

Please contact me if you have questions. Thank you.

Please be advised that NMOCD approval of this corrective action does not relieve Western Refining Southwest, Inc.- Gallup Refinery of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the Gallup Refinery of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Dil Conservation Division, Environmental Bureau

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E-mail: CarlJ.Chavez@state.nm.us

Nebsite: http://www.emnrd.state.nm.us/ocd/index.htm Pollution Prevention Guidance is under "Publications")

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Tuesday, August 25, 2009 1:58 PM

fo: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc: Riege, Ed

Subject: Final report - Tank 116 spill

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

Facility Name Gallup Refinery

Surface Owner Western Refining

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company Western Refining Southwest Inc. Contact Gaurav Rajen Address I-40 Exit 39, Jamestown, NM 87347 Telephone No. 505-722-0227 Facility Type Oil refinery Mineral Owner Western Refining Lease No. LOCATION OF RELEASE Range Feet from the North/South Line Feet from the East/West Line County

Unit Letter Section Township 23 8-33 15N 15W McKinley

Latitude 35°29'22" Longitude 108°25'24"

NATURE	OF RELEASE				
Type of Release Ultra-Low Sulfur Diesel (ULSD)	Volume of Release 45 barrels (1890 gallons) final estimate	Volume Recovered 12 barrels (500 gallons) estimate			
Source of Release Overflow from Tank 116	Date and Hour of Occurrence 4/24/2008; 2:00 am (approximately)	Date and Hour of Discovery 4/24/2008; 2:50 am			
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required	If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division; Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone)				
By Whom? Gaurav Rajen and Cheryl Johnson	Date and Hour 4/24/2008 (approximately) 11:00 am				
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse. Not applicable				
If a Wetgranger was Impacted Describe Fully * Nat applicable					

If a Watercourse was Impacted, Describe Fully.* Not applicable

Describe Cause of Problem and Remedial Action Taken.* At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled ULSD onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration.

Describe Area Affected and Cleanup Action Taken.*

The affected area within the berm had a surface area originally estimated as approximately 500 square feet with some vertical penetration of the ULSD. Through excavation and sampling, this area has a final estimate of approximately 1000 square feet, and of 2 feet depth. An affected area of approximately 500 feet in length and average 5 feet wide (ranging between 2-10 feet depending on the amount of pooling of the spilled material) lay along the service road. The material on the road surface penetrated to a depth of 3 inches (maximum) into the underlying surface as the road surface is partially paved.

A truck with a vacuum pump was used to collect free ULSD product from within the berm and on the service road. Absorbent material was placed on the spill along the road; and this area was isolated through the use of barricades. In further cleanup actions, contaminated soils were excavated, confirmatory environmental samples were collected and analyzed, and all contaminated materials disposed off in accordance with applicable regulations at a permitted landfill. Details are provided in the attached report.

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

Signature: Mal A. M.	112	OIL CONSERVATION DIVISION					
Printed Name: Mark B. Turri		Approved by District Supervisor:					
Title: Refinery Manager – Gallup		Approval Date:	Date: Expiration Date:				
E-mail Address: mark.turri@wnr.com		Conditions of Approval;		Attached			
Date: 8-20-2009	Phone: 505-722-3833						

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

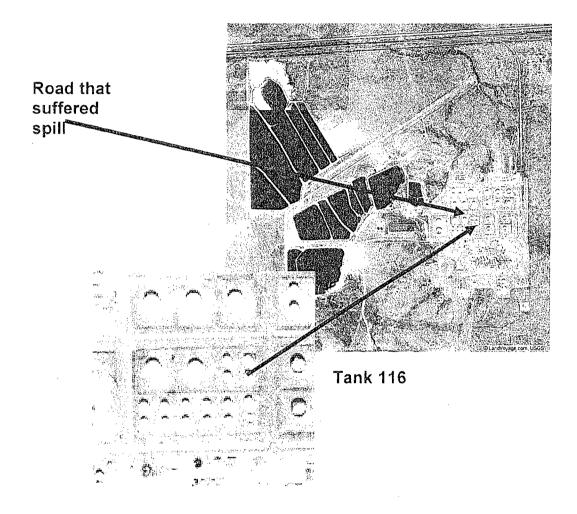


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.

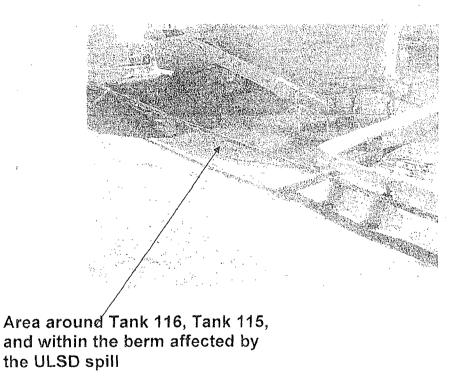


Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road

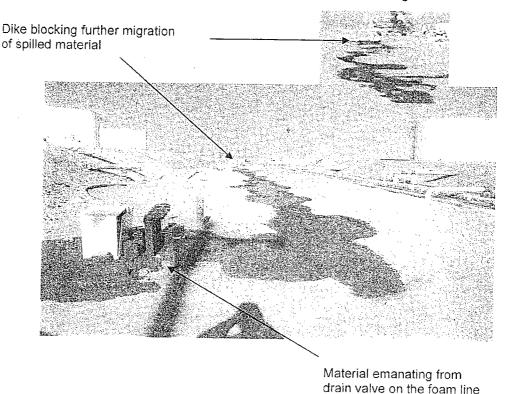


Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.

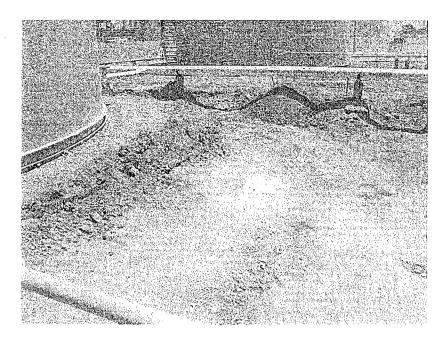


Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.

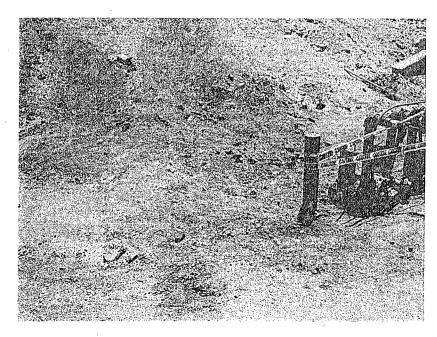


Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank

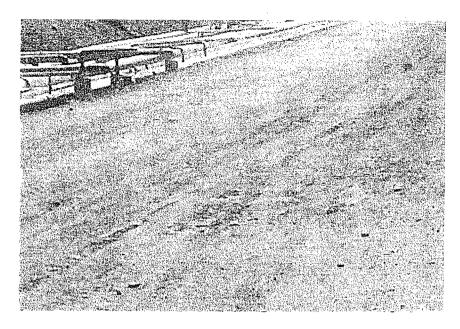


Figure 6: Preliminary clean-up of road which had experienced run-off of product.

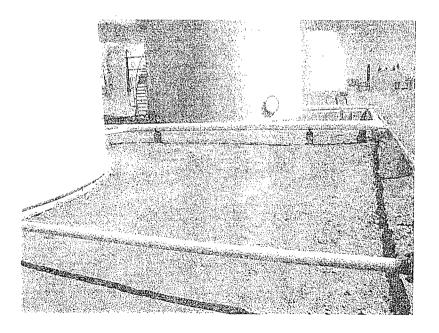


Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan - Tank 116

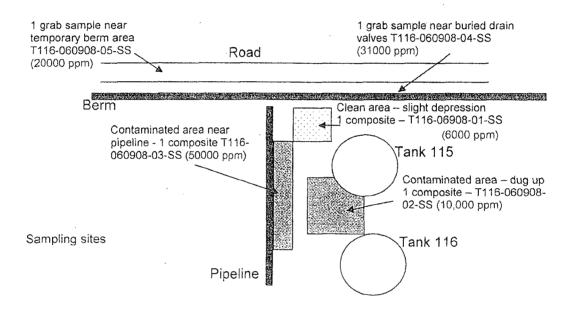


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan – Tank 116

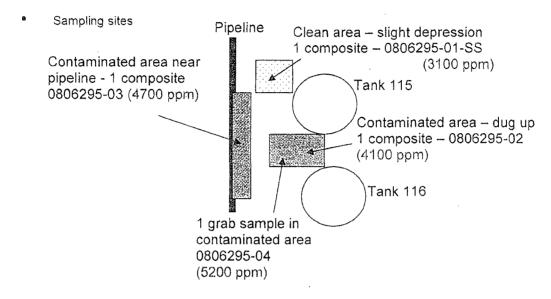


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 - 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

• We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1

foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours – this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

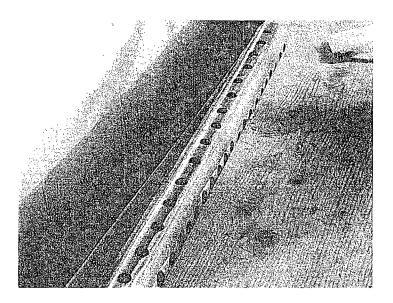


Figure 10: Perforated pipe that has been constructed

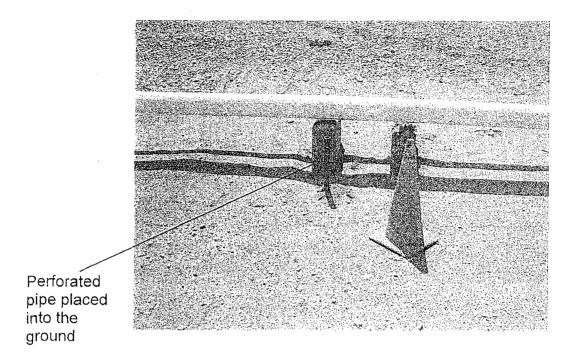


Figure 11: Photograph of emplaced pipe – the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. This level is now 190 ppm. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

Sampling Plan - Tank 116

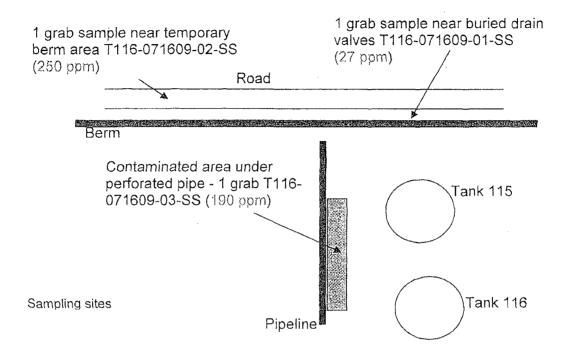


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 – 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

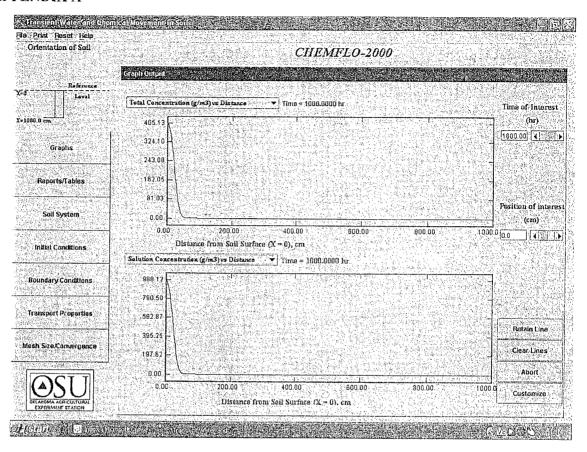


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

CHEMFLO-2000

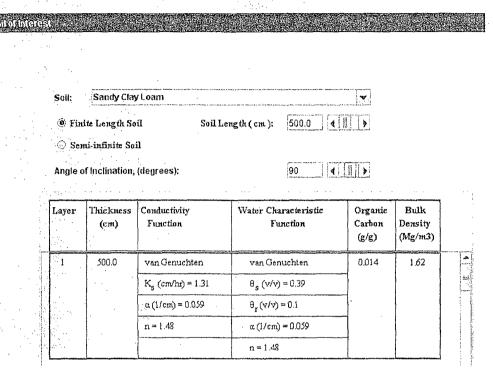


Figure A.2: Assumed soil parameters

CHEMFLO-2000 Tructiot Proposition Diffusion Coefficient of Chemical in Water(cm2/hr) Dispersivity (cm) Uniform Partition Coefficient (m3/Mg soil) Uniform 1st Order Degradation Const. in Liquid (1/hr) Uniform 1st Order Degradation Const. on Soilids (1/hr) Uniform Zero-Order Production Constant (g/m3/hr) Uniform Zero-Order Production Constant (g/m3/hr)

Figure A.3: Assumed chemical transport properties

From:

Chavez, Carl J, EMNRD

Sent:

Tuesday, August 17, 2010 2:57 PM

To:

'Riege, Ed'

Cc: Subject: 'Coleman.Simth@state.nm.us'; Van Horn, Kristen, NMENV; VonGonten, Glenn, EMNRD Initial C-141 T-116 Release Ultra-Low Sulfur Diesel Signed 8/20/2009 & Corrective Action

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Oil Conservation Division, Environmental Bureau

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Sent:

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Carl J. Chavez, CHMM

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E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Tuesday, August 25, 2009 1:58 PM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc: Riege, Ed

Subject: Final report - Tank 116 spill

August 25, 2009

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

From:

Rajen, Gaurav [Gaurav.Rajen@wnr.com]

Sent:

Tuesday, August 25, 2009 1:58 PM

To:

Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc:

Riege, Ed

Subject:

Final report - Tank 116 spill

Attachments:

C-141-final signed.pdf; Soil samples 6-09.pdf; Soil samples 6-17.pdf; Samples - July 2009.pdf;

C-141 final-report 8-25-2009.doc

August 25, 2009

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Dear Carl:

It is a pleasure to send you our final report for our Tank 116 spill of Ultra Low Sulfur Diesel which we have cleaned up. Two paper copies will go out in the mail today. Electronic copies are attached.

As you will note in the report, we excavated soil from within our berm area up to two feet. As there are active pipelines in the area, and ongoing work activity, we found it difficult to excavate any further near the pipelines, and had to cover our excavation with clean soil to prevent any hazard to workers in the area. This covering was done before our second set of laboratory results had arrived, for safety reasons. Our first set of laboratory results showed levels of DRO around 50,000 ppm. After excavation the DRO levels were of the order of 4000-6000 ppm (no BTEX was detected). As these levels were below 2 feet, we believe they did not come from the recent Tank 116 spill. We have conducted a small test at one of these locations of passive venting, using a perforated pipe to get air into the ground. The levels below the perforated pipe have fallen from 4700 ppm to 190 ppm. With your concurrence, we could now place more such perforated pipes in the area and we believe we will be able to reduce all the areas that were found to have DRO levels around 4000-6000 ppm to below concern. If we place many such perforated pipes we will also get concurrence (as needed) from the NMED's Air Quality Bureau.

* * 7	1 1	C 1								
WA	IOOK	torward	tΛ	VALUE	TOC	$n \cap n \in A$	at.	VOLL	earliect	convenience,
110	IOOK	ioiwaiu	w	your	100	POHAC	$a\iota$	YOU	Cullion	convenience,

Sincerely,

Gaurav Rajen

This inbound email has been scanned by the MessageLabs Email Security System.

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

State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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

OPERATOR	Release Notification and Corrective Action											
Address 1-40 Exit 3-9, Jamestown, NM 87347 Telephone No. 505-722-0227 Facility Name Gallup Refinery Facility Type Oil refinery Surface Owner Western Refining Mineral Owner Western Refining Lease No. LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County McKinley Latitude 35°29′22″ Longitude 108°25′24″ NATURE OF RELEASE Type of Release Ultra-Low Sulfur Direct (U.S.D) Volume Recovered 12 barrels (500 gallons) final estimate Source of Release Overflow from Tanh. 116 Date and Hour of Occurrence Date and Hour of Occurrence Was Immediate Notice Given? Yes No Nor Required Hype Monneyllo, NMED Hazardous Waste Bureau (via telephone) By Whom? Gaurav Rajen and Cheryl Johnson Date and Hour 4724/2008 (approximately) 11:00 am If a Watercourse was Impacted, Describe Fully, Not applicable Feet from the part of the County of the Watercourse was Impacted, Describe Pulls (Inc. 1) (200 per via the County of the Watercourse Not applicable If a Watercourse was Impacted, Describe Fully, Not applicable Feet from the part of the Watercourse was Impacted, Describe Pulls (Inc. 1) (200 per via the County of the Watercourse Not applicable Feet from the part of the Watercourse was Impacted, Describe Pulls (Inc. 1) (200 per via the Watercourse Not applicable Feet from the part of the Watercourse was Impacted, Describe Pulls (Inc. 1) (200 per via the Watercourse Not applicable Feet from the part of the Watercourse was Impacted, Describe Pulls (Inc. 1) (200 per via the Watercourse was Impacted, Describe Pulls (Inc. 1) (200 per via the Watercourse, Not applicable Feet from the part of the Watercourse was Impacted, Describe Area (Inc. 1) (200 per via the Watercourse, Not applicable Feet from the part of the Watercourse was Impacted, Describe Area (Inc. 1) (200 per via the Material (Inc. 1) (200 per via the Watercourse, Not applicable Feet from the part of the Watercourse, Not applicab							OPERATOR Initial Report \omega Final Rep				Final Report	
Facility Name Gallup Refinery Facility Type Oil refinery Lease No.												
Surface Owner Western Refining									27			
Location of Release Section Toweship Range Feet from the North/South Line Feet from the East/West Line County McKinley												
Latitude 35*29*22" Longitude 108*25*24"	Surface Ow	ner Wester	n Refining		Mineral C	Owner W	estern Ref	ning	Lease N	10.		
Latitude _35*29*22"		·		ı				LEASE				
Type of Release Ultra-Low Sulfur Diesel (ULSD) Volume of Release 45 berrels (1809 gallons) final stimate gallons is estimate gallons of the Stimate (1800 gallons) final stimate gallons is estimate gallons is estimate gallons of the Stimate gallons is estimate gallons of the Stimate gallons is estimate gallons of the Stimate gallons is estimate gallons estimate gallons is estimate gallons is estimate gallons estimate gallons estimate gallons estimate gallons is estimate gallons e	Unit Letter		•	, -	Feet from the	North/	South Line	Feet from the	East/West Line	, ,		
Volume of Release Ultra-Low Sulfur Diesel (ULSD)		Latitude <u>.35°29'22"</u> Longitude <u>108°25'24"</u>										
Source of Release Overflow from Tank 116 Source of Release Overflow from Tank 116 Date and Hour of Occurrence 4724/2008; 2:00 am (approximately) The second from Tank 116 Date and Hour of Occurrence 4724/2008; 2:00 am (approximately) Try ES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division; Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone) By Whom? Gaurav Rajon and Cheryl Johnson Date and Hour 4/24/2008 (approximately) Thomas Date and Hour 4/24/2008 (approximately) The second from the second				····		URE						
Source of Release Overflow from Tank 116 Author of Occurrence Author occurren	Type of Rele	ase Ultra-L	ow Sulfur Die	esel (ULSI))							
By Whom? Gaurav Rajen and Cheryl Johnson Was a Watercourse Reached? Yes No If YES, Volume Impacting the Watercourse, Not applicable Describe Cause of Problem and Remedial Action Taken. **DAt approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 5:83. Tank 116 had not over and spilled ULSD onto the soil within the area surrounded by a berm. A lesser amount of ULSD ra down within the foam line leading into the tank. Though a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tankberm area, and the spill on the road was blocked from further migration. Describe Area Affected and Cleanup Action Taken.* The affected area within the berm had a surface area originally estimated as approximately 500 square feet, and of 2 feet depth. An affected area of approximately 500 feet in length and average 5 feet wide (ranging between 2-10 feet depending on the amount of pooling of the spilled material) lay along the service road. The material on the road surface separetrated to a depth of 3 inches framsimumy into the underlying surface as the road surface is partially paved. A truck with a vacuum pump was used to collect free ULSD product from within the berm and on the service road. Absorbent material was placed on the spill along the road; and this area was isolated through the use of barricades. In further cleanup actions, contaminated soils were excavated, confirmatory environmental samples were collected and analyzed, and all contaminated innaterials disposed off in accordance with applicable regulations at a permitted landfill. Details are provided in the attached report. Thereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all	Source of Re	elease Overf	low from Tan	k 116			Date and Hour of Occurrence					
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Title: Refinery Manager – Gallup Approval Date: Expiration Date: E-mail Address: mark.turri@wnr.com Conditions of Approval: Attached	Signature:	Signature: Mal A. Juni									<u>)N</u>	
E-mail Address: mark.turri@wnr.com Conditions of Approval: Attached	Printed Name: Mark B. Turri						Approved by	District Supervis	sor:			
Attached	Title: Refinery Manager – Gallup						Approval Date: Expiration Date:					
	E-mail Address: mark.turri@wnr.com Date: 8-20-2009 Phone: 505-722-3833						Attached					

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

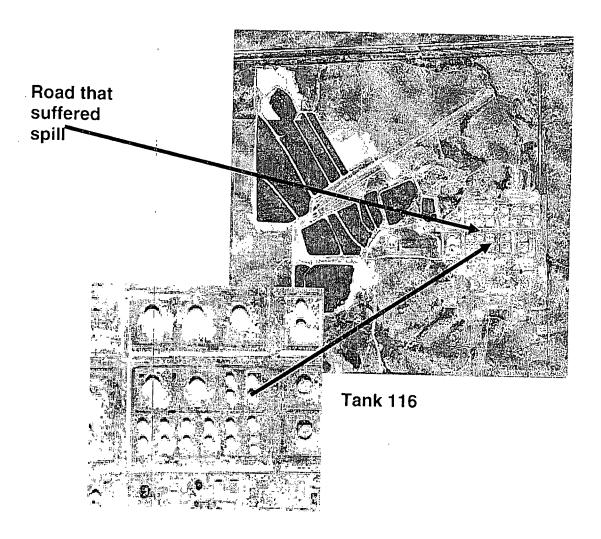
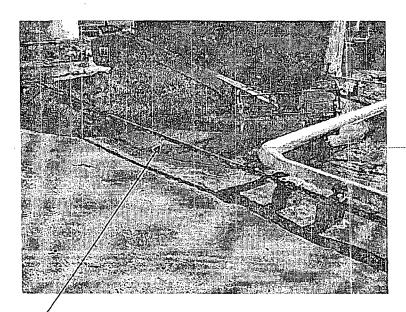


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

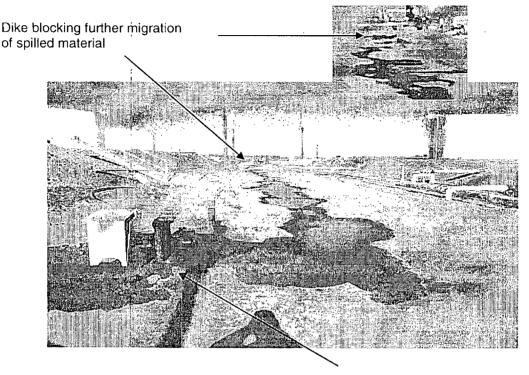
At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.



Area around Tank 116, Tank 115, and within the berm affected by the ULSD spill

Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road



Material emanating from drain valve on the foam line

Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.

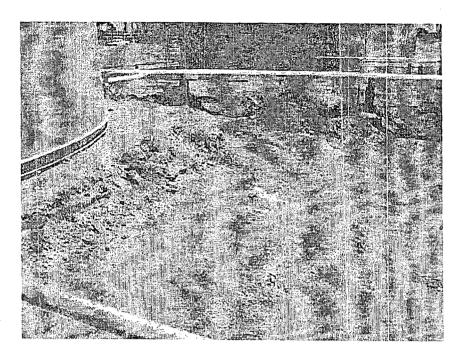


Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.

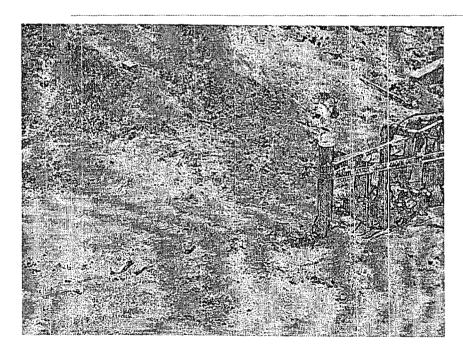


Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank

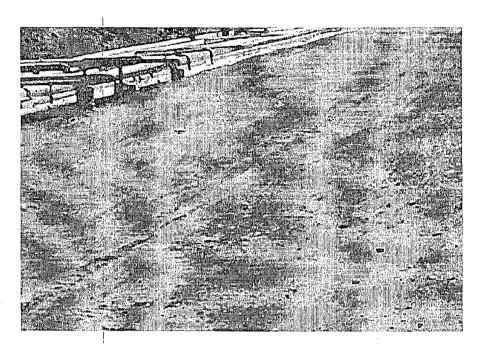


Figure 6: Preliminary clean-up of road which had experienced run-off of product.

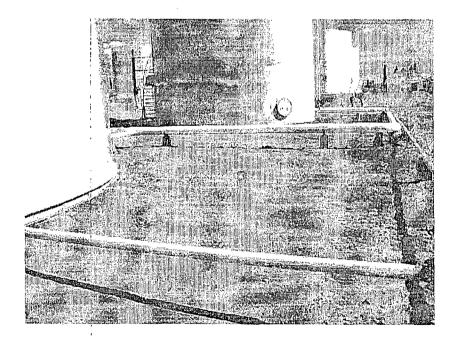


Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan - Tank 116

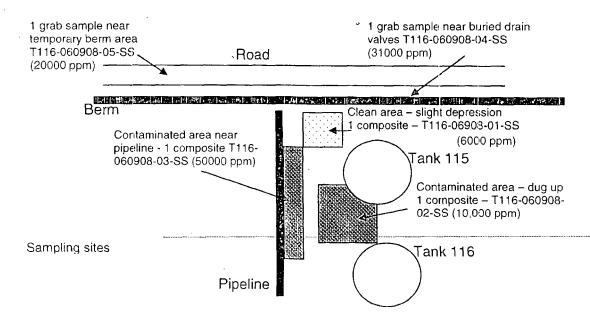


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan - Tank 116

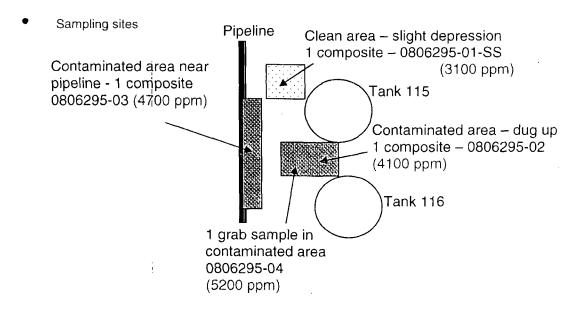


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 – 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

• We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1

foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours – this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

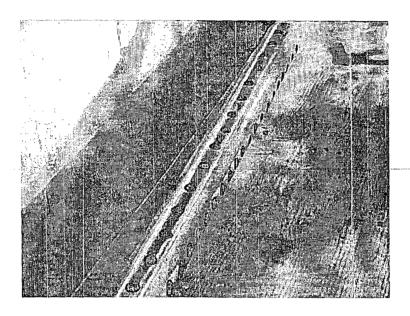


Figure 10: Perforated pipe that has been constructed

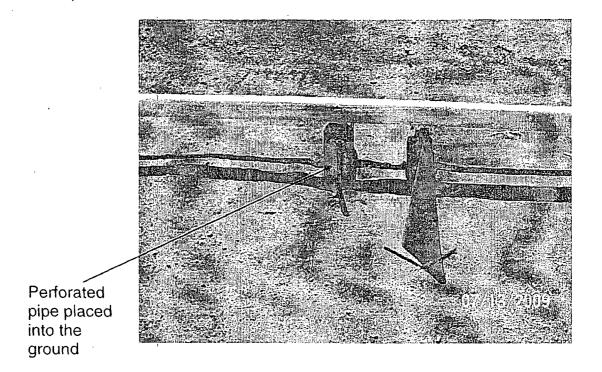


Figure 11: Photograph of emplaced pipe - the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. This level is now 190 ppm. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

Sampling Plan – Tank 116

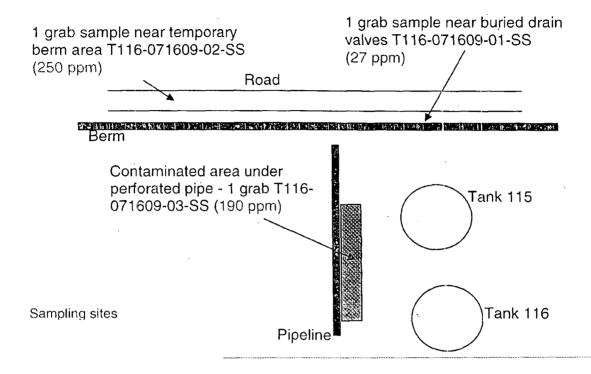


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 – 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

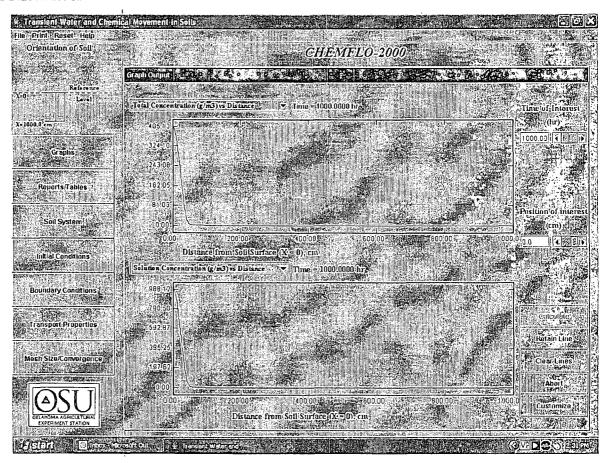


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

CHEMFLO-2000

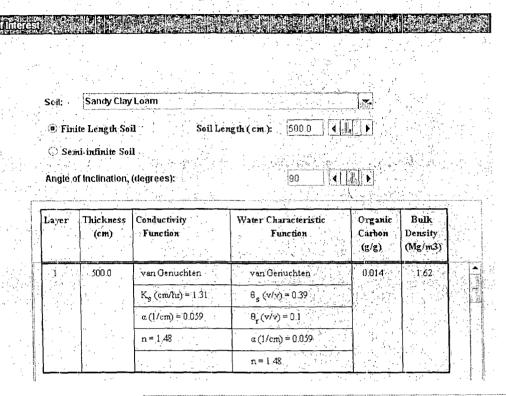


Figure A.2: Assumed soil parameters

	CHEMFLO-20	000	
Transport Properties		Z24100	
Transference Calledonae I (valuer) - 94/8			
	Diffusion Coefficient of Chemical in Water(cm2/hr)	0.035	28 4 4 4
	Dispersivity (cm) Uniform Partition Coefficient (m.3/Mg soil)	0.12	
	Uniform 1st Order Degradation Const. in Liquid (1/hr)	0.47	
	Uniform let Order Degradation Const. on Solids (1/hr) Uniform Zero-Order Production Constant (g/m3/hr)		
	the same of the sa	E.729	Faritable Manager

Figure A.3: Assumed chemical transport properties



COVER LETTER

Friday, June 13, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank-116-Spill Site

Dear Gaurav Rajen:

Order No.: 0806136

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 6/10/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 13-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Lab Order:

0806136

CASE NARRATIVE

[&]quot;S" flags denote that the surrogate was not recoverable, or elevated, due to sample dilution or matrix interferences.

Date: 13-Jun-08

CI TENTE.	Wastown Dafining Court	wast Callus		===			0006106
CLIENT: Project:	Western Refining South Tank-116-Spill Site	west, Gamup				Lab Orde	r: 0806136
Troject.	Tank-Tro-Spin One						
Lab ID:	0806136-01				Collection Dat	e: 6/9/200	9:00:00 AM
Client Sample ID	: T-116-060908-01-SS				Matri	x: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 80°	15B: DIESEL RANGE O	RGANICS					Analyst: SCC
Diesel Range Orga	nics (DRO)	6000	500		mg/Kg	50	6/12/2008 7:15:26 PM
- Motor Oil Range O	rganics (MRO)	ИD	2500		mg/Kg	50	6/12/2008 7:15:26 PM
Surr. DNOP		0	61.7-135	s	%REC	50	6/12/2008 7:15:26 PM
Lab ID:	0806136-02	All latery design the second con-			Collection Dat	e: 6/9/200	98 9:05:00 AM
Client Sample ID:	T-116-060908-02-SS				Matri	x: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE O	RGANICS					Analyst: SCC
Diesel Range Orga	nics (DRO)	10000	200		mg/Kg	20	6/12/2008 7:49:50 PM
Motor Oil Range Oi	ganics (MRO)	ND	1000		mg/Kg	20	6/12/2008 7:49:50 PM
Surr: DNOP		135	61.7-135	S	%REC	20	6/12/2008 7:49:50 PM
Lab ID:	0806136-03			mairiemiti	Collection Date	e: 6/9/200	8 9:10:00 AM
Client Sample ID:	T-116-060908-03-SS				Matri	k: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS					Analyst: SCC
Diesel Range Orga	nics (DRO)	50000	1000		mg/Kg	100	6/12/2008 8:24:14 PM
Motor Oil Range Or	ganics (MRO)	ND	5000		mg/Kg	100	6/12/2008 8:24:14 PM
Surr: DNOP		0	61.7-135	S	%REC	100	6/12/2008 8:24:14 PM
ab ID:	0806136-04				Collection Date	e: 6/9/200	8 9:15:00 AM
Client Sample ID:	T-116-060908-04-SS			•	Matrix	: SOIL	
Analyses	·	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS			· · · · · · · · · · · · · · · · · · ·		Analyst: SCC
Diesel Range Organ	• .	31000	500		mg/Kg	50	6/12/2008 9:33:04 PM
Motor Oil Range Or	ganics (MRO)	ND	2500		mg/Kg	50	6/12/2008 9:33:04 PM
•					•		

Qualifiers:	*	Value exceeds Maximum Contaminant Level
	E	Value above quantitation range

J Analyte detected below quantitation limits

S Spike recovery outside accepted recovery limits

MCL Maximum Contaminant Level

RL Reporting Limit

2

ND Not Detected at the Reporting Limit

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

Date: 13-Jun-08

CLIENT: Project:

Western Refining Southwest, Gallup

Tank-116-Spill Site

Lab Order:

0806136

Lab ID:

Collection Date: 6/9/2008 9:20:00 AM

0806136-05

Client Sample ID: T-116-060908-0	5-SS			Ma	trix: SOIL	
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC
Diesel Flange Organics (DRO)	20000	1000		mg/Kg	100	6/12/2008 10:07:28 PM
Motor Oil Range Organics (MRC)	ND	5000		mg/Kg	100	6/12/2008 10:07:28 PM
Surr: DNOP	0	61.7-135	S	%REC	100 .	6/12/2008 10:07:28 PM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Value above quantitation range

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminent Level

RL Reporting Limit

3

Page 2 of 2

Date: 13-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Work Order:

0806136

Analyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RP	DLimit Qual
Method: EPA Method 8015B: D	lesel Range	•					04/2/2020 5 20 40 504
Sample ID: MB-16176		MBLK			Batch ID: 16175	Analysis Date:	6/12/2008 5:32:13 PM
Diesel Range Organics (DRO)	ND	mg/Kg	10				
Motor Oil Range Organics (MRO)	ND	mg/Kg	50		•		
Sample ID: LCS-16175		LCS			Batch ID: 16175	Analysis Date:	6/12/2008 6:06:34 PM
Diesel Range Organics (DRO)	38.04	mg/Kg	10	76.1	64.6 116		
Sample ID: LCSD-16176		LCSD			Batch ID: 18175	Analysis Date:	6/12/2008 6:41:01 PM
Diesel Range Organics (DRO)	35.48	mg/Kg	10	71.0	64.6 116	6.98 17	4.4

Ou	alif	lers:

- E Value above quantitation range
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 1

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU				Date Receive	ed:	6/10/2008	
Work Order Number 0805136	\sim			Received by	y: ARS		
Checklist completed by:	the	7	Dale	Sample ID I	abels checked I	 Vilals	
Matrix:	Carrier name	FedE	<u>x</u>				
Shipping container/cooler in good condition?		Yes	\checkmark	No 🗆	Not Fresent		
Custody seals intact on shipping container/cool	er?	Yes	$\overline{\mathbf{V}}$	No 🗌	Not Present	Not Shipped	
Custody seals intact on sample bottles?		Yes	\checkmark	No 🗀	N/A		
Chain of custody present?		Yes	\checkmark	No 🗀			
Chain of custody signed when relinquished and	received?	Yes	V	No 🗀			
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗀			
Samples in proper container/bottle?		Yes	\checkmark	No 🗌			
Sample containers intact?		Yes	V	No 🗀			
Sufficient sample volume for indicated test?		Yes	\mathbf{Y}	No 🗀			
All samples received within holding time?		Yes	\checkmark	No 🗆			
Water - VOA vials have zero headspace?	No VOA vials subr	nitled	\square	Yes 🗌	No 🗆	 	
Water - Preservation labels on bottle and cap n	natch?	Yes		No 🗆	N/A 🗹		
Water - pH acceptable upon receipt?		Yes		No 🗆	N/A 🗹		
Container/Temp Blank temperature?			1°	<6° C Acceptai			
COMMENTS:				If given sufficier	nt time to cool.		
•							
		===	===		==='==	 	====
Client contacted	Date contacted:			Doe			
Olient contacted	Dato comacida.		·-··		son contacted	 	· '
Contacted by:	Regarding:			· — — — — — — — — — — — — — — — — — — —	· 	 ·-· 	
Comments:						 	
Corrective Action							

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) BTEX + MTBE + TPH (Gas only) TPH Method 8015B (Gas/Diesel) TPH (Method 504.1) EDB (Method 8260) B310 (PNA or PAH) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) B3210 (PNA or PAH) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F.Cl.NO ₃ ,NO ₂ ,PO ₄ ,SO ₄)		* *	* >	<		Received by: Recei
Around Time: tandard Rush ot Name: TANK-116-591LL ot #: T-116-0609-08	RASEN CUERYL SOMNSON Preservative HEAL NO. Type O&C 13 6	1	NONE -2	NOWE	NOWE		Received by: Received by: Credited laboratories. This serves as notice
HINING ENSING BOX 7 Project Pr	Project Mar Sampler:—(Discovering Sample Sam	89 9:00 AM T-116-660108-01-55	3/4/08 9.10 AM MILL -060908-02-55 80x 2	8 M-15 AMTIN -060908-04-55 800	12 full 16-060000-05 50 full 18 506000-05 50 full 18 5060000-05 50 full 18 50600000-05 50 full 18 5060000000-05 50 full 18 506000000-05 50 full 18 5060000000-05 50 full 18 506000000-05 50 full 18 5060000000-05 50 full 18 506000000-05 50 full 18 506000000-05 50 full 18 506000000-05 50 full 18 5060000000-05 50 full 18 5060000000-05 50 full 18 50600000000-05 50 full 18 50600000000000000000000000000000000000		Date: Time: Relinquished by: GAUKAN KAJEN SAIOS 10:00 M & CHEK-1L JOHNSON Date: Filme: Relinquished by: Resinquished by: If necessary, samples submitted to Hall Environmental may be subcontracted to other ac



COVER LETTER

Wednesday, June 25, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank 116 Spill Site

Dear Gaurav Rajen:

Order No.: 0806295

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 6/19/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Lab Order:

0806295

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_S, SAMPLE 0806295-01A: DNOP not recovered due to dilution

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

0806295

Client Sample ID: T-116-061708-01SS

Lab Order:

Lab ID:

Collection Date: 6/17/2008 1:30:00 PM

Project:

Tank 116 Spill Site

0806295-01

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS	,				Analyst: SCC
Diesel Range Organics (DRO)	3100	200		mg/Kg	20	6/21/2008 10:51:57 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	6/21/2008 10:51:57 AM
Surr: DNOP	0	61.7-135	s	%REC	20	6/21/2008 10;51:57 AM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: BFB	90.5	84-138		%REC	20	6/25/2008 4:21:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Toluene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Ethylbenzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Xylenes, Total	ND	2.0		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: 4-Bromofluorobenzene	87.7	81.4-117		%REC	20	6/25/2008 4:21:31 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Value above quantitation range

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 4

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Client Sample ID: T-116-061708-02SS

Collection Date: 6/17/2008 1:30:00 PM

Project:

Tank 116 Spill Site

Date Received: 6/19/2008

Lab ID:

0806295-02

Matrix: SOIL

Analyses	Result	PQL	Qual 1	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	4100	100	r	ng/Kg	10	6/21/2008 11:26:21 AM
Motor Oil Range Organics (MRO)	ND	500	r	mg/Kg	10	6/21/2008 11:26:21 AM
Surr: DNOP	8.88	61.7-135	Q.	%REC	10	6/21/2008 11:26:21 AM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	r	ng/Kg	20	6/25/2008 4:51:31 AM
Surr: BFB	93.5	84-138	. 9	%REC	20	6/25/2008 4:51:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0	r	mg/Kg	20	6/25/2008 4:51:31 AM
Toluene	ND	1.0	r	mg/Kg	20	6/25/2008 4:51:31 AM
Ethylbenizene	ND	1.0	r	ng/Kg	20	6/25/2008 4:51:31 AM
Xylenes, Total	ND	2.0	r	ng/Kg	20	6/25/2008 4:51:31 AM
Surr: 4-Bromofluorobenzene	91.1	81.4-117	q	%REC	20	6/25/2008 4:51:31 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

Value above quantitation range

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

0806295

0806295-03

Client Sample ID: T-116-061708-03SS

Lab Order:

Collection Date: 6/17/2008 1:30:00 PM

Project: Lab ID: Tank 116 Spill Site

Date Received: 6/19/2008

Matrix: SOIL

PQL Qual Units Analyses Result DF Date Analyzed **EPA METHOD 8015B: DIESEL RANGE ORGANICS** Analyst: SCC Diesel Range Organics (DRO) 4700 200 mg/Kg 20 6/21/2008 12:00:45 PM Motor Oil Range Organics (MRO) ND 1000 mg/Kg 20 8/21/2008 12:00:45 PM Surr: DNOP 120 61.7-135 %REC 20 6/21/2008 12:00:45 PM **EPA METHOD 8015B: GASOLINE RANGE** Analyst: NSB Gasoline Range Organics (GRO) ND 100 mg/Kg 20 6/25/2008 5:21:35 AM Surr: BFB 92.4 84-138 %REC 20 6/25/2008 5:21:35 AM **EPA METHOD 8021B: VOLATILES** Analyst: NSB Benzene ND 1.0 mg/Kg 20 6/25/2008 5:21:35 AM Toluone ND 1.0 mg/Kg 20 6/25/2008 5:21:35 AM Ethylbenzene ND 1.0 mg/Kg 20 6/25/2008 5:21:35 AM Xylenes, Total ND 2.0 mg/Kg 20 6/25/2008 5:21:35 AM Surr: 4-Bromofluorobenzene 89.0 %REC 81.4-117 20 6/25/2008 5:21:35 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Value above quantitation range

Analyte detected below quantitation limits J

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Page 3 of 4

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

0806295 Lab Order:

Tank 116 Spill Site

Project: Lab ID: 0806295-04 Client Sample ID: T-116-061708-04SS

Collection Date: 6/17/2008 4:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL (ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	5200	200	mg/Kg	20	6/21/2008 1:09:31 PM
Motor Oil Range Organics (MRO)	ND	1000	mg/Kg	20	6/21/2008 1:09:31 PM
Surr; ONOP	96.8	61.7-135	%REC	20	6/21/2008 1:09:31 PM
EPA METHOD 8015B; GASOLINE RAN	1GE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 5:51:32 AM
Surr: 19FB	102	84-138	%REC	20	6/25/2008 5:51:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Ethylberizene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 5:51:32 AM
Surr: 4-Bromofluorobenzene	101	81.4-117	%REC	20	6/25/2008 5:51:32 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 25-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Work Order:

0806295

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLi	imit	%RPD	RPDL	imit Qual
Method: EPA Method 8015B: D	lesel Rangé	-								
Sample ID: MB-16266		MBLK			Batch I	:D: *	18266	Analysis Da	6/20/2008 1:24:03 AM	
Diesel Range Organics (DRO)	ND	mg/Kg	10							
Motor Oil Range Organics (MRO)	ND	mg/Kg	50							
Sample ID: LCS-16266		LCS			Batch 1	D: 1	18266	Analysis Da	ite:	6/20/2008 1:58:25 AM
Diesel Range Organics (DRO)	33.93	mg/Kg	10	67.9	64.6	116				
Sample ID: LCSD-16266		LCSD			Batch I	D: 1	16266	Analysis Da	ite:	6/20/2008 2:32:46 AM
Diesel Range Organics (DRO)	33.99	mg/Kg	10	68.0	64.6	116		0.177	17.4	
Method: EPA Method 8015B: G	asoline Rar	ige								
Sample ID: MB-16271		MBLK			Batch I	D:	16271	Analysis Da	ite:	6/25/2008 2:48:53 AM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0					•		
Sample ID: LCS-16271		LCS			Batch I	ID:	16271	Analysis Da	ite:	6/25/2008 1:18:42 AM
Gasoline Range Organics (GRO)	24.56	mg/Kg	5.0	87.4	69.5	120				
Sample ID: LCSD-16271		LCSD			Batch I	ID:	16271	Analysis Da	ite:	6/25/2008 1:48:48 AM
Gasoline Range Organics (GRO)	25.01	mg/Kg	5.0	89.2	69.5	120		1.82	11.6	
Method: EPA Method 8021B: V	olatiles									
Sample ID; MB-16271		MBLK			Batch	ID:	16271	Analysis Da	ate:	6/25/2008 2:48:53 AM
Benzene	ND	mg/Kg	0.050							
Toluene	ND	mg/Kg	0.050							
Ethylbenzene	ND	mg/Kg	0.050							
Xylenes, Total	ND	mg/Kg	0.10							
Sample ID: LCS-16271		LCS			Batch	ID:	16271	Analysis Da	ite:	6/25/2008 1:18:42 AM
Benzene	0.2928	mg/Kg	0.050	105	78.8	132				
Toluene	2.030	mg/Kg	0.050	101	78.9	112				
Ethylbenzene	0.4135	mg/Kg	0.050	103	69.3	125				
Xylenes, Total	2.465	mg/Kg	0.10	107	73	128				•
Sample ID: LCSD-16271		LC\$D		·	Batch	ID:	16271	Analysis Da	ate:	6/25/2008 1:48:48 AM
Benzene	0.2963	mg/Kg	0.050	108	78.8	132		1.19	27	
Toluene	2.037	mg/Kg	0.050	101	78.9	112		0.354	19	
Ethylbenzene	0.4119	mg/Kg	0.050	103	69.3	125		0.388	10	
		mg/Kg	0.10			128			13	

Οu	ali	ſŀ.	eı.	3

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU				Date Receive	d:		6/19/2008	
Work Order Number 0806295				Received by	r: AT		10/2	W
Checklist completed by: Linux 5	the .		Ca / [a	Sample ID II	abels checked	l by:	Initiata	•
Matrix:	Carrier name	FedE	Σ					
Shipping container/cooler in good condition?	•	Yes	\checkmark	No 🗆	Not Present			
Custody seals intact on shipping container/cooler?	•	Yes		No 🗌	Not Present		Not Shipped	¥
Custody seals intact on sample bottles?		Yes		No 🗀	N/A	5		
Chain of custody present?		Yes	lacksquare	No 🗆				
Chain of custody signed when relinquished and rec	eived?	Yes	\checkmark	No 🗀				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗌				
Samples in proper container/bottle?		Yes	\mathbf{Z}	No 🗌				
Sample containers intact?		Yes	\checkmark	No 🗆				
Sufficient sample volume for indicated test?		Yes	\square	No 🗀				
All samples received within holding time?		Yes	\mathbf{Z}	No 🗀				
Water - VOA vials have zero headspace?	No VOA vials subm	nitted	V	Yes 🗌	No []		
Water - Preservation labels on bottle and cap match	h?	Yes		No 🗆	N/A ☑]		
Water - pH acceptable upon receipt?		Yes		No 🗀	N/A 🔽	j		
Container/Temp Blank temperature?		16	_	<6° C Acceptab				
COMMENTS:			١	If given sufficien	t time to cool.			
							•	
								=======================================
Ollent contacted De	ite contacted:			D				
Client contacted . Da	ite contacted.				son contacted			
Contacted by:	garding:							
Comments:								
Corrective Action								

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	TPH Method 8015Β (Gas/Diesel) TPH (Method 418.1) EDB (Method 504.1) EDC (Method 8260) 8310 (PMA or PAH) 8260Β (VOA) 8260Β (VOA) 8270 (Semi-VOA) Antreples (Y or N)		× ×	× ×	× ×					S:			iny sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time: Standard Rush Project Name: TANK 116 SPILL SITE Project #: 06 17 08	Project Manager: (3A) Sampler: Sample Fig. 19 Container Preservative HEAL No. 2 NONE	2	2	ONX2 NONE	700				Received by / / / Remarks	Represend by		If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratonies. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.	
Client: WESTERN REFINING PAddress: GALLUP	ckage: Indicate and the state of the state	1-30 1-116-061708-0155 800xx	6/17 1-30 1-116-061708-02558	3/17 1-30 111606108-0255	6/17 4=30/116-061708-0455 Box						Date: Time: Relinquished by	- 1	If necessary, samples submitted to Hall Environmental may be subcont



COVER LETTER

Friday, July 31, 2009

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0227 FAX (505) 722-0210

RE: T116

Dear Gaurav Rajen:

Order No.: 0907508

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 7/28/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 31-Jul-09

	Vestern Refining South	west, Gallup		·	L	ab Order:	0907508
Lab ID:	0907508-01			Co	llection Date	7/16/2009	2:00:00 PM
Client Sample ID:	T1160716090155				Matrix	: SOIL	
Analyses		Result	PQL	Qual U	Jnits	DF	Date Analyzed
EPA METHOD 8016	B: DIESEL RANGE C	RGANICS				· · · · · · · · · · · · · · · · · · ·	Analyst: SCC
Diesel Range Organ	ics (DRO)	27	10	n	ng/Kg	1	7/31/2009
Motor Oil Range Org	janics (MRO)	120	50	n	ng/Kg	1	7/31/2009
Surr: DNOP		67.3	61.7-135	9	%REC	1	7/31/2009
EPA METHOD 8019	5B: GASOLINE RANG	· E					Analyst: NSB
Gasoline Range Org	anics (GRO)	ND	5.0	n	ng/Kg	1	7/30/2009 2:41:54 PM
Surr: BFB	•	107	58.8-123	9,	%REC	1	7/30/2009 2:41:54 PM
Lab ID:	0907508-02			Co	ollection Date	: 7/16/200	9 2:15:00 PM
Client Sample ID:	T1160716090255					: SOIL	
Analyses		Result	PQL	Qual U	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE (RGANICS					Analyst: SCC
Diesel Range Organ	nics (DRO)	250	50	r	ng/K g	5	7/30/2009
Motor Oll Range Org	ganics (MRO)	250	250	. r	ng/Kg	5	7/30/2009
Surr: DNOP		77.9	61,7-135	9	%REC	5	7/30/2009
EPA METHOD 801	5B: GASOLINE RANG						Analyst: NS E
Gasoline Range Org	ganics (GRO)	ND	5.0	•	ng/Kg		7/30/2009 3:12:28 PM
Surr: BFB		102	58.8-123	Ç	%REC	1	7/30/2009 3:12:28 PM
Lab ID:	0907508-03			C	ollection Date	: 7/16/200	9 2:25:00 PM
Client Sample ID:	T1160716090355				Matrix	: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE (DRGANICS					Analyst: SCC
Diesel Range Organ		190	10	•	mg/Kg	1,	7/30/2009
Motor Oil Range Org	ganics (MRO)	ND	50		mg/Kg	1	7/30/2009
Surr: DNOP		83.5	61.7-135		%REC	1	7/30/2009
EPA METHOD:801	5B: GASOLINE RANG						Analyst: NSE
Gasolíne Range Org	ganics (GRO)	ND	5.0		mg/Kg	1	7/30/2009 3:43:00 PM
Surr: BFB	v	97.6	58.8-123		%REC	1	7/30/2009 3:43:00 PM

Qualifiers	
	٠

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 31-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

T116

Work Order:

0907508

Analyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RPDLim	it Qual
Method: EPA Method 8016B: D Sample ID: MB-19724	iesel Range	Organics MBLK			Batch ID: 19724	Analysis Date:	7/29/2009
Diesel Range Organics (DRO)	ND	mg/Kg	10				
Motor Oil Range Organics (MRO) Sample ID: LCS-19724	ND	mg/Kg <i>LCS</i>	- 50		Batch ID: 19724	Analysis Date:	7/29/2009
Diesel Range Organics (DRO) Sample ID: LCSD-19724	35.49	mg/Kg <i>LCSD</i>	10	71.0	64.6 116 Batch ID: 1972 4	Analysis Date:	7/29/2009
Diesel Range Organics (DRO)	41.25	mg/Kg	10	82.5	64.6 116	15.0 17.4	
Method: EPA Method 8015B; G	asoline Ran	. •			D. (.) (D	Australa Batan 77	20/2022 2.47:22 DM
Sample ID: MB-19740	ND	MBLK	. 0		Batch ID: 19740	Analysis Date: 7/3	30/2009 8:17:32 PM
Gasoline Range Organics (GRO) Sample ID: LCS-19740	ND	mg/Kg LCS	5.0		Batch ID: 19740	Analysis Date: 7/3	30/2009 7:16:37 PM
Gasoline Range Organics (GRO) Sample ID: LCSD-19740	30.59	mg/Kg LCSD	5.0	112	64.4 133 Batch ID: 19740	Analysis Date: 7/3	30/2009 7:47:11 PM
Gasoline Range Organics (GRO)	30.13	mg/Kg	5.0	110	69.5 120	1.52 11.6	

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU			Date Receive	d:	7/28/2009
Work Order Number 0907508			Received by	r: AT	\mathcal{C}
Checklist completed by:	ne St	1	Sample ID I. 7/28/09	abels checked by:	Initials
Signature		Date	1120101		
Matrix:	Carrier name	Client drop-off	<u>f</u>		
Shipping container/cooler in good condition?		Yes 🗹	No 🔲	Not Present	
Custody seals intact on shipping container/coole	er?	Yes 🗌	No 🗆	Not Present	Not Shipped 🗹
Custody seals intact on sample bottles?		Yes 🗹	No 🗌	N/A []	
Chain of custody present?		Yes 🗹	No 🗆	•	•
Chain of custody signed when relinquished and	received?	Yes 🗹	No 🗌		
Chain of custody agrees with sample labels?		Yes 🗹	No 🗌		
Samples in proper container/bottle?		Yes 🗹	No 🗌	•	
Sample containers intact?		Yes 🗹	No □		
Sufficient sample volume for indicated test?		Yes 🗹	No 🗀		
All samples received within holding time?		Yes 🗹	No 🗀		Number of preserved bottles checked for
Water - VOA vials have zero headspace?	No VOA vials sub	mitted 🗹	Yes 🗔	No 🗆	pH:
Water - Preservation labels on bottle and cap m	atch?	Yes 🗌	No 🗆	N/A ✓	**************************************
Water - pH acceptable upon receipt?		Yes 🗌	No 🗆	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?		8.6°"	<6° C Accepta		
COMMENTS:		•	If given sufficie	nt time to cool.	
				•	
Client contacted	Date contacted:		Pe	rson contacted	
Contacted by:	Regarding:				
Contacted by.	Regarding		 - 		,
Comments:					
					
		• _			
					
Corrective Action					, , , , , , , , , , , , , , , , , , , ,
•					

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com /kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Requesit	EDE (Method 504.1) EDC (Method 8260) 8310 (PNA or PAH) Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8270 (Semi-VOA) TON (AO N)	*	¥	*					data will be clearly notated on the analytical report
Brush 4901 Haw 4901 Haw 505-	RAJEN HEAL No. Type TPH (Method 418.1) TPH (Method 418.1)	Nove	NON E -2	NONE -3				Received by: 1/23/08/emarks:	Received by: credited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report
Tum-Around Time To Standard Project Name:	Project Manager: Container Project Manager:	116 0716 07 07 55 15802 NE	1x802	32				1 Par	Infrommental may be subcontracted to other ao
Chain-of-Custody Record Client: WESTERN REFINING Address: GALLUP	email or Fax#: OA/OC Package: Standard □ Level · □ Other: □ EDD (Type) □ Date □ Time Sam	7/16 2:00 TI16	716 2=19 MILLEC	2/16 2:25 11/60	-			28 8:40	Date: Relinquished by:





GALLUP REFINERY

2009 AUG 28 AM 10 50

August 25, 2009

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Dear Carl:

It is a pleasure to send you our final report for our Tank 116 spill of Ultra Low Sulfur Diesel which we have cleaned up.

As you will note in the report, we excavated soil from within our berm area up to two feet. As there are active pipelines in the area, and ongoing work activity, we found it difficult to excavate any further near the pipelines, and had to cover our excavation with clean soil to prevent any hazard to workers in the area. This covering was done before our second set of laboratory results had arrived, for safety reasons. Our first set of laboratory results showed levels of DRO around 50,000 ppm. After excavation the DRO levels were of the order of 4000-6000 ppm (no BTEX was detected). As these levels were below 2 feet, we believe they did not come from the recent Tank 116 spill. We have conducted a small test at one of these locations of passive venting, using a perforated pipe to get air into the ground. The levels below the perforated pipe have fallen from 4700 ppm to 190 ppm. With your concurrence, we could now place more such perforated pipes in the area and we believe we will be able to reduce all the areas that were found to have DRO levels around 4000-6000 ppm to below concern. If we place many such perforated pipes we will also get concurrence (as needed) from the NMED's Air Quality Bureau.

We look forward to your response at your earliest convenience,

Sincerely, Gaurav Rajen <u>District I</u>
1625 N. French Dr., Hobbs, NM 88240
<u>District II</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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Revised October 10, 2003 abmit 2 Copies to appropriate

Form C-141

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

Release Notification and Corrective Action **OPERATOR** Final Report Initial Report Name of Company Western Refining Southwest Inc. Contact Gaurav Rajen Address I-40 Exit 39, Jamestown, NM 87347 Telephone No. 505-722-0227 Facility Name Gallup Refinery Facility Type Oil refinery Surface Owner Western Refining Mineral Owner Western Refining Lease No. LOCATION OF RELEASE Township Feet from the North/South Line Feet from the East/West Line Unit Letter Section Range County 23&33 15W McKinley Latitude 35°29'22" Longitude 108°25'24" NATURE OF RELEASE Type of Release Ultra-Low Sulfur Diesel (ULSD) Volume of Release 45 barrels Volume Recovered 12 barrels (500 (1890 gallons) final estimate gallons) estimate Source of Release Overflow from Tank 116 Date and Hour of Occurrence Date and Hour of Discovery 4/24/2008; 4/24/2008; 2:00 am 2:50 am (approximately) Was Immediate Notice Given? If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division: Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone) By Whom? Gauray Rajen and Cheryl Johnson Date and Hour 4/24/2008 (approximately) 11:00 am Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. Not applicable Yes No If a Watercourse was Impacted, Describe Fully.* Not applicable Describe Cause of Problem and Remedial Action Taken. * At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled ULSD onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Describe Area Affected and Cleanup Action Taken.* The affected area within the berm had a surface area originally estimated as approximately 500 square feet with some vertical penetration of the ULSD. Through excavation and sampling, this area has a final estimate of approximately 1000 square feet, and of 2 feet depth. An affected area of approximately 500 feet in length and average 5 feet wide (ranging between 2-10 feet depending on the amount of pooling of the spilled material) lay along the service road. The material on the road surface penetrated to a depth of 3 inches (maximum) into the underlying surface as the road surface is partially paved. A truck with a vacuum pump was used to collect free ULSD product from within the berm and on the service road. Absorbent material was placed on the spill along the road; and this area was isolated through the use of barricades. In further cleanup actions, contaminated soils were excavated, confirmatory environmental samples were collected and analyzed, and all contaminated materials disposed off in accordance with applicable regulations at a permitted landfill. Details are provided in the attached report. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Printed Name: Mark B. Turri Approved by District Supervisor: Title: Refinery Manager - Gallup Approval Date: Expiration Date: E-mail Address: mark.turri@wnr.com Conditions of Approval: Attached 🔲

Attach Additional Sheets If Necessary

Phone: 505-722-3833

Date: 8-20-2009

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

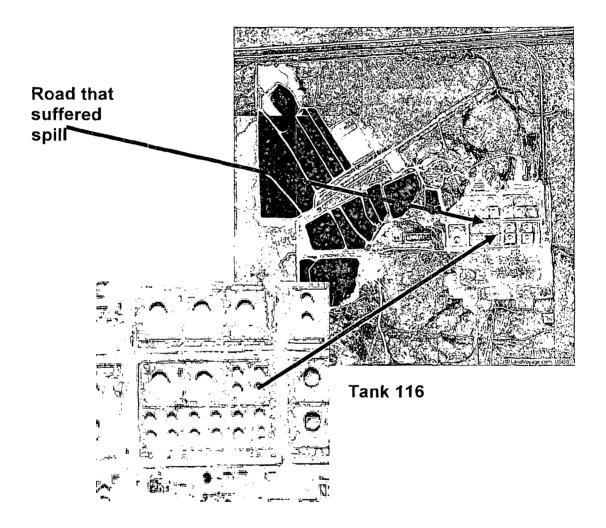
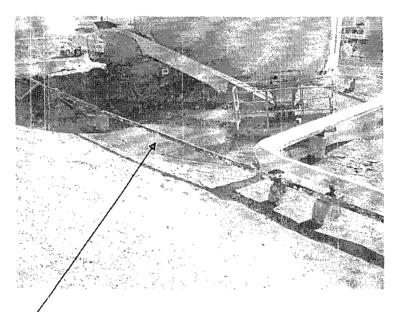


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

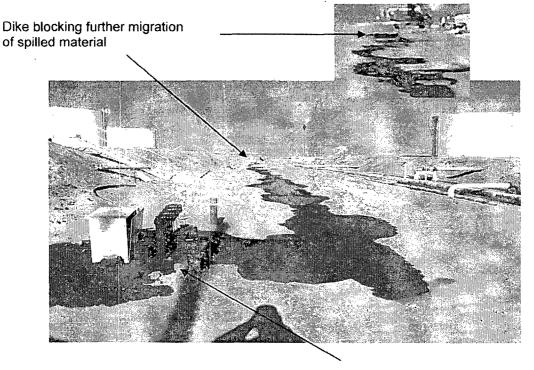
At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.



Area around Tank 116, Tank 115, and within the berm affected by the ULSD spill

Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road



Material emanating from drain valve on the foam line

Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.

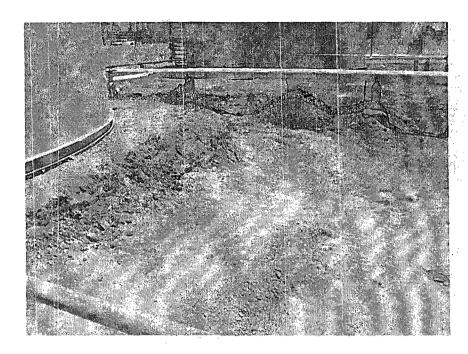


Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.

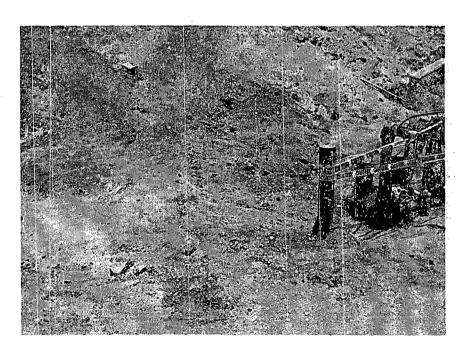


Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank

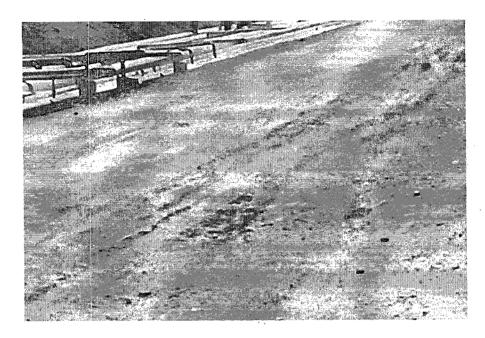


Figure 6: Preliminary clean-up of road which had experienced run-off of product.

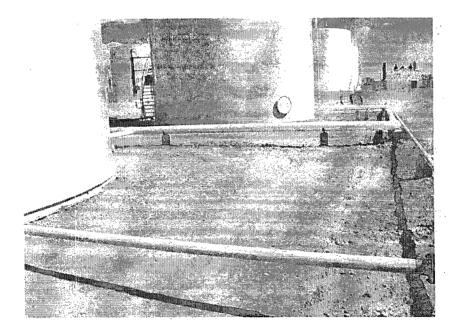


Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan - Tank 116

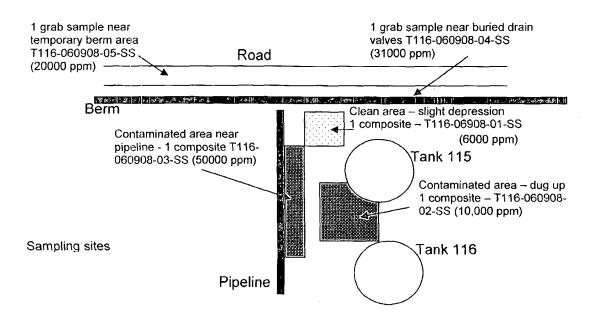


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan – Tank 116

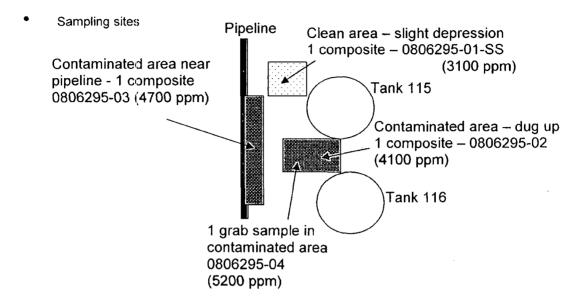


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 – 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

 We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1 foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours – this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

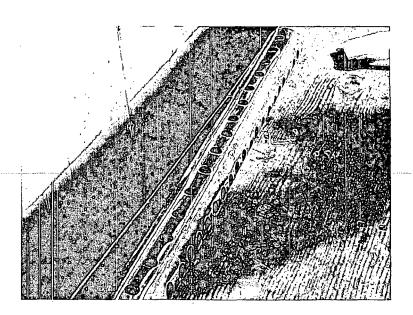
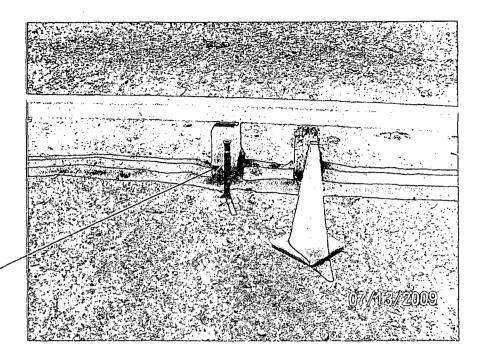


Figure 10: Perforated pipe that has been constructed



Perforated pipe placed into the ground

Figure 11: Photograph of emplaced pipe – the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. This level is now 190 ppm. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

Sampling Plan – Tank 116

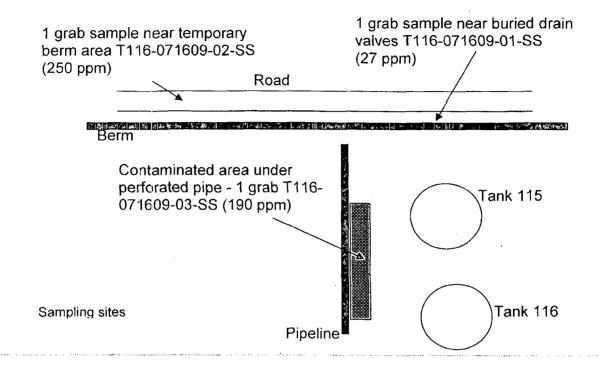


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 - 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

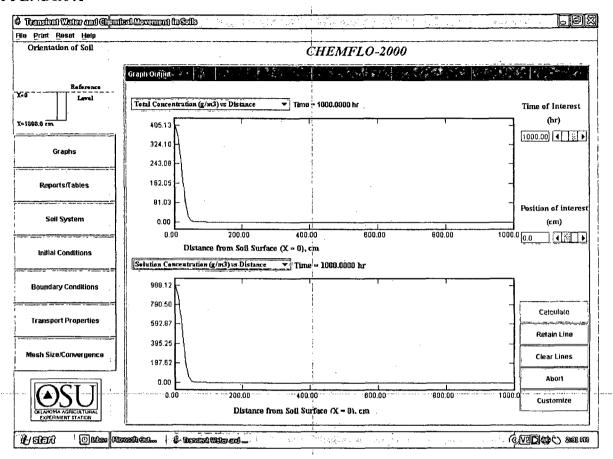
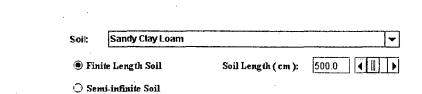


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

CHEMFLO-2000



Angle of Inclination, (degrees):

90

Layer	Thickness (cm)	Conductivity Function	Water Characteristic Function	Organic Carbon (g/g)	Bulk Density (Mg/m3)	
1	500.0	van Genuchten	van Genuchten	0.014	1.62	
		K _S (cm/hr) = 1.31	$\theta_s(v/v) = 0.39$			
		$\alpha (1/cm) = 0.059$	$\theta_{\rm r}({\rm v/v}) = 0.1$			
		n = 1.48	α (1/cm) = 0.059	•		
			n = 1.48		1	

Figure A.2: Assumed soil parameters

Figure A.3: Assumed chemical transport properties



COVER LETTER

Friday, June 13, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank-116-Spill Site

Dear Gaurav Rajen:

Order No.: 0806136

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 6/10/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682

ORELAP Lab # NM100001



Date: 13-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Lab Order:

0806136

CASE NARRATIVE

[&]quot;S" flags denote that the surrogate was not recoverable, or elevated, due to sample dilution or matrix interferences.

Date: 13-Jun-08

CLIENT: Project:	Western Refining South Tank-116-Spill Site	west, Gallup			or and to the last	La	b Order:	0806136
Lab ID:	0806136-01	******			Collect	on Date:	6/9/2008	9:00:00 AM
Client Sample ID	: T-116-060908-01-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	15B: DIESEL RANGE O	RGANICS						Analyst: SCC
Diesel Range Orga	nics (DRO)	6000	500		mg/Kg		50	6/12/2008 7:15:26 PM
Motor Oll Range Or	ganics (MRO)	ND	2500		mg/Kg		50	6/12/2008 7:15:26 PM
Surr: DNOP		0	61.7-135	S	%REC		50	6/12/2008 7:15:26 PM
Lab ID:	0806136-02				Collecti	on Date:	6/9/2008	9:05:00 AM
Client Sample ID:	T-116-060908-02-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Orga	nics (DRO)	10000	200		mg/Kg		20	6/12/2008 7:49:50 PM
Motor Oil Range Or	ganics (MRO)	ND	1000		mg/Kg		20	6/12/2008 7:49:50 PM
Surr: DNOP		135	61.7-135	S	%REC		20	6/12/2008 7:49:50 PM
Lab ID:	0806136-03				Collecti	on Date:	6/9/2008	9:10:00 AM
Client Sample ID:	T-116=060908-03-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL FANGE OF	RGANICS						Analyst: SCC
Diesel Range Organ	nics (DRO)	50000	1000		mg/Kg		100	6/12/2008 8:24:14 PM
Motor Oil Range Or	ganics (MRO)	ND	5000		mg/Kg		100	6/12/2008 8:24:14 PM
Surr: DNOP		0	61.7-135	S	%REC		100	6/12/2008 8:24:14 PM
ab ID:	0806136-04		- Anna Carlotta	O MOLETICA PO	Collection	on Date:	6/9/2008	9:15:00 AM
Client Sample ID:	T-116-060908-04-SS			•		Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
PA METHOD 801	5B: DIESEL RANGE OF	IGANICS						Analyst: SCC
Diesel Range Organ	ics (DRO)	31000	500		mg/Kg		50	6/12/2008 9:33:04 PM
Motor Oil Range Org	anics (MRO)	ND	2500		mg/Kg		50	6/12/2008 9:33:04 PM
Surr: DNOP	• • •	0						

O	110	11	fie	rs:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

2

Date: 13-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Lab Order:

0806136

Lab ID:

ranchisera manifest factories amangame

Collection Date: 6/9/2008 9:20:00 AM

Client Sample ID: T-116-060908-05-SS

0806136-05

Conceilon Date: 07

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	20000	1000		mg/Kg	100	6/12/2008 10:07:28 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	6/12/2008 10:07:28 PM
Surr: DNOP	0	61.7-135	S	%REC	100	6/12/2008 10:07:28 PM

Qualiflers:

Value exceeds Maximum Contaminant Level

E Value above quantitation range

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCI. Maximum Contaminant Level

RL Reporting Limit

3

Page 2 of 2

Date: 13-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Work Order:

0806136

Analyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RPI	OLimit Qual
Method: EPA Method 8015B: D	lesel Range	•					
Sample ID: MB-16175		MBLK			Batch ID: 16176	Analysis Date:	6/12/2008 5:32:13 PM
Diesel Range Organics (DRO)	ΝD	mg/Kg	10				
Motor Oil Range Organics (MRO)	ND	mg/Kg	50				
Sample ID: LCS-16175		LCS			Batch ID: 16175	Analysis Date:	6/12/2008 6:06:34 PM
Diesel Range Organics (DRO)	38.04	mg/Kg	10	76.1	64.6 116		•
Sample ID: LCSD-16175		LCSD			Batch ID: 18175	Analysis Date:	6/12/2008 6:41:01 PM
Diesel Range Organics (DRO)	35.48	mg/Kg	10	71.0	64.6 116	6.98 17	.4

Qualiflers:

Page 1

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU			Date Received	l:	6/10/2008		
Work Order Number 0806136	\sim			Received by:	ARS		
Checklist completed by:	Mi		Lelle	Sample ID lai	bels checked	by: Initials	-
Matrix:	Carrier name	Fed	<u>Ex</u>				
Shipping container/cooler in good condition?		Yes	Ø	No 🗌	Not Present		
Custody seals intact on shipping container/coo	ler?	Yes	\checkmark	No 🔲	Not Present	☐ Not Shipped	
Custody seals intact on sample bottles?		Yes	\checkmark	No 🗆	N/A		
Chain of custody present?		Yes	\checkmark	No 🗀			
Chain of custody signed when relinquished and	d received?	Yes	V	No 🗌			
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗀			
Samples in proper container/bottle?		Yes	lacksquare	No 🗌			
Sample containers intact?		Yes	\checkmark	No 🗀			
Sufficient sample volume for indicated test?		Yes	\mathbf{Y}	No 🗌			
All samples received within holding time?		Yes	V	No 🗆			
Water - VOA vials have zero headspace?	No VOA vials subm	nitted	$ \mathbf{V} $	Yes 🗌	No 🗌		
Water - Preservation labels on bottle and cap r	natch?	Yes		No 🗀	N/A 🗹		
Water - pH acceptable upon receipt?		Yes		No 🗆	N/A 🗹		
Container/Temp Blank temperature?			1°	<6° C Acceptable	•	•.	
COMMENTS:				If given sufficient	time to cool.		
					====		
Client contacted	Date contacted:			Perso	on contacted		
Contacted by:	Regarding:						
Comments:							
to the state of th							
				•			
			T				
Corrective Action							
							-

HALL ENVIRONMENTAL ANALYSIS LABORATORY	www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	izel)	o sa2) eid\sea	+ TPH (C) 5810 (A) 1082 (A) 1082 (A) 1082 (A) 1082 (A) 1082 (A) 1082	od 8 bood 6 ood 6 ood 6 ood 6 ood 6 ood 6 ool 6	BTEX + M- BTEX + M- BTEX + M- TPH (Methorenth (Methore	× ×	*	*	*	X					Remarks:		Il recessary, samples submitted to Hall Environmental may be subcontracted to other accredited laborationes. This serves as notice of this possibility. Any sub-contracted data will be clearly on the analysis record
Tum-Around Time: © Standard □ Rush	Project Name: TANK-116-591.LL SITE	Project #: T-116-0609-08	Project Manager: CAURAV	RASEN	Sampler: CUERYL SOMNSON	ange kengsalman	Container Preservative HEAL No. Type and # Type $O\&6$ 13 G	2 NONE	2 NONE -	80xx2 NONE -3	Sax 2 NONE -4	105 x 2 NCWE -S	-				80 01 9 01 6 00 8	Received by:	acted to other accredited laboratories. This serves as notice of this pa
Record !∧ ਓ	6	201	5057120210	OA/QC Package: © Standard	□ Other Sc		Date Time Sample Request ID (6/9/08 9-00-80 J-116-66008-01-55 8	C/2/08 9-05 AM TILL-06090B-02-55 8	3/9/08 9.10 AM MILLS -060908-03-55	~	11 JULY 163 PIZO FMT 116-060908-0655 8 9 05 x 2				·	00 ATM	elinquished by:	If necessary, samples submitted to Hall Environmental may be subconfit



COVER LETTER

Wednesday, June 25, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-3833

FAX (505) 722-0210

RE: Tank 116 Spill Site

Dear Gaurav Rajen:

Order No.: 0806295

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 6/19/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Lab Order:

0806295

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_S, SAMPLE 0806295-01A: DNOP not recovered due to dilution

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Client Sample ID: T-116-061708-01SS

Collection Date: 6/17/2008 1:30:00 PM

Project:

0806295-01

Lab ID:

Tank 116 Spill Site

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	3100	200		mg/Kg	20	6/21/2008 10:51:57 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	6/21/2008 10:51:57 AM
Surr: DNOP	0	61.7-135	s	%REC	20	6/21/2008 10:51:57 AM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: BFB	90.5	84-138		%REC	20	6/25/2008 4:21:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Toluene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Ethylbenzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Xylenes, Total	ND	2.0		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: 4-Bromofluorobenzene	87.7	81.4-117		%REC	20	8/25/2008 4:21:31 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
 - Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Project:

Tank 116 Spill Site

Lab ID:

0806295-02

Client Sample ID: T-116-061708-02SS

Collection Date: 6/17/2008 1:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGI	ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	4100	100	mg/Kg	10	6/21/2008 11:26:21 AM
Motor Oil Range Organics (MRO)	ND	500	mg/Kg	10	6/21/2008 11:26:21 AM
Surr: DNOP	88.8	61.7-135	%REC	10	6/21/2008 11:26:21 AM
EPA METHOD 8015B: GASOLINE RAI	NGE		•		Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 4:51:31 AM
Surr: BFB	93.5	84-138	%REC	20	6/25/2008 4:51:31 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Ethylbenzene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 4:51:31 AM
Surr: 4-Bromofluorobenzene	91.1	81.4-117	%REC	20	6/25/2008 4:51:31 AM

Qualiflers:

- Value exceeds Maximum Contaminant Level
- E . Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 4

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Tank 116 Spill Site

Project: Lab ID:

0806295-03

Client Sample ID: T-116-061708-03SS

Collection Date: 6/17/2008 1:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	4700	200		mg/Kg	20	6/21/2008 12:00:45 PM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	6/21/2008 12:00:45 PM
Surr: DNOP	120	61.7-135		%REC	20	6/21/2008 12:00:45 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	6/25/2008 5:21:35 AM
Surr. BFB	92.4	84-138		%REC	20	6/25/2008 5:21:35 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		mg/Kg	20	6/25/2008 5:21:35 AM
Toluene	ND	1.0		mg/Kg	20	6/25/2008 5:21:35 AM
Ethylbenzene	, ND	1.0		mg/Kg	20	6/25/2008 5:21:35 AM
Xylenes, Total	ND	2.0		mg/Kg	20	6/25/2008 5:21:35 AM
Surr: 4-Bromofluorobenzene	89.0	81.4-117		%REC	20	6/25/2008 5:21:35 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E Value above quantitation range

Analyte detected below quantitation limits

Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

В Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Tank 116 Spill Site

Project: Lab ID:

0806295-04

Client Sample ID: T-116-061708-04SS

Collection Date: 6/17/2008 4:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual U	Inits	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	5200	200	m	ıg/Kg	20	6/21/2008 1:09:31 PM
Motor Oil Range Organics (MRO)	ND	1000	m	ng/Kg	20	6/21/2008 1:09:31 PM
Surr: DNOP	96.8	61.7-135	%	REC	20	6/21/2008 1:09:31 PM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	m	ıg/Kg	20	6/25/2008 5:51:32 AM
Surr: BFB	102	84-138	%	REC	20	6/25/2008 5:51:32 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0	m	ıg/Kg	20	6/25/2008 5:51:32 AM
Toluene	ND	1.0	m	g/Kg	20	6/25/2008 5:51;32 AM
Ethylbenzene	ND	1.0	m	g/Kg	20	6/25/2008 5:51:32 AM
Xylenes, Total	ND	2.0	m	g/Kg	20	6/25/2008 5:51:32 AM
Surr: 4-Bromofluorobenzene	101	81.4-117	%	REC	20	6/25/2008 5:51:32 AM

Qualiflers:

Value exceeds Maximum Contaminant Level

E Value above quantitation range

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 25-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Work Order:

0806295

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPD	Limit Qu	ıal
Method: EPA Method 8015B: D	lesel Range	•								
Sample ID: MB-16266		MBLK			Batch	ID: 16266	Analysis Da	ate:	6/20/2000	3 1:24:03 AM
Diesel Range Organics (DRO)	ND	mg/Kg	10							
Motor Oil Range Organics (MRO)	ND	mg/Kg	50							
Sample ID: LCS-16266		LCS			Batch	ID: 16266	Analysis Da	ite:	6/20/2008	3 1:58:25 AM
Diesel Range Organics (DRO)	33.93	mg/Kg	10	67.9	64.6	116				
Sample ID: LCSD-16266		LCSD			Batch	ID: 16266	Analysis Da	ate:	6/20/2008	3 2:32:46 AM
Diesel Range Organics (DRO)	33.99	mg/Kg	10	68.0	64.6	116	0.177	17.4		
Method: EPA Method 8016B: G	asoline Ran	ge								
Sample ID: MB-16271		MBLK			Batch	ID: 16271	Analysis Da	ate:	6/25/2008	3 2:48:53 AM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0							
Sample ID: LCS-16271		LCS			Batch	ID: 16271	Analysis Da	ate;	6/25/2008	3 1:18:42 AM
Gasoline Range Organics (GRO)	24.56	mg/Kg	5.0	87.4	69.5	120				
Sample ID: LCSD-16271		LCSD			Batch	ID: 16271	Analysis Da	ate:	6/25/2008	3 1:48:48 AM
Gasoline Range Organics (GRO)	25.01	mg/Kg	5.0	89.2	69.5	120	1.82	11.6	;	
Method: EPA Method 8021B: V	olatiles									
Sample ID; ,MB-16271		MBLK			Batch	ID: 16271	Analysis Da	ate:	6/25/2008	3 2:48:53 AM
Benzene	ND	mg/Kg	0.050			** *********				
Toluene	ND	mg/Kg	0.050							
Ethylbenzene	ND	mg/Kg	0.050							
Xylenes, Total	ND	mg/Kg	0.10							
Sample ID: LCS-16271		LCS			Batch	ID: 16271	Analysis Da	ate:	6/25/2008	3 1:18:42 AM
Benzene	0.2928	mg/Kg	0.050	105	78.8	132				
Toluene	2.030	mg/Kg	0.050	101	78.9	112				
Ethylbenzene	0.4135	mg/Kg	0.050	103	69.3	125				
Xylenes, Total	2.465	mg/Kg	0.10	107	73	128			•	
Sample ID: LCSD-16271		LCSD		•	Batch	ID: 16271	Analysis Da	ite:	6/25/2008	1:48:48 AM
Benzene	0.2963	mg/Kg	0.050	106	78.8	132	1.19	27		
Toluene	2.037	mg/Kg	0.050	101	78.9	112	0.354	19		
Ethylbenzene	0.4119	mg/ Kg	0.050	103	69.3	125	0.388	10		
Xylenes, Total	2.470	mg/Kg	0.10	107	73	128	0.190	13		

Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU		Date Rec	eived:	6/19/2008
Work Order Number 0806295		Receive	d by: AT	MIN
Checklist completed by: Laue Signature	Co	Sample 1/9/08	ID labels checked by:	Initiate
Matrix: Ca	rrier name <u>FedEx</u>			
Shipping container/cooler in good condition?	Yes 🗹	No 🗆	Not Present]
Custody seals intact on shipping container/cooler?	Yes 🗌	No 🗀	Not Present	Not Shipped 🗹
Custody seals intact on sample bottles?	Yes 🗌	No 🗔	N/A 😾	9
Chain of custody present?	Yes 🗹	No 🗌		
Chain of custody signed when relinquished and received?	Yes 🗹	No 🗆		
Chain of custody agrees with sample labels?	Yes 🗹	No 🗀		
Samples in proper container/bottle?	Yes 🗹	No 🗀		
Sample containers intact?	Yes 🗹	No 🗀		
Sufficient sample volume for indicated test?	Yes 🗹	No 🗆		
All samples received within holding time?	Yes 🗹	No 🗔		
The same of the sa	A vials submitted 🗹	Yes 🗌	No 🗆	The state of the s
Water - Preservation labels on bottle and cap match?	Yes 🗌	No 🗆	N/A 🗹	
Water - pH acceptable upon receipt?	Yes 🗌	No 🗆	N/A 🗹	
Container/Temp Blank temperature?	16°	<6° C Accep	otable	
COMMENTS:		If given suffic	clent time to cool.	
Client contacted Date cont	acted:	F	erson contacted	
Contacted by: Regarding	g:			
Comments:			· 	
			,	
Corrective Action				

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	TPH (Method 418.1) EDB (Method 504.1) EDC (Method 8260)	*	× ×	* *					2			This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
4901 H	(Vlno asa), H9T + 38TM + XETB (GaseiO\saa) 83T08 bodfeM H9T	_						 		 arks:		/. Amy sub
	BTEX + MTBE + TMB's (8021)									Remarks:		possibility
Around Time: tandard Rush ct Name: TANK 116 SPILL SITE of #: 06 1708	Manager: SAURAU RASEN r. France and A Type OR0629S	NONE -1	NONE -2	NONE -3	NONE					Regioned by Charles	Received by:	accredited laboratories. This serves as notice of this p
Tum-Around Time: E Standard Project Name: TRNK 11 Project #: 06	Project Manager: (3AU) Sampler: Or fee: 22 Container Pre	Rax x 2		2	2)					œ	cted to other
Chain-of-Custody Record Client: NESTERN REFINING Address: GALLUP Phone #: 505 722 0227	email or Fax#: OA/QC Package: © Standard	SS10-80C190-911-71 08-11 C1/8		1/17 1:30 TIL 001708-0255	6/17 4 20 TILG-061708-0455 Boxx	,				71me:	Date: Time: Relinquished by:	if necessary, samples submitted to Hall Environmental may be subcomba

Air Bubbles (Y or N)



COVER LETTER

Friday, July 31, 2009

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0227 FAX (505) 722-0210

RE: T116

Dear Gaurav Rajen:

Order No.: 0907508

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 7/28/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 31-Jul-09

	Western Refining South T116	west, Gallup	برسانة فلنسا			La	b Order:	0907508
Lab ID:	0907508-01				Collecti	on Date:	7/16/200	9 2:00:00 PM
Client Sample ID:	T1160716090155					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE O	RGANICS						Analyst: \$C0
Diesel Range Orga	nics (DRO)	27	10		mg/Kg		1	7/31/2009
Motor Oil Range Or	ganics (MRO)	120	50		mg/Kg	•	1	7/31/2009
Surr: DNOP	- , ,	67.3	61.7-135		%REC		1	7/31/2009
EPA METHOD 801	5B: GASOLINE RANG	E .						Analyst: NSI
Gasoline Range Or	ganics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 2:41:54 PM
Surr: BFB		107	58.8-123		%REC		1	7/30/2009 2:41:54 PM
Lab ID:	0907508-02			+	Collecti	on Date:	7/16/200	9 2:15:00 PM
Client Sample ID:	T1160716090255					Matrix:		
Analyses		Result	PQL	Qual	Units	•	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE O	RGANICS						Analyst: SC
Diesel Range Orga	nics (DRO)	250	50		mg/Kg		5	7/30/2009
Motor Oil Range Oi	ganics (MRO)	250	250		mg/Kg		5	7/30/2009
Surr: DNOP		77.9	61.7-135		%REC		5	7/30/2009
EPA METHOD 801	5B: GASOLINE RANG	E						Analyst: NSI
Gasoline Range Or	ganics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 3:12:28 PM
Surr: BFB		102	58.8-123		%REC		1	7/30/2009 3:12:28 PM
Lab ID:	0907508-03				Collecti	on Date:	7/16/200	9 2:25:00 PM
Client Sample ID:	T1160716090355					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
	5B: DIESEL RANGE O							Analyst: SC
Diesel Range Orga	• •	190	10		mg/Kg		1.	7/30/2009
Motor Oil Range Or	ganics (MRO)	ND	50		mg/Kg		1	7/30/2009
Surr: DNOP		83.5	61.7-135		%REC		1	7/30/2009
EPA METHOD 801	5B: GASOLINE RANG	E						Analyst: NSI
Gasoline Range Or	ganics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 3:43:00 PM
Surr: BFB		97.6	58.8-123		%REC		1	7/30/2009 3:43:00 PM

Qua	li	ſī	e	rs	:
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- Value exceeds Meximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

Page 1 of 1

Date: 31-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

T116

Work Order:

0907508

Analyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RPD	DLimit Qual
Method: EPA Method 8015B: D	iesel Range						
Sample ID: MB-19724		MBLK			Batch ID: 19724	Analysis Date:	7/29/2009
Diesel Range Organics (DRO)	ND	mg/Kg	10				
Motor Oil Range Organics (MRO)	ND	mg/Kg	50				•
Sample ID: LCS-19724		LCS			Batch ID: 19724	Analysis Date:	7/29/2009
Diesel Range Organics (DRO)	35.49	mg/Kg	10	71.0	64.6 116		
Sample ID: LCSD-19724		LCSD			Batch ID: 19724	Analysis Date:	7/29/2009
Diesel Range Organics (DRO)	41.25	mg/Kg	10	82.5	64.6 . 116	15.0 17.	4
Method: EPA Method 8015B: G	asoline Ran	ge					
Sample ID: MB-19740	•	MBLK			Batch ID: 19740	Analysis Date:	7/30/2009 8:17:32 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0				
Sample ID: LCS-19740		LCS			Batch ID: 19740	Analysis Date:	7/30/2009 7:16:37 PM
Gasoline Range Organics (GRO)	30.59	mg/Kg	5.0	112	64.4 133		
Sample ID: LCSD-19740		LCSD			Batch ID: 19740	Analysis Date:	7/30/2009 7:47:11 PM
Gasoline Range Organics (GRO)	30.13	mg/Kg	5.0	110	69.5 120	1.52 11.	6

Qualisters:

- E Estimated value
- Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit

Н

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU	•	Date Receiv	eu.	772872009
Work Order Number 0907508	/)	Received b	by: AT	\mathcal{U}
Checklist completed by:	M	7/28/09	labels checked by:	Initials
Signature	Date	1/2010	L	
Matrix: Carrie	er name <u>Client drop-o</u>	ff		
	<u> </u>	<u></u>		
Shipping container/cooler in good condition?	Yes 🗹	No 🔲	Not Present 🔲	
Custody seals intact on shipping container/cooler?	Yes 🗌	No 🗌	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes 🗹	No 🗆	N/A	
Chain of custody present?	Yes 🗹	No 🗆		•
Chain of custody signed when relinquished and received?	Yes 🗹	No 🗌		
Chain of custody agrees with sample labels?	Yes 🗹	No 🗆		
Samples in proper container/bottle?	Yes 🗹	No 🗔		
Sample containers intact?	Yes 🗹	No 🗆 .		
Sufficient sample volume for indicated test?	Yes 🗹	No 🗌		
All samples received within holding time?	Yes 🗹	No 🗆		Number of preserve
Water - VOA vials have zero headspace? No VOA	vials submitted 🗹	Yes 🗌	No 🗌	bottles checked for pH:
Water - Preservation labels on bottle and cap match?	Yes	No 🗆	N/A ☑	
Water - pH acceptable upon receipt?	Yes 🗌	No 🗆	N/A 🗹	<2 >12 unless noted
Container/Temp Blank temperature?	8.6°"	<6° C Accepte		below.
COMMENTS:	•	If given sufficie	ent time to cool.	
				•
		=====		
Client contacted Date contact	oted:	Pe	erson contacted	
Contacted by: Regarding:				
Comments:		•		
Corrective Action	······································			
CONTROLLED ACTION			,	

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request	8310 (PNA or PAH) Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 82608 (VOA) 8270 (Semi-VOA) T (NOY)	* 4	*		If 1/23 (Semarks: This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
HALL ANAL www.hall 4901 Hawkins NE - Tel. 505-345-3975	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH Method 8015B (Gas/Diesel) TPH (Method 504.1) EDB (Method 504.1)				Remarks:
nd Time: Td	A JEN Servative HEAL No. Type 79/7508	NON E -2	NONE -3		Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by. Received by.
Ody Record Tum-Around Andrown Standa Project Nat Project Nat Project Nat Project #:	Project Mana Project Mana Sampler: Sampler: Sample Request ID Type and #	1×802	25		Time: Relinquished by:
Client WESTER Client WESTER Address: GALLい Phone#: 50572	email or Fax#: QA/QC Package: Standard Other EDD (Type) Date	716 2:15			Date: Time: Date: If necessary, samples

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

State of New Mexico

Form C-141

Energy Minerals and Natural Resources CEIVED

Revised October 10, 2003

Oil Conservation Division

1220 South St. Francis District Office in accordance

with Rule 116 on back

side of form

1220 S. St. France	cis Dr., Santa	Fe, NM 87505		1220 Sa	nta F	e, NM 875	/2 ይ ያለያ ነበሀህ <i>ለ</i> ሰና	28 mil tu 5	U wit	side of			
			Dale				rrective A	otion					
			Ker	ase monne	cano								
Name of Ca		otom Dofini	ma Cauth	anact Inc	 -	OPERA?		Initia	Report		Report		
							irav Rajen No. 505-722-022	7					
Facility Nar			1111 075				e Oil refinery						
Surface Ow	ner Wester	n Refining		Mineral ()wner	Western Ref	ning	Lease N	0.				
				LOCA	ATIO	N OF RE	LEASE.						
Unit Letter									County McKinley				
		Lati	tude3	5°29'22"		Longitud	le108°25'24	,,					
				NAT	TURE	OF REL	EASE						
Type of Rele	ase Ultra-Lo	ow Sulfur Die	sel (ULSI	D)			Release 45 barre			2 barrels (500	1		
Course of Do	Jacca Overf	low from Tan	k 116				ons) final estimate			overy 4/24/20	000.		
Source of Re	icase Over	iow irom Tan	K 110			4/24/2008 (approxim	2:00 am	2:50 am	TOUT OF DISC	overy 4/24/20	JU6,		
Was Immedi	ate Notice C		Yes [] No 🗌 Not R	equired.	If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division;							
By Whom? (Gaurav Raje	n and Cheryl	Johnson			Date and I	Iour 4/24/2008 (a	pproximately) 11:0	0 am				
Was a Water	course Read			7		If YES, V	olume Impacting	the Watercourse. No	ot applicable				
		L	Yes 2	7 140									
Describe Cat over. The Pu surrounded to in the ground containment	use of Problomp Operatory a berm. A loutside the dike on this	em and Reme r was notified lesser amour berm area, so road outside	dial Action and a transit of ULSIome ULSIone between the tank between the	nsfer was started O ran down withi O leaked out onto erm area, and the	into Tai n the fo a servi	nk 583. Tank am line leadin ce road runnin	16 had run over a ginto the tank. T	e Operations Shifter and spilled ULSD of hrough a drain valve k 116. The operator ther migration.	nto the soil version	within the area n line that is b	a buried		
The affected Through exc 500 feet in le road. The ma	area within avation and ength and avaterial on the	sampling, thi erage 5 feet v e road surface	a surface s area has vide (rang penetrate	arca originally es a final estimate or ing between 2-10 d to a depth of 3	of appro feet de inches (ximately 1000 pending on the maximum) in	square feet, and e amount of pooli o the underlying	eet with some vertic of 2 feet depth. An a ng of the spilled ma surface as the road s	affected area terial) lay al surface is par	of approximations of the service tially paved.	ately ce		
spill along the environment landfill. Deta	ne road; and al samples v ails are prov	this area was vere collected ided in the att	isolated the and analy ached rep	nrough the use of yzed, and all cont ort.	barrica aminate	des. In further d materials di	cleanup actions, sposed off in acco	ervice road. Absorbe contaminated soils v ordance with applica	vere excavat ible regulation	ed, confirmations at a permi	tory itted		
regulations a public health should their or the enviro	Ill operators or the environe honerations honerations	are required to ronment. The lave failed to	o report a acceptan adequately OCD accep	nd/or file certain ce of a C-141 rep y investigate and	release ort by ti remedia	notifications a he NMOCD rr ite contaminat	nd perform correct parked as "Final Ricon that pose a thi	inderstand that purs ctive actions for rele deport" does not reli- eat to ground water responsibility for co	ases which a eve the oper surface wa	may endanger ator of liabilit ter, human he	r ty		
Signature:	Nal	1. (u	1 <u>M</u> .				OIL CON	SERVATION	DIVISIO	N			
Printed Nam	e: Mark B.	Turri				Approved by	District Supervis	sor:					
Title: Refine	ry Manager	– Gallup				Approval Da	te:	Expiration I	Date:		· 		
E-mail Address: mark.turri@wnr.com Conditions of Approval:								Attached \(\square\)					

Date: 8-20-2009

Phone: 505-722-3833

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

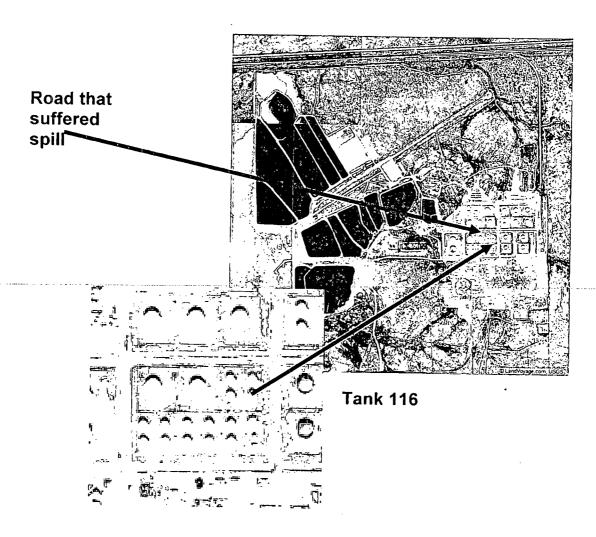
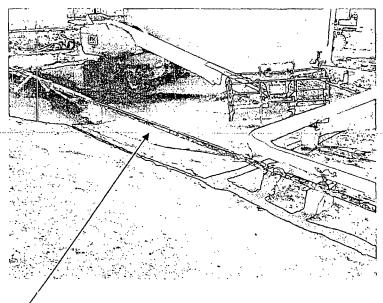


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

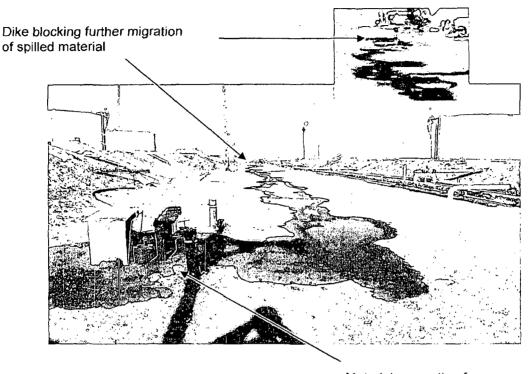
At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.



Area around Tank 116, Tank 115, and within the berm affected by the ULSD spill

Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road



Material emanating from drain valve on the foam line

Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.

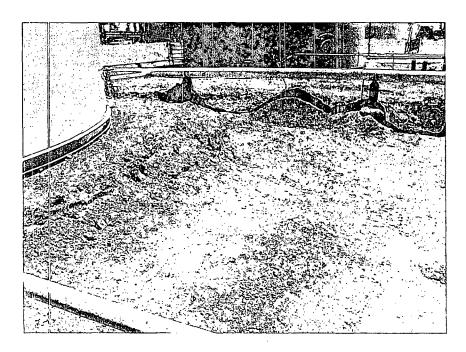


Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.

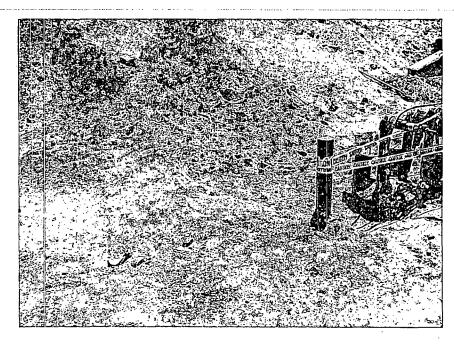


Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank

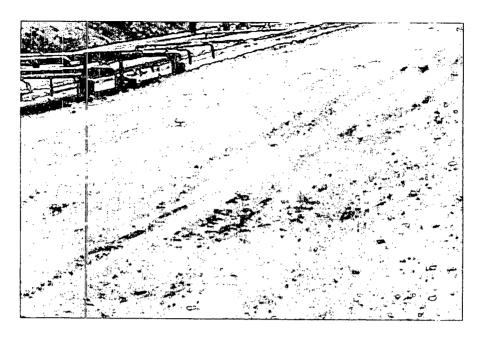


Figure 6: Preliminary clean-up of road which had experienced run-off of product.

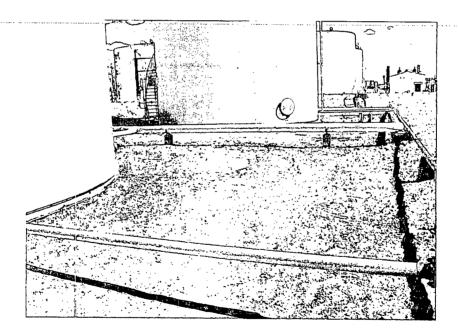


Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan – Tank 116

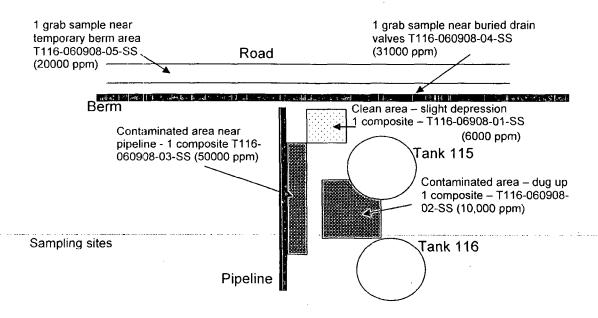


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan – Tank 116

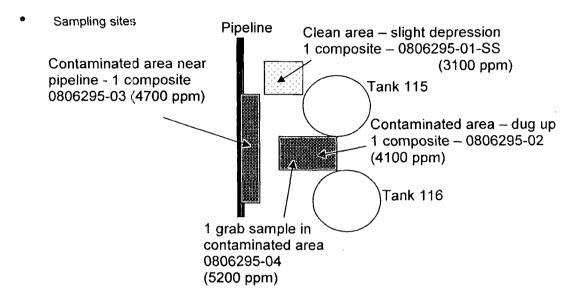


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 - 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

• We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1

foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours – this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

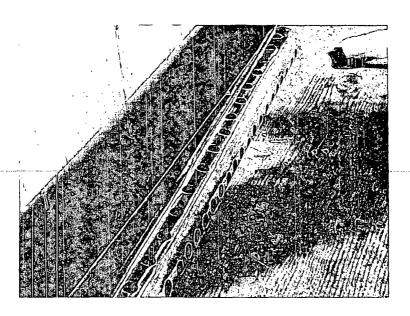


Figure 10: Perforated pipe that has been constructed

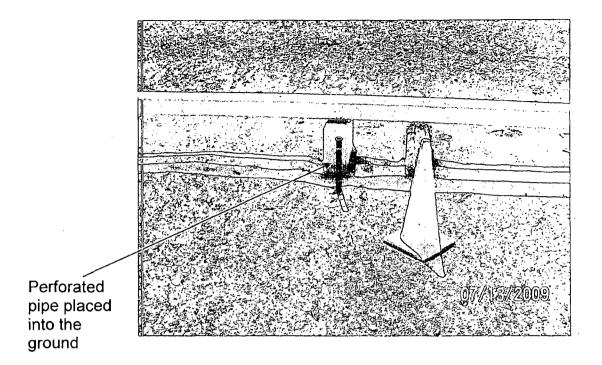


Figure 11: Photograph of emplaced pipe – the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. **This level is now 190 ppm**. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

Sampling Plan – Tank 116

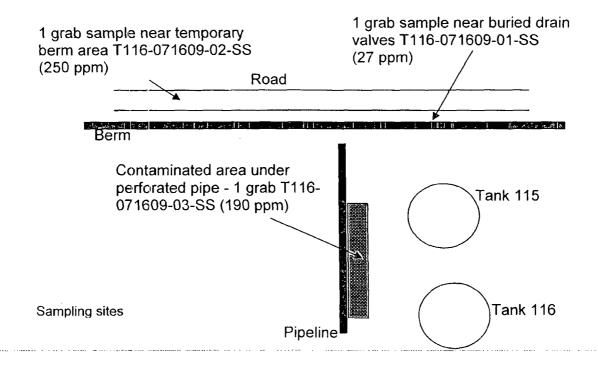


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 - 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

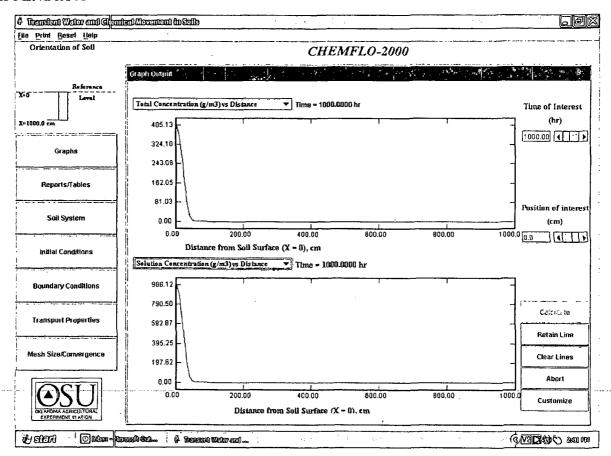


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

CHEMFLO-2000

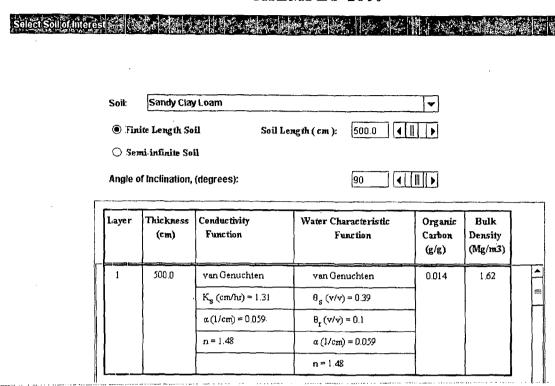


Figure A.2: Assumed soil parameters

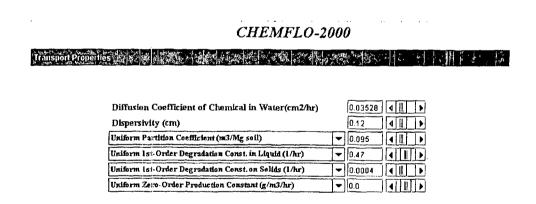


Figure A.3: Assumed chemical transport properties

Hall Environmental Analysis Laboratory, Inc.

Date: 13-Jun-08

	Western Refining Sout Tank-116-Spill Site						b Order:	0806136
Lab ID:	0806136-01				Collectio	n Date:	6/9/2008	9:00:00 AM
Client Sample 1D:	T-116-060908-01-S	S			P	Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE (ORGANICS						Analyst: SC
Diesel Range Organ	nics (DRO)	6000	500		mg/Kg		50 '	6/12/2008 7:15:26 PM
Motor Oll Range Or	ganics (MRO)	ND	2500		mg/Kg		50	6/12/2008 7:15:26 PM
Surr: DNOP		0	61.7-135	s	%REC		60	6/12/2008 7:16:26 PM
Lab ID:	0806136-02				Collection	n Date:	6/9/2008	9:05:00 AM
Client Sample ID;	T-116-060908-02-S	S			ī	Astrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	58: DIESEL RANGE C	RGANICS						Analyst: SCC
Diesol Range Organ	ilcs (DRO)	10000	200		mg/Kg		20	8/12/2008 7:49:50 PM
Motor Oll Range Or	ganics (MRO)	ND	1000		mg/Kg		20 '	6/12/2008 7:49:50 PM
Surr: DNOP		135	81,7-135	s	%REC		20	6/12/2008 7:49:50 PM
Lab ID:	0806136-03	······································			Collection	Date:	6/9/2008	9:10:00 AM
Client Sample ID:	T-116-060908-03-SS	5			V	latrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	58: DIESEL RANGE O	RGANICS						Analyst: SCC
Diesel Range Organ	ics (DRO)	50000	1000		mg/Kg		100	6/12/2008 8:24:14 PM
Motor Oil Range Org	ganics (MRO)	ND	5000		mg/Kg		100	6/12/2008 8:24:14 PM
Surr: DNOP		0	61.7-135	S	%REC		100	6/12/2008 8:24:14 PM
Lab ID:	0806136-04				Collection	Date:	6/9/2008	9:15:00 AM
Client Sample ID:	T-116-060908-04-SS	3			M	latrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	B: DIESEL RANGE O	RGANICS						. Analyst: SCC
Diosel Range Organ		31000	500		mg/Kg		50	6/12/2008 9:33:04 PM
Motor Oil Range Org		ND	2600		mg/Kg	,		6/12/2008 9:33:04 PM
			61.7-135					

Qualiflers:	•	Value exceeds Maximum	Contaminant Level		В	Analyte detecte	d in the asso	ociated Method Blank
	Е	Value above quantitation	range		н	Holding times	for preparati	on or analysis exceeded
	1	Analyte detected below qu	uentitation limits		MCL	. Maximum Con	taminant Lo	vel
	ND	Not Detected at the Repor	rting Limit		RL.	Reporting Limi	it	
	S	Spike recovery outside ac	cepted recovery limits	2				Page 1 of 2
Diesel Ra	nge Or	ganics (DRO)	20000	1000		mg/Kg	100	6/12/2008 10:07:28 PM
Motor Oil	Range	Organics (MRO)	ND	5000		mg/Kg	100	6/12/2008 10:07:28 PM
Surr: D	NOP		0	61.7-135	S	%REC	100	6/12/2008 10:07:28 PM

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	EX + MTBE + TME's (8021) EX + MTBE + TPH (Gas only) H Method 8015B (Gas/Diesel) H Method 418.1) Method 504.1) (Method 504.1)	28 28 28 28 28 28 28 28 28 28 28 28 28 2	*	*	* *				Remarks:	
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Chain-of-Custoc Client NESTERN (Address: GALL!)	OA/QC Package: © Standard © Other © EDD (Type) Date Tir	\exists		Ę		_			j					Date: 6/18	Date:	=
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Hall Environmental Analysis Laboratory, Inc.

Date: 31-Jul-09

	estern Refining South	west, Gallup				La	b Order:	0907508
Lab ID:	0907508-01	;;; -: -:		(Collecti	on Date:	7/16/200	9 2:00:00 PM
Client Sample ID:	T1160716090155					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units	•	DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE C	RGANICS						Analyst: SCC
Diesel Range Organi	cs (DRO)	27	10		mg/Kg		1	7/31/2009
Motor Oil Range Orga	-	120	50		mg/Kg	•	1	7/31/2009
Surr: DNOP	, ,	67.3	61.7-135		%REC		1	7/31/2009
EPA METHOD 8015	B: GASOLINE RANG	i E						Analyst: NSB
Gasoline Range Orga	anics (GRO)	ND	. 5.0		mg/Kg		1	7/30/2009 2:41:54 PM
Surr: BFB	, ,	107	58.8-123		%REC	•	·1	7/30/2009 2:41:54 PM
Lab ID:	0907508-02				Collecti	on Date:	7/16/200	9 2:15:00 PM
Client Sample ID:						Matrix:		
Analyses		Result	PQL	Qual	Units	•	DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE C	RGANICS						Analyst: SCC
Diesel Range Organi	cs (DRO)	250	50		mg/Kg		5	7/30/2009
Motor Oll Range Org	anics (MRO)	250	250		mg/Kg		5	7/30/2009
Surr: DNOP		77.9	61.7-135		%REC		5	7/30/2009
EPA METHOD 8015	B: GASOLINE RANG	Ε						Analyst: NSB
Gasoline Range Orga	anics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 3:12:28 PM
Surr: BFB		102	58.8-123		%REC	4	1	7/30/2009 3:12:28 PM
Lab ID:	0907508-03				Collecti	on Date:	7/16/200	9 2:25:00 PM
Client Sample ID:						Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE C	ORGANICS						Analyst: SCC
Diesel Range Organi		190	10		mg/Kg		1,	7/30/2009
Motor Oil Range Org	anics (MRO)	ND	50		mg/Kg		1	7/30/2009
Surr: DNOP		83.5	61.7-135		%REC		1	7/30/2009
EPA METHOD 8015	B: GASOLINE RANG	E						Analyst: NSB
Gasoline Range Org	anics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 3:43:00 PM
Surr: BFB		97.6	58.8-123		%REC		1	7/30/2009 3:43:00 PM

Qualifiers:	٠	Value exceeds	ľ
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Maximum Contaminant Level

Е Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit.

Spike recovery outside accepted recovery limits

- Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 1 of 1

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU-	٦ .		Date Received	l:	7/28/2009
Work Order Number 0907508			Received by:	AT	$\mathcal{N}_{\mathcal{L}}$
Checklist completed by:	in Si	Date	Sample ID la 7/28/09	bels checked by	ritials V-J
Matrix:	Carrier name	Client drop-off			
Shipping container/cooler in good condition?		Yes 🗹	No 🔲	Not Present (
Custody seals intact on shipping container/cool	ler?	Yes 🗌	No 🗆	Not Present (Not Shipped
Custody seals intact on sample bottles?		Yes 🗹	No 🗆	N/A [
Chain of custody present?		Yes 🗹	No 🗀		,
Chain of custody signed when relinquished and	received?	Yes 🗹	No 🗆		
Chain of custody agrees with sample labels?		Yes 🗹	No 🗆		
Samples in proper container/bottle?		Yes 🗹	No 🗌		
Sample containers intact?		Yes 🗹	No 🔲 .		·
Sufficient sample volume for indicated test?		Yes 🗹	No 🗆		
All samples received within holding time?		Yes 🗹	No 🗆		Number of preserved
Water - VOA vials have zero headspace?	No VOA vials subr	milted 🗹	Yes 🗌	No 🗆	bottles checked for pH:
Water - Preservation labels on bottle and cap n	natch?	Yes 🗌	No 🗆	N/A 🗹	
Water - pH acceptable upon receipt?		Yes 🗌	No 🗆	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?		8.6°"	<6° C Acceptable	9	Delow.
COMMENTS:		• 1	f given sufficient	time to cool.	
·					
Client contacted	Date contacted:		Perso	on contacted	
Contacted by:	Regarding:				
Comments:					
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Corrective Action					. • • •
ON FACILITY ACTION					
					

	Air Bubbles (Y or N)				T										
HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com wkins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107					-		_		-		_	-	}		
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Chavez, Carl J, EMNRD

From: Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent: Friday, August 13, 2010 3:46 PM

To: Van Horn, Kristen, NMENV; Van Horn, Kristen, NMENV

Cc:Chavez, Carl J, EMNRDSubject:API OVERFLOW 073010Attachments:C-141 INITIAL 073010.pdf

Dear Kristen and Hope,

The following is a submittal of the initial C-141 for the API overflow that occurred on July 30, 2010 in accordance with state regulations. A formal report will be forth coming.

Thanks,

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

* Attach Additional Sheets If Necessary

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

	Release Notification and Corrective Action														
						OPERAT	ГOR	⊠ In	tial Report	Final Report					
		estern Refin	ing			Contact Bec									
Address I-4		n Refining (Gallup)			Facility Typ	No.(505) 722-02	258	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						
		ii iteiiiiig (Сапар)			racinty ryp	e Remiery								
Surface Ow	ner			Mineral C	wner			No.							
				LOCA	TIO	N OF REI	LEASE								
Unit Letter	Section	Township	Range	Feet from the	North	/South Line	Feet from the	East/West Line	County						
	28	15 N	15 W						McKinley						
			L	atitude_35° 29'	030"	Longitude	e108° 24' 04	0"							
						OF RELI									
Type of Rele		ater Mixture					Release 230 bbls		Recovered 205						
Source of Re	lease API					Date and H 7/30/2010;	lour of Occurrent		d Hour of Discov 010; 1800	ery					
Was Immedi	ate Notice (Given?				If YES, To		1730/2	710, 1800						
		\boxtimes	Yes [No 🗌 Not Re	equired			n/Van Horn/Mon	zeglio; OCD (Pov	well)					
By Whom? F						Date and H			7 hrs); 8/2 (0745	hrs)					
Was a Water	course Read	ched?	Yes 🗵	1 No.		If YES, Vo	lume Impacting	the Watercourse.							
10 111															
Il a Watercoi	urse was Im	pacted, Descr	ibe Fully.	N/A											
Due to a hear was operating excess will be be discharged	vy rain even g properly a e sent to the d into the fi	t the time of t baker tanks.	an overflo he inciden The baker s. Howeve	w at 1745 hrs and it. The maximum tank system is de r, the influx of sto	API des	sign flow ratin to accommoda	g is 500 gpm. If a	a rain event excellevents by allow	eds the design flo ng any API over	w rating, any flow volumes to					
Around the A	VPI and with		nments of	ten.* all five baker tank back to the API v											
regulations a public health should their or or the enviro	Il operators or the environerations homent. In a	are required to ronment. The ave failed to a	o report ar acceptant adequately OCD accep	is true and comp nd/or file certain rece of a C-141 report investigate and restance of a C-141	elease n ort by th emediat	otifications ar e NMOCD m e contaminati	nd perform correct arked as "Final R on that pose a thr	ctive actions for report" does not reat to ground wa	eleases which ma elieve the operate ter, surface water	ay endanger or of liability , human health					
	/1	2/	\supset			OIL CON	SERVATIO	N DIVISION	-						
Signature:	-()		ans			Approved by	District Supervis	or:							
Printed Nam	e: Beck La	rsen													
Title: Enviro	nmental En	gineer				Approval Dat	e:	Expiration	n Date:						
E-mail Addre	E-mail Address: Thurman,larsen@wnr.com						Conditions of Approval:								
Date: 8/13/2	2010	Ph	one: (505)	722-0258											

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Monday, August 02, 2010 8:07 AM

To:

Powell, Brandon, EMNRD Chavez, Carl J, EMNRD

Cc: Subject:

FW: API Overfow NOTIFICATION

Brandon and Carl,

Here are the details on API Overflow this weekend.

Thanks,

From: Larsen, Thurman

Sent: Saturday, July 31, 2010 1:49 PM

To: Van Horn, Kristen, NMENV; 'Monzeglio, Hope, NMENV'

Subject: API Overfow NOTIFICATION

Dear Ms Van Horn and Ms Monzeglio,

This e-mail is to act as a notification of an API overflow incident that occurred yesterday, Friday, July 30.

At about 1745 hrs (545 PM) the API began to overflow due to a heavy rain. It continued to overflow until 1905 hrs (705PM). Crews were immediately dispatched to begin cleanup efforts as soon as the API stopped overflowing. It is estimated to be 5 bbls but the exact quantity is still under investigation.

Notifications: Verbal Notifications were given to the following:

E-form Notification: submitted at 1315 hrs, Saturday, July 31

Verbal (Msg); Brandon Christenson at 1320 hrs, Saturday, July 31, 2010 Verbal (Msg): Kristen Van Horn at 1324 hrs, Saturday, July 31, 2010 Verval (Msg): Hope Monzelglio at 1327 hrs, Saturday, July 31, 2010

Follow-up e-mail submitted to Kristen Van Horn and Hope Monzeglio at 1345 hrs, Saturday, July 31

If you need to contact me or require additional information, please feel free to contact me at (505) 722-0258 A C-141 will follow.

Sincerely,
Beck Larsen
Environmental Engineer
Western Refining (Gallup Refinery).

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Tuesday, April 27, 2010 11:47 AM

To:

Monzeglio, Hope, NMENV

Cc:

Chavez, Carl J, EMNRD; Van Horn, Kristen, NMENV; Powell, Brandon, EMNRD

Subject:

Sour Naphtha Line Leak

Attachments:

SOUR NAPHTHA CHARGE LINE-C141 Initial.pdf

Dear All,

The following is the Initial C-141 for the Sour Naphtha Line Leak that occurred on Saturday, April 24, 2010. Please feel free to contact me if you have any questions. I may be contacted at (505) 722-0258 or via my cell at (505) 862-1749. Sincerely,

Beck Larsen

Environmental Engineer

Western Refining (Gallup Refinery)

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505 Form C-141
Revised October 10, 2003

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

1220 S. St. Francis St., Santa Fe, 11	11.1 0 7 5 0 5		Sa	anta Fe	, NM 875	05		n Sending and a colonia	**************************************		5160 01 101		
Release Notification and Corrective Action													
OPERATOR Initial Report Final Report													
Name of Company Western	n Refining	<u> </u>			Contact Bec				1				
Address I-40 / Exit 39				,	Telephone N	lo.(505) 722-02	258						
Facility Name Western Ref	fining (Ga	llup)			Facility Typ	e Refinery							
Surface Owner			Mineral (Owner				Lease No.					
			LOCA	ATION	OF REI	LEASE							
Unit Letter Section Tow	vnship F	Range	Feet from the		South Line	Feet from the	East/V	West Line	County				
28 1	15 N	15 W							McKinley				
20 1	15.11		stitudo 25° 20	, 020;	Longitud	e108° 24' 040			wicking	***			
		L					U _						
			NAT	TURE	OF RELI			r.,					
Type of Release Sour Naphth	ia Product I	line			Volume of (740 gallor	Release <18 b	obls	Volume F gallons)	Recovered <	18 bbis	s (740		
Source of Release						our of Occurrence	e	Date and	Hour of Dis 0 / 1100 hrs	covery			
Was Immediate Notice Given?		es 🗌	No 🗌 Not R	equired		Whom? NMED	(Steve			Ionzigl	io) / OCD		
By Whom? Beck Larsen		· · · · · · · · · · · · · · · · · · ·			Date and H	our 4/26/2010	/ 0830-0	0840					
Was a Watercourse Reached?		Yes ⊠	No		If YES, Vo	lume Impacting t	the Wate	ercourse.					
If a Watercourse was Impacted					1					·			
Tra videroodise vias impactor	a, 12001100												
Describe Cause of Problem an At approximately 1100 hrs on from the cooling towers and le Operations and Off-site persor to the NHT Unit was previous (H2S) levels in this area indica concrete road area was excava Maintenance personnel are in	4/24/2010, eaking under nnel took in sly blocked ated "non-cated. Once the the process	, sour na erground mmediat in, there detect" a the conce of repla	phtha was disco I. This line area in the action in order the control liquid to monitored using the control line.	is part of to identi I that was ig an LEI d, a vacu	the process a fy the product in the line w meter. Once um truck rem	rea going undern et and to stop any eas escaping unde e the leak was sto loved 740 gallons	eath the flow or or the co opped fro s of sour	road leadir leak. It wa nerete slab/ om sour nap naphtha fr	ng to the tanks determined roadway. Hy ohtha (NHT) om this exca	k farm I that the ydroge Chargo ivated	area. he flow going on Sulfide e) line, the area.		
Describe Area Affected and C (740 gallons) was removed fro						o 10 cu yards) wa	is excav	ated for dis	posal. Sour	naphth	a product		
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.											ndanger f liability ıman health		
12/						OIL CON	SERV	ATION	DIVISIO	N			
Signature:	_												
					Approved by	District Supervis	or:						
Printed Name: Beck Larsen							 						
Title: Environmental Engineer	r				Approval Dat	e:		Expiration	Date:				
E-mail Address: Thurman.lars	sen@wnr.co	om		(Conditions of Approval: Attached								

Phone:(505) 722-0258

^{*} Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Friday, April 16, 2010 1:14 PM

To:

Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD

Cc:

Riege, Ed

Subject:

Response Letter- "Notice of Disapproval", "Cleanup Status for API Separator Overflows"

(September 5 and December 8, 2009)

Attachments:

NMED RESPONSE LETTER-041610.pdf

Dear Ms Monzeglio and Mr. Chavez;

Western Refining (Gallup) is submitting a Response Letter to address the NMED "Notice of Disapproval", "Cleanup Status for the API Overflows" that occurred on September 5 and December 8, 2009 that is due on April 16, 2010. In addition, this attachment includes the Interim Measures Plan that is due on April 19, 2010. The hard copies will be sent on today via Certified Mail (# 7008 2810 0000 4726 1727). If you should have any additional questions or concerns in this matter, please feel free to contact me at (505) 722-0258.

Sincerely, Beck Larsen Environmental Engineer Western Refining (Gallup Refinery) GALLUP

CERTIFIED MAIL: 7008 2810 0000 4726 1727

April 16, 2010

New Mexico Environmental Department (NMED) Hazardous Waste Bureau (HWB) 2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505 Attention: James P. Bearzi

New Mexico Energy Minerals and Natural Resources Department New Mexico Oil Conservation Division (NMOCD) 1220 South Saint Francis Drive Santa Fe, New Mexico 87505 Attn: Mr. Carl J. Chavez

Reference:

RESPONSE LETTER- "NOTICE OF DISAPPROVAL",

"CLEANUP STATUS FOR API SEPARATOR OVERFLOWS"

(SEPTEMBER 5, 2009 and DECEMBER 8, 2009)

WESTERN REFINING SOUTHWEST INC, GALLUP REFINERY

EPA ID NO. NMD000333211

HWB-GRCC-MISC

Dear Mr. Bearzi and Mr. Chavez;

Please accept the following letter in response to a letter from Mr. James Bearzi of the New Mexico Environmental Department (NMED) (Hazardous Waste Bureau (HWB) (March 4, 2010) that references API overflows that occurred on September 5, 2009 and December 8, 2009.

The following shall address the comments as identified by the New Mexico Environmental Department (NMED)/Hazardous Waste Bureau. Enclosed is the Interim Measures Work Plan for the control and prevention of overflows from the API that is due on April 19, 2010 as required according to the letter of March 4, 2010.

I. COMMENT 1-"Permittee must describe in detail the sampling collection methods and procedures that were used to collect the confirmation samples (eg., how were the samples collected, were they discrete or composite samples, how were any composite samples collected, what equipment was used (shovel, encore sampler) to collect the samples). The Permittee must also describe the decontamination process of the sampling equipment (eg., equipment was cleaned in a non-phosphate solution followed by a rinse using de-ionized water."

RESPONSE:

a. Sample Collection- Six inches of soil was removed at each of the fourteen (14) sample locations using a stainless steel (6") garden spade. Fourteen (14) discrete samples were

- collected in individual 8 oz glass jars at the indicated sample collection point locations as indicated on the initial Sampling Plan. (Figure 1)
- b. Sampling Equipment-A clean stainless steel (6 inch) garden spade was used to collect each sample. The sampler used clean latex gloves in order to minimize any cross contamination that may occur during the sampling event. After collecting an individual sample and before collecting the next sample, the latex gloves were replaced with a new pair of latex gloves.
- c. Decontamination Process or Procedures- The spade was decontaminated before and after each sample collection using an Alconox solution or Simple Green cleaner followed by a de-ionized water rinse.

II. COMMENT 2-"Permittee states "Gallup is proceeding to excavate contaminated soil based on the analysis received from Hall Environmental Laboratories." The Permittee must provide a schedule for when the additional sampling and clean up activities will be conducted and be completed.

RESPONSE: This project will be separated into two phases in order to assure the agency that an overflow condition will not occur.

Phase 1 is the installation of four (4) additional Baker Tanks as described in the Interim Measures Work Plan. The importance of this as the first step is to be able to handle any API overflows in order to assure that this will not occur. Tank installation has to be the first step because any API overflow will cause additional contamination in this same area that we are trying to remediate. Dirt Work has to be done to insure a solid foundation for the baker tanks. The dirt work and frac tank installation will be on a non-contaminated area north of the existing baker tank. Next, piping has to be fabricated. The four (4) frac tanks have to be delivered and placed at this location. Piping will then have to be connected to each frac tank. This phase should take up to two and one-half weeks to complete. (Refer to Attachment)

Phase 2 is the clean up activities around the API and other contaminated areas. All contaminated material including around the API is to be remediated. This soil will be put in roll-off boxes to be shipped off-site as Hazardous Waste. The clean up activities will take about two to two and one-half weeks to complete. Next, sampling will be conducted for the same sample locations as described in a previous location plot of December 8 Sampling Plan. It will take up to four weeks to receive analysis from Hall Environmental Laboratory with a normal turn-around. (Figure 1)

III. COMMENT 3-The Permittee must address the following regarding the "Confirmation Samples" figure that identifies the areas requiring additional excavation and confirmation sampling.

a. The figure shows two hatched areas: the blue hatch identifies the "Area of Possible Contamination" and the red hatch identifies that the "Area is Contaminated." The report indicates that the red hatch area is where additional excavation and confirmation sampling will occur. The Permittee must explain the difference between the red and blue hatch areas, and specifically why the "Area of Possible Contamination" does not require additional sampling."

RESPONSE: The "Red" hatch (Area is Contaminated) and the BLUE hatch (area of Possible Contamination) was based on the Total Petroleum Hydrocarbon (TPH) values greater than 200 mg/kg as determined from 2006 (2009) Soil Screening Levels (SSL). Areas that were greater than 200 mg/kg were considered to be a "HOT ZONE", i.e., shaded in "RED" hatch or "Area is Contaminated". Areas that were less than 200 mg/kg was considered to be "BLUE" hatch or "Area of Possible Contamination" Clean up efforts will be made for both "RED" and "BLUE" hatch areas. These areas do not determine if excavation is required, only which areas are more contaminated than others.

b. The area west of the Baker Tank is hatched, red indicating that additional excavation and confirmation sampling will occur; however, there are two small areas within the red hatch that are blue (west edge of the excavation and the southwest corner edge of the excavation), an area which indicates no further sampling will be conducted. It is not clear how the Permittee determined that these "blue" areas do not need additional excavation and sampling. Additionally, it is unclear how the Permittee determined the areas north and south of the sample location API-W-6 do not need additional excavation. The Permittee must explain how the borders between the "Area of Possible Contamination" and the "Area is Contaminated" were determined.

RESPONSE: The two small areas of concern are due to a drawing error. These two areas are all considered as contaminated, should have been identified as a red hatch area, and will also be excavated. Excavation and sampling of the areas north and south of the sample location API-W-6 will also be performed. A detailed description of the red and blue hatch areas was previously identified under comment (3 a) above.

c. Additional sampling is necessary to define the horizontal and vertical extent of contamination in areas where contaminants are still present. The Permittee must revise the Confirmation Sampling figure to address items a and b and propose additional sampling. The Permittee must be able to demonstrate that clean up of contamination surrounding the API separator and Baker Tank has been completed.

RESPONSE: The facility is in process of addressing the API overflow issue which is the cause of the contamination. An "Interim Measures Work Plan" is being submitted along with this report. This plan addresses the API overflow issues in more detail. Additional excavation and sampling will be conducted around the API and Baker Tanks both under the "BLUE" and "RED" hatch areas. (Figure 2)

IV. COMMENT 4- In NMED's September 15, 2009 letter regarding the Formal Report submittal to the September 5, 2009 API Separator Overflow, NMED directed the Permittee to provide steps that would be implemented to ensure overflow to the API separator do not continue to occur. On page 5 of the Report, the Permittee states "both of the API overflows were the direct result of inclement weather conditions that were beyond the control of the refinery. Gallup is in the design phase of a new "Stormwater Diversion Project" in order to eliminate overflows from the new API due to unexpected or inundated

stormwater discharges. This project will be composed of two (2) Stormwater diversion Tanks (T-27 and T-28) and additional diversionary tank. The new system will connect directly into the current stormwater system. A new twenty-four inch (24" pipe will connect the old system to the Stormwater Diversion Tanks (T-27 and T-28). The stormwater will be pumped from the diversion tanks (T-27 and T-28) to the new API."

The overflows were a direct result of the weather, which cannot be controlled by the Permittee; however, the Permittee can control how the overflows are handled so that the wastewater will not flow to the ground surface. The Stormwater diversion Project is no yet installed. Until it is, the API separator must prevent releases from the API separator to the ground surface. The Permittee must propose an interim measures in accordance with Section IV.B.6 (Interim Measure (IM)) of the Post-Closure Care Permit that will control and prevent all overflow from the API separator to the ground surface until the Stormwater diversion Project is installed and operational. The Interim Measures Work Plan is due to NMED on or before April 19, 2010.

RESPONSE: An "Interim Measures Work Plan for control and prevention of Overflow from the API Separator" has been prepared. The plan discusses the amendments to the API area through the use of four (4) additional frac tanks in conjunction with an existing frac tank. The Interim Measures Work Plan is being submitted in conjunction with this report. (Attachment)

- V. COMMENT 5- The following comments address the "Hall Environmental Laboratory Data Summary" Table.
 - a. NMED updated their Soil Screening Levels (NMED SSLs), (December 2009). The updated NMED SSLs must be applied to all future comparisons. The change in the December 2009 version of the NMED SSLs do not affect the information provided in this table with the exception of xylenes, for which the reported detection is below the NM SSL industrial value of 3,610 mg/kg. No revision to the Table is necessary.

RESPONSE: Changes have been adopted to use the December 2009 NMED Soil Screening Levels (SSL) for future comparisons. The 2006 SSL for Xylene was 82 mg/kg. The December 2009 SSL of 3610 mg/kg has been adopted. The table has been modified to reflect these changes. (Figure 3)

b. In the Table, the Permittee presents the chromium III value of 100,000 mg/kg. In the future, the Permittee must apply the chromium VI values unless chromium has been speciated or the Permittee can otherwise demonstrate the chromium present in the sample is chromium III. No revision is necessary as the chromium detections are below the industrial chromium VI value.

RESPONSE: According to the table, the 2006 SSL value for Cr(+3) is 100,000 mg/kg. This is the Soil Screening Level (SSL) not the Cr(+3) value. This value has been changed in accordance with the December 2009 SSL value of 1,570,000 mg/kg. The

maximum Cr(+3) value of 73 mg/kg is below either SSL versions (2006 or 2009). (Figure 3)

The 2006 SSL value for Cr(+6) is 3400 mg/kg. The 2009 SSL value for Cr(+6) is 2900 mg/kg. This value will be used in future comparisons. A maximum Cr(+3) value is well below either 2006 or the 2009 SSL values. (Figure 3)

c. The benzene standard in the table states "258 mg/kg". The standard in the NMED SSLs June 2006 is 25.8 mg/kg. No revisions to the Table us necessary since the benzene detection are below the NMED SSLs December 2009 industrial standard of 85.4 mg/kg.

RESPONSE: A decimal error was made in the original submittal reporting a SSL (2006 version) of 258 mg/kg for Benzene. This value should have been designated as 25.8 mg/kg as a SSL. This value has been changed to reflect a new SSL of 85.4 mg/kg. The new 2009 SSL will be applied in future comparisons. No revision to table is required. (Figure 3)

d. The "DRO" row under the brown shaded column titled "Cleanup Status" states "ok", indicating no additional cleanup is necessary. However, listed detection exceed the cleanup standard and additional cleanup activities are required. No revision is necessary as the locations that have detections above the cleanup standard are designated as requiring additional cleanup in the Report. The Permittee must ensure the text, tables, and figures are consistent with one another. No revisions are necessary.

RESPONSE: The SSL detection for TPH for both 2006 and 2009 is 200 mg/kg. According to the NMED tables, there are no SSL values for DRO, MRO, and GRO. However, the comparison will reflect a DRO, MRO, and GRO change based on the TPH values in the future. (Figure 3)

e. According to the laboratory reports, gasoline range organics (GRO) were not detected at the following sample locations: API-N-1, API-E-2, API-S-4, API-W-5, API-W-6, CHN-C-10, CHN-C-11, NBT-W-12, and NBT-E-14; however, the Table includes detections for these locations. The detections provided in the Table are the PQL values found in the laboratory reports. Since there were no detections, no revision is necessary. In the future, the Permittee must ensure the tables are consistent with the laboratory reports.

RESPONSE: The comparison chart submitted was based on an actual value to reflect any "Clean Up Status" as indicated in "Brown". Therefore, the lowest value that could be put in the table was a PQL. For future comparisons, if the value is a "non-detect, ND", the letters of "ND" will be put in table.

VI. SUMMARY- The comments as identified by the New Mexico Environmental Department (NMED)/Hazardous Waste Bureau were addressed in detail as indicated above. Enclosed is the Interim Measures Work Plan for the control and prevention of overflows from the API that is due on April 19, 2010 as required according to the letter of March 4, 2010.

VI. DOCUMENT ENCLOSURES/ATTACHMENTS:

The following enclosures or attachments have been included in order to provide the Agency with a visual reference in order to aid in a better understanding of the event surrounding the API overflows that include sampling. These enclosures include the following:

NMED correspondence letter of March, 2010 "Notice of Disapproval, Clean up Status for API Separator Overflows",

Figure 1- Sampling / Clean Up Plan

Figure 2- Drawing of the API area indicating the extent of overflow contamination,

Figure 3- Hall Environmental Laboratory Data Summary Spreadsheet (Corrected),

Attachment- Interim Measures Work Plan for Control and Prevention of Overflows from the API Separator- Installation of four (4) additional frac tanks, letter from NMED "Notice of Disapproval Cleanup Status for API Separator Overflows"

If you require additional information concerning this matter, please contact me at (505) 722-0258.

Sincerely,

Beck Larsen-CHMM, REM

Environmental Engineer

Western Refining (Southwest) (Gallup Refinery)

Enc: NMED correspondence letter of March 4, 2010

Figure 1- Sampling / Clean Up Plan

Figure 2- Drawing of the API area indicating extent of contamination

Figure 3- Hall Environmental Laboratory Data Summary Spreadsheet (Corrected)

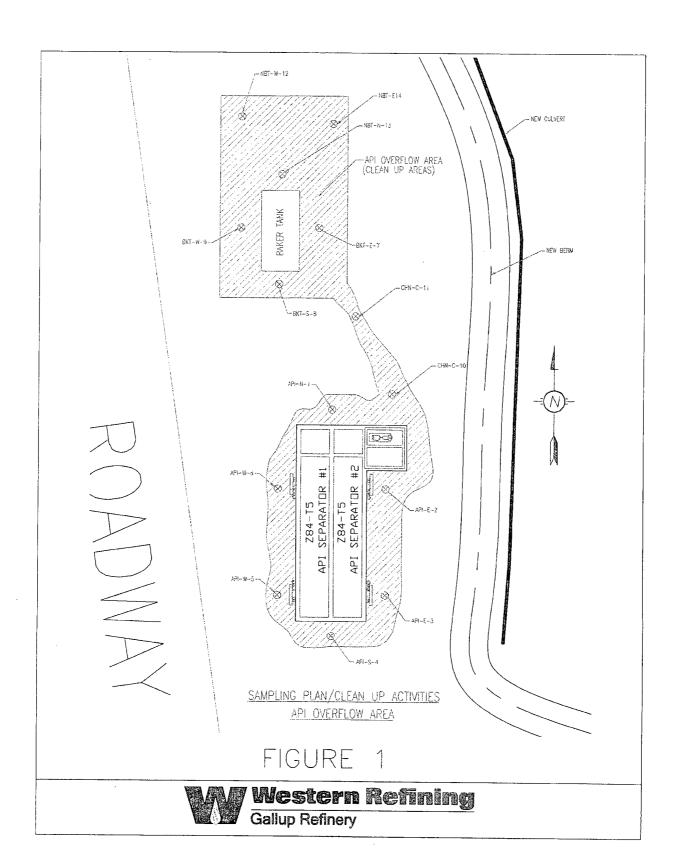
Attachment- Interim Measures Work Plan for Control and Prevention of Overflows from the API Separator- Installation of four (4) Additional Frac Tanks

Cc: Mr. Mark Turri, Gallup (Southwest), Refinery Manager

Mr. Ed Riege, Gallup (Southwest), Environmental Manager)

File

NMED (HWB)- Ms Hope Monzeglio



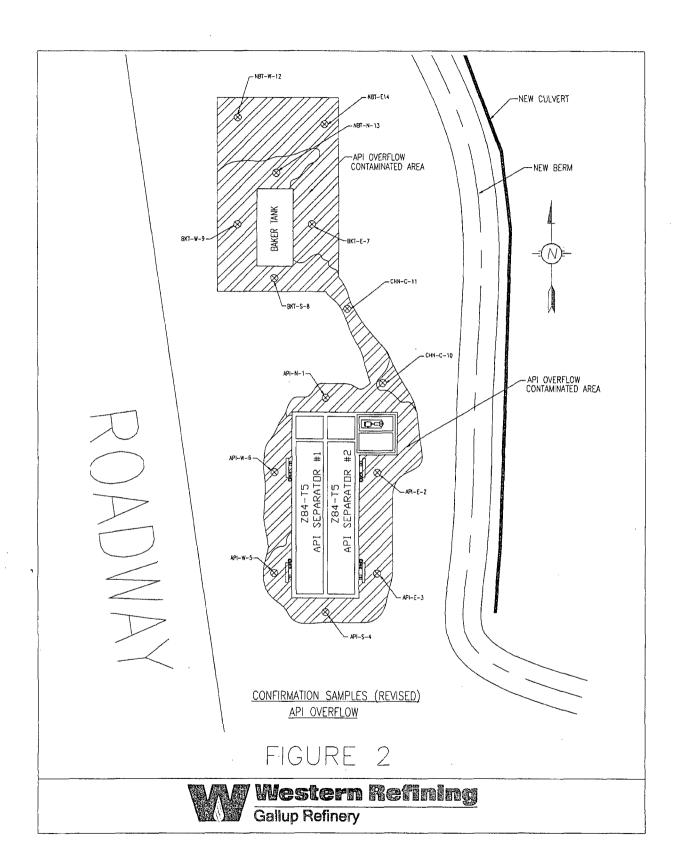


FIG 3

HALL ENVIRONMENTAL LABORATORY DATA SUMMARY (CORRECTED)

(API Spill on 12/08/09)

WED SOIL (2009) CLEANUP SCREENING STATUS LEVELS (marks)	8888	NA OK! NA OK! NA OK!	17.7 O.K.I. 224000 O.K.I. 1120 O.K.I.		800 O.K.! 49.9 O.K.! 5680 O.K.! 5680		85.4 O.K.I	385 O.K.I		252 O.K.I			MA O.K.I	NA O.K.I		24400 %%%%			252 O'KI
NMED SOL (2006) NMED SOL (2009) SCREENING SCREENING LEVELS (markq)	Z Z Z 20	WA WA NA	17.7 190000 564	100000 3400	800 100000 568 (5680) 568 (5680)		258 (25.8)	128	69.2	300	A W	N/A	62.1	62.1	82	26500	20500	30900 N/A	300
MAXIMUM NBT-E-14 CONTAMINATION FOUND	8700 8700 120 2300	0000	0 640 0	73	7.7 0.11 0		6.9	28	20 20	13	35	5.4	6.2	10	180	<u>.</u>	9.5	25.7 1.1 29	59
NBT-E-14 C	0 0 0 0		310	5.0	6.2														
NBT-N-13	720 390 120 210		350		0.067		0.25	2.6	0, 8, 0, 4,	0.81	3.0	0.69	1.0	1.3	19		0.65	68.0	0.24
NBT-W-12	110 120 32 100 78 ND ND		0 350		7.7 7 0.068				າຫ		e								
CHN-C-10 CHN-C-11 NBT-W-12 NBT-N-13	220 88 12 72 10 ND ND	AED	350 380		7.2 5.8 0.077				0.059		0.23								
 ************************************	2916 160 560 56 2300	ALYTICAL TEST PERFORMED	640	0.6	8.0		6.9	: 88 :	2 8	13	27	5.4	6.2	5 0	180		0.6	3.5	1.5
	1490 29 1100 ND 390	CAL TEST	360	7.6	5. B		0.91	5.1	77 7.9	5 (≥ %	4.1	3.5	3.0	98		2.0	0.23	2.5
ATION SAM	31 31 ND NO		200		5.6 0.071		0.15	0.28	0.31	0.24	0.71	0.82	0.13	0.12	2.0				
Sample ID: 1001093 (SOIL CONFIRMATI ∪E:2_APLE:3_APLS-4_APLW-6_APLW-6_BK	24	NO RCI AN	0 450		3 1.3			,	n (C		0 44		m				_		
S (SOIL C	210 0 210 D 210 N ND		0 130		3.3				1.1 0.16		5 0.34		2 0.13	en w	. o	σ	2 0.21	1.1	· თ
. 100109. -3 API-S-	0 8700 500 8700 ND ND 120 ND		380 480		3.5 4.		g	0.15			35 35		0.71 0.72		0.8	+	9.2		0.49 5
ample ID E-2 API-E	870 1620 870 1500 ND ND ND 120		200		5.7		C	0			4 9	c	o o	0.097			13	0.26	
Sample ID: 1001093 (SOIL CONFIRMATION SAMPLING API:N-1 APIE2 APIE3 APIS-4 API-W-6 API-W-6 BKT-E-7 BKT-S-8	777. 710 67 ND		420	9.0	1.9 0.048				0.36		5 6	7	0.22	0.055			0.47	2.	
Units	mg/Kg mg/Kg mg/Kg	deg F s.u. mg/Kg mg/Kg	ау/Ка ту/Ка ту/Ка	mg/Kg	mg/Kg mg/Kg mg/Kg mg/Kg		mg/Kg ma/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg mg/Kg	mg/Kg mg/Ka	mg/Kg	ma/Ka	mg/Kg	mg/Kg mg/Kg	mg/Kg
ANALYTES	TPH DRO MRO GRO		METALS		Pb Se Ag	OLATILES	Benzene Toluene	zene	ylbenzene	Naphthlene		mene)		n-propylbenzene sec-butylbenzene		SEMIVOLATILES Fluorene	rene	haphthalene	

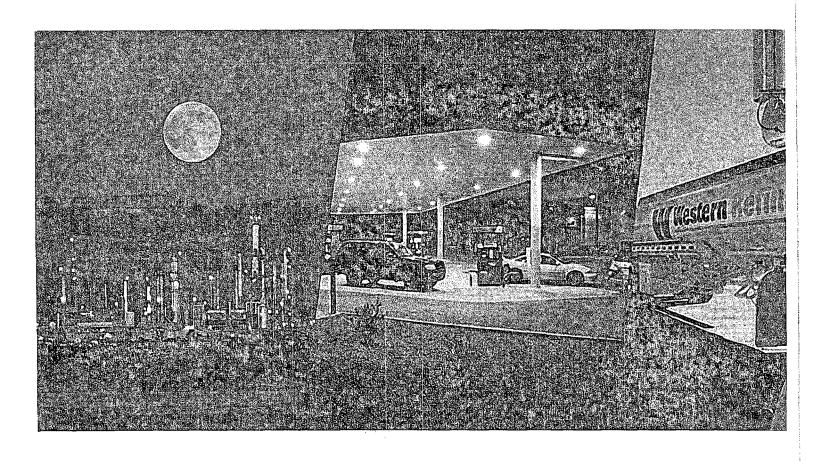
NOTE: BLANKS indicate a Non-detect (ND)

"Light Blue, citor are highlightis (DRC) vice a particular sample ID above
"Light Blue, citor are highlightis (DRC) vice a particular sample ID above
"Yellow color area highlightis the maximum contaminant for a particular sample ID above
"Clear" ingnity in a Nation of Soil Scient Lightis (nightis) for industrial Facilities for a particular contaminant
"Clear" ingnity in a NATUS indicates that clean to a nightis in a contaminant of a particular contaminant of a

NOTE: SCREENING GUIDELINES BASED ON AUGUST 2009 NMED TABLE

Interim Measures Work Plan for Control and Prevent of Overflows from the API Separator-Installation of Four (4) Additional Frac Tanks

Western Refining Gallup, New Mexico



April 2010

Attachment

Interim Measures Work Plan WESTERN REFINING SOUTHWEST, INC., GALLUP REFINERY EPA ID #NMD000333211 April 2010

Executive Summary

This report describes Western Refining's Interim Measures Work Plan to comply with Section IV.B.6 (Post-closure Care Permit) that will control and prevent all future overflows from the API separator to the ground surface until the Stormwater Diversion Project is installed and operational. Western Refining (Gallup Refinery) is in the design phase of a new Stormwater Diversion Project in order to eliminate these overflows from the new API due to unexpected or inundated stormwater discharges. The original Stormwater Diversion project is comprised of two (2) Stormwater Diversion Tanks (T-27 and T-28) having a capacity of 5000 barrels each. These tanks are to be utilized as additional storage capacity for potentially contaminated stormwater from the process unit areas.

There is one (1) frac tank (500 bbl capacity) in use that receives overflow from the API separator during excessive flow events. During normal situation, it has sufficient volume to prevent the API separator from overflowing on to the ground. In order to address excessive stormwater events, four (4) additional frac tanks with a capacity of 500 bbls each are being installed. This increase will allow for a total influx capacity of 2500 bbls of additional stormwater and process water to the API during heavy storm events.

The 2009 API overflows are primarily as a result of weather related issues. These overflows occurred on September 5 and December 8, 2009. These overflows occurred due to inundation of stormwater to the API unit causing the API to overflow from the top. This work plan will address this issue and corrections made to the API system in order to prevent this occurrence in the future.

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1.0 Introduction and Background

Western Refining-(Southwest)-(Gallup Refinery) has had a couple of API overflows during 2009 as a result of weather related issues. The API overflows occurred on September 5 and December 8, 2009. These overflows occurred due to inundation of stormwater to the API unit causing the API to overflow from the top. This work plan will address this issue and corrections made to the API system in order to prevent this occurrence in the future.

On September 5, 2009 another heavy rain and thunderstorm passed over the facility. Once again the API began overflowing from the top as a result of this event. The estimated quantity of oily water from this event was determined to be 230 bbls and 6 $\frac{1}{2}$ bbls of oil.

On December 8, 2009 another heavy rain and thunderstorm passed over the facility. In addition to excessive stormwater, the facility experienced a plant wide reduction in power that corresponded to a 15 to 20 percent power reduction. This power reduction translated to a total power failure to all units. This power failure caused the API began overflowing from the top as a result of this event. The estimated quantity of oily water from this event was determined to be 739 bbls and 7 ½ bbls of oil.

A working group including engineers, operators, management staff, including the refinery and maintenance managers was created to solve wastewater issues. This group meets on a bi-weekly basis in order to discuss API issues including overflows at the API. Action items are developed, evaluated, and implemented.

2.0 Current Conditions

This Interim Measures Work Plan is to comply with requirements of Section IV.B.6 (Post-closure Care Permit) in order to control and prevent all future overflows from the API separator to the ground surface until the Stormwater Diversion Project is installed and operational. Western Refining (Gallup Refinery) is in the design phase of a new Stormwater Diversion Project in order to eliminate these overflows from the new API due to unexpected or inundated stormwater discharges. The Stormwater Diversion project includes two (2) Stormwater Diversion Tanks (T-27 and T-28) having a capacity of 5000 barrels each. These tanks are to be utilized as additional storage capacity for potentially contaminated stormwater from the process unit areas.

The facility has one (1) frac tank with a capacity of 500 bbls located at the new API separator area that is used during excessive flow events from the process units. Under normal conditions, this frac tank is sufficient in volume in order to contain overflows from the API separator due to minor storm surges as a result of inclement weather. In order to address excessive storm events, Western Refining is in the process of installing four (4) additional frac tanks with a capacity of 500 bbls each providing a total of 2000 bbls additional capacity. The total frac tank storage allowable for overflow conditions will be 2500 bbls. This quantity exceeds the maximum capacity of any of the overflow volumes encountered during 2009. Completion of the Stormwater Diversion project will

allow for an additional influx capacity of 10000 barrels of potentially contaminated and contaminated stormwater to be diverted from the API separator.

3.0 Physical Changes

The existing frac tank (500 bbls) is connected to the new API separator. This tank collects overflow liquids from the API due to excess flow from the process units. The only design change to this set up is to add four (4) additional frac tanks (500 bbls each) to the existing system. The importance of this as the first step is to be able to handle any API overflows in order to assure that this will not occur. Tank installation has to be the first step because any API overflow will cause additional contamination in this same area that we are trying to remediate. Dirt Work has to be done to insure a solid foundation for the baker tanks. The dirt work and frac tank installation will be on a non-contaminated area north of the existing baker tank. Next, Piping has to be fabricated. Baker Tanks Co has to deliver four (4) frac tanks to this location. Piping will then have to be connected to each frac tank.

3.0 Schedule

Western Refining has prepared and is in the process of implementation of the Interim Measures Plan as directed by NMED/HWB in the previous correspondence of March 4, 2010. This frac tank installation should take up to three weeks to complete.

4.0 Summary

The important element of the Interim Measures Work Plan is to install and pipe four (4) additional frac tanks (500 bbl each) in conjunction to the existing frac tank (500 bbl) to the new API separator system in order to provide additional storage capacity during excess storm or API overflow event. The additional storage capacity will insure that the new API will not overflow to the ground in the future.

Appendix A: NMED's March 4, 2009 letter (Interim Measures Work Plan Requirements, Comment 4)



283 ROHANDSON Governor

DIANT BUNISH Lighterunt Gewöner

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardons Waste Bureau

2005 Rodes Park Drive East, Building 1 Sunta Fe, New Mortice 67505-6305 Phone (505) 476-5000 Fax (505) 476-5030

RON CORRS

CHRYSTED MASS - REYORN RECEBY REQUESTED

. Viaret 4, 2010

Mr. Le Riogo Environments: Manager Woshen Retining, Southwest Inc., Gallup Retining, Southwest Inc., Gallup Retining Route 3 Box 7 Gallup, New Mexico 87301 Mr. Book Larsen Environmental Engineer Western Refining, Southwest from Gallup Rothery Roate 3 Box 7 Caling, New Mexicos 87301

RE: POTICE OF DISAPPROVAL
CLEAN UPSTATUS FOR API SEPARATOR OVER FLOWS
(SEPTEMBER 5, 2009 & DECEMBER \$(2010) 2, 449
WESTERN REFLAING SOUTHWEST INC., GALLUP REFINERY
EPA ID NO. NMB600333211
EWB-GRCC-MISC

Dear Mosses, Riego and Lursetti

The New Mexico Taylorogicent Department (NMLD) has reviewed Western Retining Southwest Inc., Gr. Inp Retinory's (the Formittee) Cleanup States for Western Relining (Ouling Relinent) for 4PI Overflow on September 5, 2009 and API Overflow on December 8, 2009 (Report) Cated Sumary 25, 2010, and NMED hereby issues this Notice of Disapproval (NOD).

Comment !

On page 4, item of the Permittee states "[t]he sampler exceeded potentially contaminated soil of the locations as designated on the sampling plate to a maximum depth of 6 method. The sampleft followed proper descriptorilization procedures between all fourteen sample points in order to minimize any cross contamination. The samples were collected in an 8 oz jor for shipment to Hall Environmental Inocratory."

Mr. Ed Riege Gailup Refinery March 4, 2010 Page 2 of 4

The Permittee must describe in detail the sampling collection methods and procedures that were used to collect the confirmation samples (e.g., how were the samples collected, were they discrete or composite samples, how were any composite samples collected, what equipment was used (shove), encore sampler) to collect the samples). The Permittee must also describe the deconfirmation process of the sampling equipment (e.g., equipment was closued in a non phosphate solution followed by a time using dejonized water).

Continest 2

On page 5, the Permittee states "Gallup is precessing to excavate contaminated still based on the unalysis received from Hall Environmental Laboratories." The Permittee unust provide a schedule for when the additional sampling and clean up activities will be conducted and be completed.

Comment 3

The Permittee must address the following regarding the "Confirmation Samples" figure that identifies the area-requiring additional excavation and confirmation sampling.

- a. The figure shows two hatched areas: the blue hatch identities the "Area of Possible Contamination" and the red hatch identities that the "Area is Contaminated." The Report indicates that the red hatched area is where additional executation and confirmation sampling will occur. The Pennittee must explain the difference between the red and blue hatched areas, and specifically why the "Area of Possible Contamination" does not require additional sampling.
- b. The area west of the Baker Tank is hasehed, red indicating that additional excavation and confirmation sampling will occur; however, there are two small areas within the red batch that are blue (the west edge of the excavation and the southwest corner edge of the excavation), or area which indicates no further sampling will be considered. It is not clear how the Permittee determined that these "blue" areas do not need additional excavation and sampling. Additionally, it is undeer how the Permittee determined the areas poeth and south of comple location API-W-6 do not need additional excavation. The Permittee invite explain now the borders between the tArea of Possible Contamination" and the "Area is Contaminated" work determined.
- e. Additional sampling is necessary to define the horizontal and the vertical extent of contentional on in great where contaminants are said present. The Permittee must revise the Confirmation Sampling figure to address items a and brane propose additional sampling. The Permittee must be able to demonstrate that elecump of confirmation surrounding the AFI separator and Poker Tank Class been completed.

Mr. Ed Riege Gallup Rofinery March 4, 2010 Page 3 nf4

Сиписель 4

In NMED's September 15, 2009 letter regarding the Formal Report Submitted to the September 5, 2009 API September 15, 2009 API September 1

The overflows were a direct result of weather, which cannot be controlled by the Permittee; however, the Permittee can control how the overflows are handled so that the wasteward with not flow to the ground surface. The Stormwatch Diversion project is not yet installed. Usuallining API separator must prevent releases from the API separator to the ground surface. The Permittee must propose an interior measure in accordance with Section IV.B.6 (Interim Measures (Iva)) of the Post-Closure Care Famili that will control and prevent all overflows from the API separator to the ground surface until the Stormwater Diversion Project is installed and operational. The Interim Measures Work Flor is due to NVLD only or before April 19, 2010.

Comment 5

The following comments address the "Rai" Unvironmental Leboratory Data Securiary Table (Table).

- NMED updated their 5oil Screening Lovels (NMED SSLs). (December 2009). The updated NVF) SSLs must be applied to all future comparisons. The changes in the December 2009 version of the NMED SSLs in not affect the information provided in this table with the execution of xylones. For which the reported detection is below the NMESSL industrial value of 5,610 mg/kg. No revision to the Table is uccessery.
- b. In the Tuple, the Permitter presents the chronium III value of 100,000 mg/kg. In the fature, the Permitter must apply the chronium VI value unless chromium has been quesisted or the Permittee run otherwise demonstrate the byogunin present in the sample is chronium III. No recision is nonessary as sheighronium detections are below the industrial chromium VI og/ne.
- C. The hor year standard in the lable states "258 mg/kg." The shadard in the NMBD S87's Inde 2006 is 25.8 mg/kg. No revision to the Table is necessary shootne.

Mr. Ed Riege Gallup Reimery March 4, 1010 Page 1 of 4

benzene detections are below the NVLED SSLs December 2009 inclusifial standard of $35.4\,\mathrm{mg/kg}$.

- d. The "DRO" row under the brown shaded informs filled "Check OP STA(U,S" states "ok," indicating no additional clearup is necessary. However, listed detections exceed the elemany standard and additional elearup activities are required. No revision is necessary as the locations that have detections above the elemany standard are designated as recuiring additional clearup in the Report. The Permittoe must ensure the text, tables, and figures are exhibited with one amplier. No revisions are necessary.
- a. According to the inhoratory reports, gaseline range organics (GRO) were not described at the following sample locations: API-N-1, API-B-2, API-S-4, API-W-5, API-W-5, CHN-C-10, CHN-C-11, NBT-W-12, NBT-B-14; however, the Table includes detections for these locations. The detections provided in the Table are the PQI, values lound in the fatherstory reports. Since there were no detections, no revision is necessary. In the fathers, the Parameter must ensure the tables are consistent with the laboratory reports.

The Pennittee must address all comments requiring a response, and submit a response to NM2D on or before April 10, 2010. The Interim Measures, Work Flan (Comment 4) is also que April 19, 2010.

If you have questions please contact Kristen, Van Horn et 805-476-6048. .

Sincarely,

James P. Bearzi

Chief

Hazardous Waste Bureau

ect J. Kieling, NMED EWB

D. Cobrein, NMED HWB

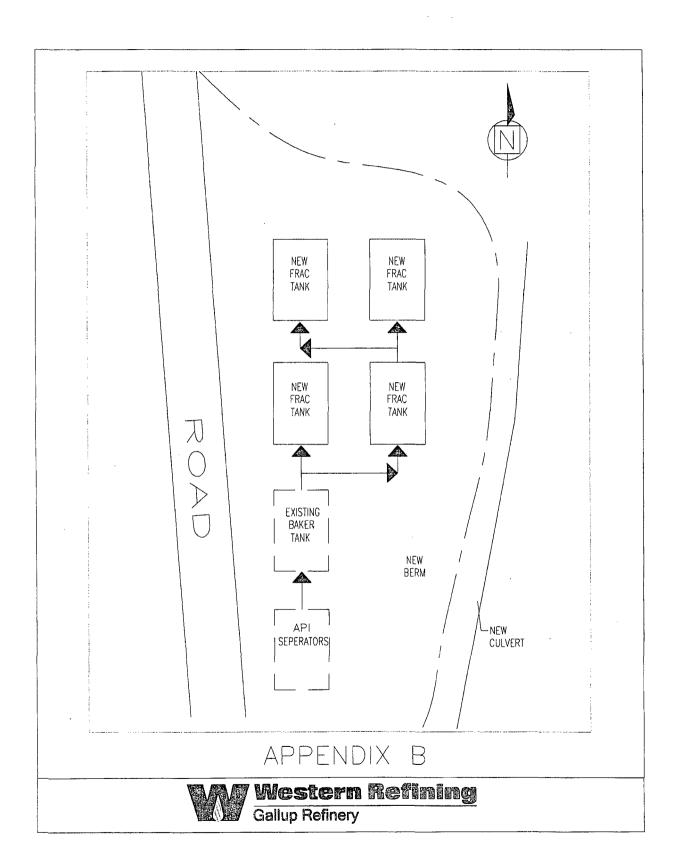
. II. Microeglio, NMED HWD

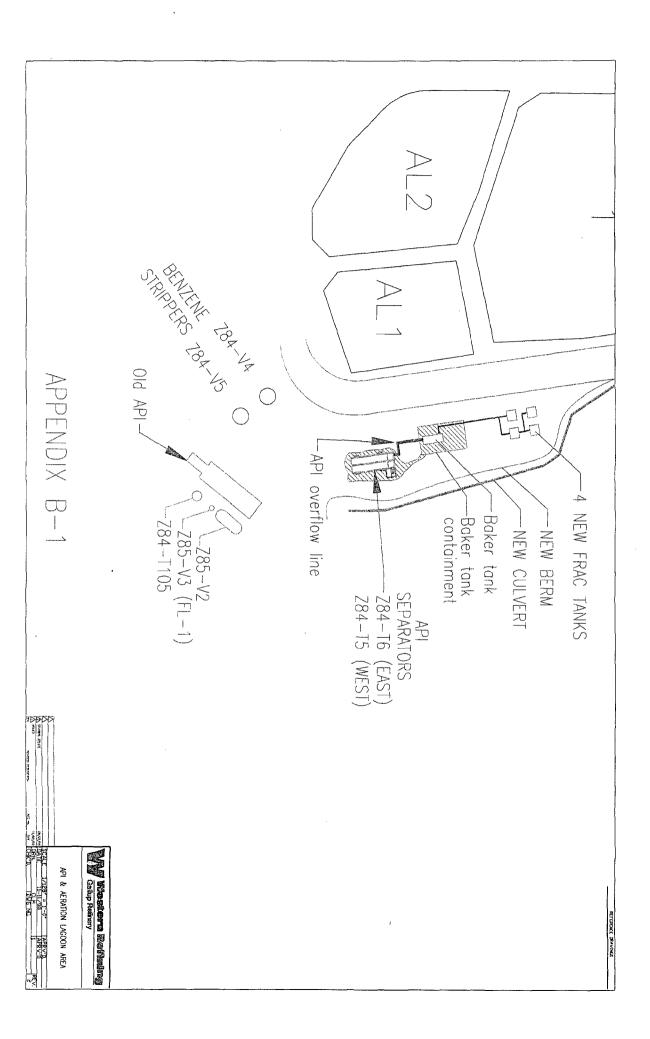
K. Van Horr, NVTD HWB

C. Chryos, NVRVNRO OCD

Pilo: Reading Pilo and WRG 2010-

Appendix B: API Area Drawing with Newly Installed Baker Frac Tanks





Chavez, Carl J, EMNRD

From: Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent: Monday, April 26, 2010 11:00 AM

To: Powell, Brandon, EMNRD

Cc: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Subject: Sour Naphtha Line Leak

Dear Brandon,

As per our conversation, we had a sour naphtha line leak over the weekend. The incident occurred on Saturday, April 24, at 1100 hrs. A sour naphtha line going under the concrete road from the process area to the tank farm was found to be leaking. Operations immediately began to search for the source, isolated the line and blocked it in. The concrete was removed in this area and contaminated soil was removed in order to repair the line. This is a sour naphtha product line feed going to the NHT/DHT Units; however, the concentration of H2S is undetermined at this time. A C-141 will be submitted as soon as the fully details of the incident has been determined. The section of line will be replaced with a newly fabricated line. The contaminated soil will be put in a roll-off for off-site disposal. If you should have any additional questions concerning this matter, please contact me at (505) 722-0258.

Sincerely, Beck Larsen



COVER LETTER

Friday, January 15, 2010

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: API Overflow Sample Points

Dear Thurman B. Larsen:

Order No.: 1001093

Hall Environmental Analysis Laboratory, Inc. received 14 sample(s) on 1/8/2010 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Laboratory Manager

NM Lab # NM9425 NM0901 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Lab Order:

1001093

CASE NARRATIVE

[&]quot;S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-N-1

Lab Order:

1001093

Collection Date: 1/6/2010 10:30:00 AM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-01

Matrix: SOIL

Diesel Range Organics (DRO)	Analyst: SCC 0 10:16:16 AM 0 10:16:16 AM
Motor Oil Range Organics (MRO) 67 50 mg/Kg 1 1/12/201 Surr: DNOP 121 61.7-135 %REC 1 1/12/201 EPA METHOD 8015B: GASOLINE RANGE Gasoline Range Organics (GRO) ND 25 mg/Kg 5 1/13/201 Surr: BFB 106 65.9-118 %REC 5 1/13/201 EPA METHOD 7471: MERCURY Mercury 0.048 0.033 mg/Kg 1 1/12/201 EPA METHOD 6010B: SOIL METALS Arsenic ND 13 mg/Kg 5 1/11/201 Barium 420 1.0 mg/Kg 10 1/11/201 Cadmium ND 0.50 mg/Kg 5 1/11/201 Lead 1.9 1.3 mg/Kg 5 1/11/201 Lead 1.9 1.3 mg/Kg 5 1/11/201 Selenium ND 13 mg/Kg 5 1/11/201 Selenium ND 1.3 mg/Kg 5 1/11/201 Acenaphthene ND 0.20 mg/Kg 1 1/12/201 Acenaphthylene ND 0.20 mg/Kg 1 1/12/201 Aniline ND 0.20 mg/Kg 1 1/12/201 Azobenzene ND 0.20 mg/Kg 1 1/12/201 Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/201 Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/201 Benz(a)priene ND 0.20 mg/Kg 1 1/12/201 Benz(b)fluoranthene ND 0.20 mg/Kg 1 1/12/201	0 10:16:16 AM
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Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010	2:43:43 PM
Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010	2:43:43 PM
Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010	2:43:43 PM
Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010	2:43:43 PM
4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010	2:43:43 PM
Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010	2:43:43 PM
Carbazole ND 0.20 mg/Kg 1 1/12/2010	2:43:43 PM
4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010	
4-Chloroaniline ND 0.50 mg/Kg 1 1/12/2010	2:43:43 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
 - Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 56

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order: 10

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-01

Client Sample ID: API-N-1

Collection Date: 1/6/2010 10:30:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLA	TILES				Analyst: LB
2-Chioronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 2:43:43 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	. 1	1/12/2010 2:43:43 PM
Dibenzofuran	· ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 2:43:43 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 2:43:43 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 2:43:43 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 2:43:43 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 2:43:43 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 2:43:43 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
2-Methylnaphthalene	0.50	0.25	mg/Kg	1	1/12/2010 2:43:43 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Naphthalene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
I-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 2:43:43 PM
Nitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
2-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
4-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 2:43:43 PM
Phenanthrene	0.47	0.20	mg/Kg	1	1/12/2010 2:43:43 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points Project:

Lab ID:

1001093-01

Client Sample ID: API-N-1

Collection Date: 1/6/2010 10:30:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES			- VALMATRA II		Analyst: LBJ
Phenoi	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 2:43:43 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 2:43:43 PM
Surr: 2,4,6-Tribromophenol	70.1	35.5-141	%REC	1	1/12/2010 2:43:43 PM
Surr: 2-Fluorobiphenyl	72.2	30.4-128	%REC	1	1/12/2010 2:43:43 PM
Surr: 2-Fluorophenol	63.7	28.1-129	%REC	1	1/12/2010 2:43:43 PM
Surr: 4-Terphenyl-d14	48.5	34.6-151	%REC	1	1/12/2010 2:43:43 PM
Surr: Nitrobenzene-d5	64.6	26.5-122	%REC	1	1/12/2010 2:43:43 PM
Surr: Phenol-d5	62.3	37.6-118	%REC	1	1/12/2010 2:43:43 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Toluene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Ethylbenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2,4-Trimethylbenzene	0.88	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,3,5-Trimethylbenzene	0.36	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Naphthalene	0.32	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
1-Methylnaphthalene	1.0	0.20	mg/Kg	1	1/12/2010 3:51:55 PM
2-Methylnaphthalene	1.6	0.20	mg/Kg	1	1/12/2010 3:51:55 PM
Acetone	ND	0.75	mg/Kg	1	1/12/2010 3:51:55 PM
Bromobenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Bromoform	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Bromomethane	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
2-Butanone	ND	0.50	mg/Kg	1	1/12/2010 3:51:55 PM
Carbon disulfide	ND	0.50	mg/Kg	1	1/12/2010 3:51:55 PM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
Chlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Chloroethane	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
Chloroform	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Chloromethane .	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
2-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
4-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value Ε
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-01

Client Sample ID: API-N-1

Collection Date: 1/6/2010 10:30:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Dibromochloromethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Dibromomethane	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,3-Dichloropropane	ND	0.050	mg/Kg	1.	1/12/2010 3:51:55 PM
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
Hexachlorobutadiene	ΝD	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
2-Hexanone	ND	0.50	mg/Kg	1	1/12/2010 3:51:55 PM
isopropylbenzene	, ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
4-Isopropyltoluene	0.064	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/12/2010 3:51:55 PM
Methylene chloride	ND	0.15	mg/Kg	1	1/12/2010 3:51:55 PM
n-Butylbenzene	0.22	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
'n-Propylbenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
sec-Butylbenzene	0.055	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Styrene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
tert-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,1,2,2-Tetrachioroethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
1,2,3-Trichloropropane	МD	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
Vinyl chloride	ND	0.050	mg/Kg	1	1/12/2010 3:51:55 PM
Xylenes, Total	ND	0.10	mg/Kg	1	1/12/2010 3:51:55 PM
Surr: 1,2-Dichloroethane-d4	95.7	59.5-119	%REC	1	1/12/2010 3:51:55 PM
Surr: 4-Bromofluorobenzene	100	57.9-141	%REC	1	1/12/2010 3:51:55 PM
Surr: Dibromofluoromethane	107	65.4-122	%REC	1	1/12/2010 3:51:55 PM
Surr: Toluene-d8	82.2	81.1-112	%REC	1	1/12/2010 3:51:55 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-E-2

Lab Order:

1001093

Collection Date: 1/6/2010 10:45:00 AM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-02

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	870	100	mg/Kg	10	1/13/2010 10:54:17 AM
Motor Oil Range Organics (MRO)	ND	500	mg/Kg	10	1/13/2010 10:54:17 AM
Surr: DNOP	94.6	61.7-135	%REC	10	1/13/2010 10:54:17 AM
EPA METHOD 8015B: GASOLINE RA	NGE				Anaiyst: NSB
Gasoline Range Organics (GRO)	ND	50	mg/Kg	10	1/13/2010 12:36:43 PM
Surr: BFB	101	-65.9-118	%REC	10	1/13/2010 12:36:43 PM
EPA METHOD 7471: MERCURY					Analyst: SNV
Mercury	ND	0.033	mg/Kg	1 ·	1/12/2010 3:30:32 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 1:12:08 PM
Barium	500	2.0	mg/Kg	20	1/11/2010 3:34:57 PM
Cadmium	ND	0.50	mg/Kg	5	1/11/2010 1:12:08 PM
Chromium	4.0	- 1.5	mg/Kg	5	1/11/2010 1:12:08 PM
Lead	ND	1.3	mg/Kg	5	1/11/2010 1:12:08 PM
Selenium	, ND	13	mg/Kg	5	1/11/2010 1:12:08 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 1:12:08 PM
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: LBJ
Acenaphthene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Acenaphthylene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Aniline	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Anthracene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Azobenzene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Benz(a)anthracene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Benzo(a)pyrene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Benzo(g,h,i)perylene	ND	0.50	mg/Kg	1	1/12/2010 3;13:07 PM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Benzoic acid	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
Benzyl alcohol	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Bis(2-chloroethoxy)methane	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Bis(2-chloroethyl)ether	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Bis(2-ethylhexyl)phthalate	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
4-Bromophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Carbazole	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
4-Chloroaniline	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Project:

API Overflow Sample Points

Lab ID:

1001093-02

Client Sample ID: API-E-2

Collection Date: 1/6/2010 10:45:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES				<u> </u>	Analyst: LBJ
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 3:13:07 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 3:13;07 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 3:13:07 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 3:13:07 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 3:13:07 PM
1,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 3:13:07 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
luoranthene	ND	0.25	mg/Kg	1	1/12/2010 3:13:07 PM
iuorene	NÐ	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
łexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
łexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
lexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
lexachtoroethane	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
ndeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 3:13:07 PM
sophorone	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
-Methylnaphthalene	1.6	0.25	mg/Kg	1	1/12/2010 3:13:07 PM
-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
I-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
I-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
laphthalene	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
-Nitroa nili ne	ND	0.25	mg/Kg	1	1/12/2010 3:13:07 PM
litrobenzene	ND	0.50	mg/Kg	1	1/12/2010 3:13:07 PM
-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 3:13:07 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 3:13:07 PM
Phenanthrene	1.1	0.20	mg/Kg	1	1/12/2010 3:13:07 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Project:

API Overflow Sample Points

Lab ID:

1001093-02

Client Sample ID: API-E-2

Collection Date: 1/6/2010 10:45:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES	1					Analyst: LBJ
Phenoi	ND	0.20		mg/Kg	1	1/12/2010 3:13:07 PM
Pyrene	0.26	0.20		mg/Kg	1	1/12/2010 3:13:07 PM
Pyridine	ND	0.50		mg/Kg	1	1/12/2010 3:13:07 PM
1,2,4-Trichlorobenzene	ND	0.20		mg/Kg	1	1/12/2010 3:13:07 PM
2,4,5-Trichlorophenol	ND	0.20		mg/Kg	1	1/12/2010 3:13:07 PM
2,4,6-Trichlorophenol	ND	0.20		mg/Kg	1	1/12/2010 3:13:07 PM
Surr: 2,4,6-Tribromophenol	35.4	35.5-141	\$	%REC	1	1/12/2010 3:13:07 PM
Surr: 2-Fluorobiphenyl	78.3	30.4-128		%REC	1	1/12/2010 3:13:07 PM
Surr: 2-Fluorophenol	39.8	28.1-129		%REC	1	1/12/2010 3:13:07 PM
Surr: 4-Terphenyl-d14	50.3	34.6-151		%REC	1	1/12/2010 3:13:07 PM
Surr: Nitrobenzene-d5	75.1	26.5-122		%REC	1	1/12/2010 3:13:07 PM
Surr: Phenol-d5	48.3	37.6-118		%REC	1	1/12/2010 3:13:07 PM
EPA METHOD 8260B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Toluene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Ethylbenzene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
1,2,4-Trimethylbenzene	0.081	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
1,2-Dichloroethane (EDC)	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
1,2-Dibromoethane (EDB)	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Naphthalene	0.22	0.10		mġ/Kg	1	1/12/2010 4:48:07 PM
1-Methylnaphthalene	1.4	0.20		mg/Kg	1	1/12/2010 4:48:07 PM
2-Methylnaphthalene	1.6	0.20		mg/Kg	1	1/12/2010 4:48:07 PM
Acetone	ND	0.75		mg/Kg	1	1/12/2010 4:48:07 PM
Bromobenzene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Bromodichloromethane	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Bromoform	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Bromomethane	ND	0.10		m g/K g	1	1/12/2010 4:48:07 PM
2-Butanone	ND	0.50		mg/Kg	1	1/12/2010 4:48:07 PM
Carbon disulfide	ND	0.50		mg/Kg	1	1/12/2010 4:48:07 PM
Carbon tetrachloride	ND	0.10		mg/Kg	1	1/12/2010 4:48:07 PM
Chiorobenzene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Chloroethane	ND	0.10		mg/Kg	1	1/12/2010 4:48:07 PM
Chloroform	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
Chloromethane	ND	0.050		mg/Kg	1	1/12/2010 4:48:07.PM
2-Chlorotoluene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
4-Chlorotoluene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
cis-1,2-DCE	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
cis-1,3-Dichloropropene	ND	0.050		mg/Kg	1	1/12/2010 4:48:07 PM
1,2-Dibromo-3-chloropropane	ND	0.10		mg/Kg	1	1/12/2010 4:48:07 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-02

Client Sample ID: API-E-2

Collection Date: 1/6/2010 10:45:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	······································				Analyst: DAM
Dibromochloromethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
Dibromomethane	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	· 1	1/12/2010 4:48:07 PM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,2-Dichloropropane	· ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
Hexachlorobutadiene	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
2-Hexanone	ND	0.50	mg/Kg	1	1/12/2010 4:48:07 PM
Isopropylbenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
4-Isopropyltoluene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	· 1	1/12/2010 4:48:07 PM
Methylene chloride	ND	0.15	mg/Kg	1	1/12/2010 4:48:07 PM
n-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
n-Propylbenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
Styrene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
tert-Butylbenzene	ND	0.050	mg/Kg	. 1	1/12/2010 4:48:07 PM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,2,3-Trichlorobenzene	· ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
Vinyl chloride	ND	0.050	mg/Kg	1	1/12/2010 4:48:07 PM
Xylenes, Total	ND	0.10	mg/Kg	1	1/12/2010 4:48:07 PM
Surr: 1,2-Dichloroethane-d4	97.0	59.5-119	%REC	1	1/12/2010 4:48:07 PM
Surr: 4-Bromofluorobenzene	99.2	57.9-141	%REC	1	1/12/2010 4:48:07 PM
Surr: Dibromofluoromethane	110	65.4-122	%REC	1	1/12/2010 4:48:07 PM
Surr: Toluene-d8	90.5	81.1-112	%REC	1	1/12/2010 4:48:07 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-E-3

Lab Order:

1001093

Collection Date: 1/6/2010 10:59:00 AM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-03

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS			<u> </u>		Analyst: SCC
Diesel Range Organics (DRO)	1500	200		mg/Kg	20	1/13/2010 11:30:47 AN
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	1/13/2010 11:30:47 AM
Surr: DNOP	0	61.7-135	s	%REC	20	1/13/2010 11:30:47 AN
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSE
Gasoline Range Organics (GRO)	120	50		mg/Kg	10	1/13/2010 1:05:30 PM
Surr: BFB	124	65.9-118	S	%REC	10	1/13/2010 1:05:30 PM
EPA METHOD 7471: MERCURY						Analyst: SNV
Mercury	0.11	0.033		mg/Kg	1	1/12/2010 3:35:51 PM
EPA METHOD 6010B: SOIL METALS	•					Analyst: SNV
Arsenic	ND	13		mg/Kg	5	1/11/2010 1:16:23 PM
Barium	380	1.0		mg/Kg	10	1/11/2010 3:05:48 PM
Cadmium	ND	0.50		mg/ Kg	5	1/11/2010 1:16:23 PM
Chromium	73	1.5		mg/Kg	5	1/11/2010 1:16:23 PM
Lead	3.5	1.3		mg/Kg	5	1/11/2010 1:16:23 PM
Selenium	ND	13		mg/Kg	5	1/11/2010 1:16:23 PM
Silver	ND	1.3		mg/Kg	5	1/11/2010 1:16:23 PM
EPA METHOD 8270C: SEMIVOLATIL	.ES					Analyst: LBJ
Acenaphthene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Acenaphthylene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Aniline	ND	0.40		m g/Kg	1	1/12/2010 3:42:20 PM
Anthracene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Azobenzene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Benz(a)anthracene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Benzo(a)pyrene	ND.	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Benzo(b)fluoranthene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Benzo(g,h,i)perylene	ND	1.0		mg/Kg	1	1/12/2010 3:42:20 PM
Benzo(k)fluoranthene	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Benzoic acid	ND	1.0		mg/Kg	1	1/12/2010 3:42:20 PM
Benzyl alcohol	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Bis(2-chloroethoxy)methane	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Bis(2-chloroethyl)ether	ND	0.40		mg/Kg	1	1/12/2010 3:42;20 PM
Bis(2-chloroisopropyl)ether	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Bis(2-ethylhexyl)phthalate	ND	1.0		mg/Kg	1	1/12/2010 3:42:20 PM
4-Bromophenyl phenyl ether	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Butyl benzyl phthalate	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
Carbazole	ND	0.40		mg/Kg	1	1/12/2010 3:42:20 PM
4-Chloro-3-methylphenol	ND	1.0		mg/Kg	1	1/12/2010 3:42:20 PM
4-Chloroaniline	ND	1.0		mg/Kg	1	1/12/2010 3:42:20 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Client Sample ID: API-E-3

Collection Date: 1/6/2010 10:59:00 AM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-03

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATIL	.ES				Analyst: LBJ
2-Chloronaphthalene	ND	0.50	mg/Kg	1	1/12/2010 3:42:20 PM
2-Chlorophenol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
4-Chlorophenyl phenyl ether	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Chrysene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Di-n-butyl phthalate	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
Di-n-octyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Dibenz(a,h)anthracene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Dibenzofuran	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
1,2-Dichlorobenzene	ND	0.40	mg/Kg	. 1	1/12/2010 3:42:20 PM
.1,3-Dichlorobenzene	, ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
1,4-Dichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
3,3'-Dichlorobenzidine	ND	0.50	mg/Kg	1	1/12/2010 3:42:20 PM
Diethyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Dimethyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
2,4-Dichlorophenol	ND	0.80	. mg/Kg	1	1/12/2010 3:42:20 PM
2,4-Dimethylphenol	ND	0.60	mg/Kg	1	1/12/2010 3:42:20 PM
4,6-Dinitro-2-methylphenol	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
2,4-Dinitrophenol	ND	0.80	mg/Kg	1 .	1/12/2010 3:42:20 PM
2,4-Dinitratoluene	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
2,6-Dinitrotoluene	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
Fluoranthene	ND	0.50	mg/Kg	1	1/12/2010 3:42:20 PM
Fluorene	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
Hexachlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Hexachlorobutadiene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Hexachlorocyclopentadiene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20,PM
Hexachloroethane	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Indeno(1,2,3-cd)pyrene	ND	0.50	mg/Kg	1	1/12/2010 3:42:20 PM
tsophorone	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
2-Methylnaphthalene	2.1	0.50	mg/Kg	1	1/12/2010 3:42:20 PM
2-Methylphenol	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
3+4-Methylphenol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
N-Nitrosodiphenylamine	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Naphthalene	0.49	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
2-Nitroaniline	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
3-Nitroaniline	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
4-Nitroaniline	ND	0.50	mg/Kg	1	1/12/2010 3:42:20 PM
Nitrobenzene	ND	1.0	mg/Kg	1	1/12/2010 3:42:20 PM
2-Nitrophenol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
4-Nitrophenol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Pentachlorophenol	ND	0.80	mg/Kg	1	1/12/2010 3:42:20 PM
Phenanthrene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-03

Client Sample ID: API-E-3

nent Sample 115. At 1-2-5

Collection Date: 1/6/2010 10:59:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES				**************************************	Analyst: LBJ
Phénol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Pyrene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Pyridine	ND	1.0	mg/Kg	1.	1/12/2010 3:42:20 PM
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
2,4,5-Trichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
2,4,6-Trichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 3:42:20 PM
Surr: 2,4,6-Tribromophenol	38.9	35.5-141	%REC	1	1/12/2010 3:42:20 PM
Surr: 2-Fluorobiphenyl	52.4	30.4-128	%REC	1	1/12/2010 3:42:20 PM
Surr: 2-Fluorophenol	47.5	28.1-129	%REC	1	1/12/2010 3:42:20 PM
Surr: 4-Terphenyl-d14	40.3	34.6-151	%REC	1	1/12/2010 3:42:20 PM
Surr: Nitrobenzene-d5	52.5	26.5-122	%REC	1	1/12/2010 3:42:20 PM
Surr: Phenol-d5	49.7	37.6-118	%REC	1	1/12/2010 3:42:20 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Toluene	0.060	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Ethylbenzene	0.15	0.050	mg/Kg	. 1	1/12/2010 5:44:40 PM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	 1	1/12/2010 5:44:40 PM
1,2,4-Trimethylbenzene	1.1	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
1,3,5-Trimethylbenzene	1.1	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Naphthalene	0.74	0.10	mg/Kg	1	1/12/2010 5:44:40 PM
1-Methylnaphthalene	2.0	0.20	mg/Kg	1	1/12/2010 5:44:40 PM
2-Methylnaphthalene	3.0	0.20	mg/Kg	1	1/12/2010 5:44:40 PM
Acetone	ND	0.75	mg/Kg	1	1/12/2010 5:44:40 PM
Bromobenzene	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Bromoform	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Bromomethane	ND	0.10	mg/Kg	1	1/12/2010 5:44:40 PM
2-Butanone	ND	0.50	mg/Kg	1	1/12/2010 5:44:40 PM
Carbon disulfide	ND	0.50	mg/Kg	1	1/12/2010 5:44:40 PM
Carbon tetrachloride .	ND	0.10	mg/Kg	1	1/12/2010 5:44:40 PM
Chlorobanzene	ND	0.050	mg/Kg	, 1	1/12/2010 5:44:40 PM
Chloroethane	ND	0.10	mg/Kg	1	1/12/2010 5:44:40 PM
Chloroform	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
Chloromethane	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
2-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
4-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 5:44:40 PM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/12/2010 5:44:40 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project:
Lab ID:

1001093-03

Client Sample ID: API-E-3

Collection Date: 1/6/2010 10:59:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DAN
Dibromochloromethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Dibromomethane	ND	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
1,2-Dichlorobenzene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,3-Dichlorobenzene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,4-Dichlorobenzene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Dichlorodifluoromethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,1-Dichloroethane	ND	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
1,1-Dichloroethene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,2-Dichloropropane	ND ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,3-Dichloropropane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
2,2-Dichloropropane	ND	0.10		mg/Kg	1 -	. 1/12/2010 5:44:40 PM
1,1-Dichloropropene	ND	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
Hexachlorobutadiene	ND	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
2-Hexanone	ND	0.50		mg/Kg	1	1/12/2010 5:44;40 PM
Isopropylbenzene	ND	0.050		mg/Kg	. 1	1/12/2010 5:44:40 PM
4-Isopropyltoluene	0.11	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
4-Methyl-2-pentanone	ND	0.50		mg/Kg	1	1/12/2010 5:44:40 PM
Methylene chloride	ND	0.15		mg/Kg	1 .	1/12/2010 5:44:40 PM
n-Butylbenzene	0.71	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
n-Propylbenzene	0.097	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
sec-Butylbenzene	0.11	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Styrene	, ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
tert-Butylbenzene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,1,1,2-Tetrachloroethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,1,2,2-Tetrachloroethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Tetrachloroethene (PCE)	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
trans-1,2-DCE	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
trans-1,3-Dichloropropene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,2,3-Trichlorobenzene	ND	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
1,2,4-Trichlorobenzene	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,1,1-Trichloroethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,1,2-Trichloroethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Trichloroethene (TCE)	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Trichlorofluoromethane	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
1,2,3-Trichloropropane	ND	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
/inyl chloride	ND	0.050		mg/Kg	1	1/12/2010 5:44:40 PM
Kylenes, Total	0.80	0.10		mg/Kg	1	1/12/2010 5:44:40 PM
Surr: 1,2-Dichloroethane-d4	120	59.5-119	S	%REC	1	1/12/2010 5:44:40 PM
Surr: 4-Bromofluorobenzene	160	57.9-141	S	%REC	1	1/12/2010 5:44:40 PM
Surr: Dibromofluoromethane	121	65.4-122		%REC	1	1/12/2010 5:44:40 PM
Surr: Toluene-d8	83.3	81.1-112		%REC	1	1/12/2010 5:44:40 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Client Sample ID: API-S-4

Collection Date: 1/6/2010 11:15:00 AM

Project: Lab ID:

API Overflow Sample Points 1001093-04

Date Received: 1/8/2010 Matrix: SOIL

Analyses Result PQL Qual Units DF Date Analyzed	Lab ID: 1001093-04					Wallix: St		
Diesel Range Organics (DRO)	Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
Motor Oil Range Organics (MRO)	EPA METHO	D 8015B: DIESEL RANG	E ORGANICS				<u> </u>	Analyst: SCC
Surr. DNOP	Diesel Range	Organics (DRO)	8700	100		mg/Kg	10	1/13/2010 12:44:18 PM
Part	Motor Oil Ran	ige Organics (MRO)	ND	500		mg/Kg	10	1/13/2010 12:44:18 PM
Casoline Range Organics (GRO) ND 100 mg/Kg 20 1/13/2010 1:34:15 PM Surr: BFB 125 65.9+118 S %REC 20 1/13/2010 1:34:15 PM Surr: BFB 125 65.9+118 S %REC 20 1/13/2010 1:34:15 PM Surr: BFB 125 65.9+118 S %REC 20 1/13/2010 1:34:15 PM Surr: BFB 125 65.9+118 S %REC 20 1/13/2010 1:34:15 PM Surr: BFB S %REC 20 1/13/2010 1:37:39 PM Surr: BFB S SNV S SN	Surr: DNOF	>	0	61.7-135	S	%REC	10	1/13/2010 12:44:18 PM
Surr: BFB	EPA METHO	O 8015B: GASOLINE RA	NGE					Analyst: NSB
Analyst: SNV	Gasoline Ran	ge Organics (GRO)	ND	100		mg/Kg	20	1/13/2010 1:34:15 PM
Mercury ND 0.033 mg/Kg	Surr. BFB		1 2 5	65.9-118	s	%REC	20	1/13/2010 1:34:15 PM
Mercury ND 0.033 mg/Kg	EPA METHOL	7471: MERCURY						Analyst: SNV
Arsanic			ND	0.033		mg/Kg	1	1/12/2010 3:37:39 PM
Arsanic	EPA METHO	O 6010B: SOIL METALS						Analyst: SNV
Cadmium ND 0.50 mg/Kg 5 1/11/2010 1:27:27 PM Chromium 5.2 1.5 mg/Kg 5 1/11/2010 1:27:27 PM Lead 4.0 1.3 mg/Kg 5 1/11/2010 1:27:27 PM Selenium ND 13 mg/Kg 5 1/11/2010 1:27:27 PM Silver ND 1.3 mg/Kg 5 1/11/2010 1:27:27 PM SEPA METHOD 8270C: SEMIVOLATILES Acenaphthene ND 0.20 mg/Kg 1 1/12/2010 1:27:27 PM EEPA METHOD 8270C: SEMIVOLATILES Acenaphthene ND 0.20 mg/Kg 1 1/12/2010 1:27:27 PM Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Acenaphthylene ND 0.20 mg/Kg 1				13		mg/Kg	5	
Chromium	Barium	•	480	1.0		mg/Kg	10	1/11/2010 3:07:52 PM
Lead 4.0 1.3 mg/kg 5 1/11/2010 1:27:27 PM Selenium ND 13 mg/kg 5 1/11/2010 1:27:27 PM Silver ND 13 mg/kg 5 1/11/2010 1:27:27 PM Silver ND 1.3 mg/kg 5 1/11/2010 1:27:27 PM SILVET ND 1.3 mg/kg 5 1/11/2010 1:27:27 PM SILVET ND 1.3 mg/kg 5 1/11/2010 1:27:27 PM SILVET ND 1.3 mg/kg 5 1/11/2010 1:27:27 PM SILVET ND 1.3 mg/kg 5 1/11/2010 1:27:27 PM SILVET ND 1.3 mg/kg 1 1/12/2010 1:13:51 PM Acenaphthylene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Anthracene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Anthracene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a)anthracene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a)apyrene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a)pyrene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a),h)perylene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a),h)perylene ND 0.50 mg/kg 1 1/12/2010 1:11:51 PM Senz(a),h)perylene ND 0.50 mg/kg 1 1/12/2010 1:11:51 PM Senz(a),h)perylene ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a) alcohol ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a) alcohol ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Senz(a)-chlorosthoxy)methane ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorosthoxy)methane ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51 PM Sis(2-chlorostopropylether ND 0.20 mg/kg 1 1/12/2010 1:11:51	Cadmium		ND	0.50		mg/Kg	5	1/11/2010 1:27:27 PM
Selenium ND 113 mg/Kg 5 1/11/2010 1:27:27 PM Silver ND 1.3 mg/Kg 5 1/11/2010 1:27:27 PM EPA METHOD 8270C: SEMIVOLATILES Acenaphthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Anilline ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzol cacid ND 0.50	Chromium		5.2	1.5		m g/K g	5	1/11/2010 1:27:27 PM
Silver ND 1.3 mg/kg 5 1/11/2010 1:27:27 PM	Lead		4.0	1.3		mg/Kg	5	1/11/2010 1:27:27 PM
Analyst: LBJ	Selenium	•	ND	- 13		mg/Kg	5	1/11/2010 1:27:27 PM
Acenaphthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Aniline ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(c)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzya lacohol ND 0.50 mg/Kg 1 1/	Silver		ND	1.3		mg/Kg	5	1/11/2010 1:27:27 PM
Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Aniline ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.50 mg/Kg <td< td=""><td>EPA METHOD</td><td>8270C: SEMIVOLATIL</td><td>ES</td><td></td><td></td><td></td><td></td><td>Analyst: LBJ</td></td<>	EPA METHOD	8270C: SEMIVOLATIL	ES					Analyst: LBJ
Anilline Anilline Anthracene Anthracene Anthracene Anthracene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Azobenzene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Benz(a)anthracene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Benz(a)pyrene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(a)pyrene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(g,h,i)perylene ND D.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(k)fluoranthene ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND D.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND D.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND D.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzola alcohol ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethoxy)methane ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND D.50 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND D.20 mg/Kg 1 1/12/2010 4:11:51 PM	Acenaphthene	•	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
Anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(k)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzyl alcohol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND 0.50 m	Acenaphthyler	ne	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
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Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzo(k)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Benzo(a)pyren	18	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
Benzo(k)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Benzo(b)fluora	anthene	ND ·	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Benzo(g,h,i)pe	erylene	ND	0.50		mg/Kg	1	1/12/2010 4:11:51 PM
Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Benzo(k)fluora	inthene	ND	0.20		mg/Kg	1	
Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Benzoic acid		ND	0.50		mg/Kg	1	1/12/2010 4:11:51 PM
Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Benzyl alcohol		ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Bis(2-chloroeth	hoxy)methane	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Bis(2-chloroeth	hyl)ether	ND	0.20			1	1/12/2010 4:11:51 PM
4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Bis(2-chloroisc	ppropyl)ether	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Bis(2-ethylhex)	yl)phthalate	ND	0.50		mg/Kg	1	1/12/2010 4:11:51 PM
Carbazole ND 0.20 mg/Kg 1 1/12/2010 4:11:51 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	4-Bromopheny	rl phenyl ether	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	Butyi benzyi pi	hthalate	ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
•	Carbazole		ND	0.20		mg/Kg	1	1/12/2010 4:11:51 PM
4-Chloroaniline ND 0.50 mg/Kg 1 1/12/2010 4:11:51 PM	4-Chloro-3-me	thylphenol	ND	0.50		mg/Kg	1	1/12/2010 4:11:51 PM
	4-Chloroaniline	9	ND	0.50		mg/Kg	1	1/12/2010 4:11:51 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-04

Client Sample ID: API-S-4

Collection Date: 1/6/2010 11:15:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLAT	TILES				Analyst: LB.
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 4:11:51 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
3,3'-Dichlorobenzidine	ND	0,25	mg/Kg	1	1/12/2010 4:11:51 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Dimethyl phthalate	ND	0,20	mg/Kg	1	1/12/2010 4:11:51 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 4:11:51 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 4:11:51 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 4:11:51 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1 '	1/12/2010 4:11:51 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 4:11:51 PM
Fluorene	1.9	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 4:11:51 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
2-Methylnaphthalene	29	2.5	mg/Kg	10	1/13/2010 2:26:25 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Naphthalene	0.59	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
4-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 4:11:51 PM
Vitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
2-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
I-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 4:11:51 PM
Phenanthrene	9.2	2.0	mg/Kg	10	1/13/2010 2:26:25 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-04

Client Sample ID: API-S-4

Collection Date: 1/6/2010 11:15:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES	- A COLUMN TO THE PARTY OF THE				Analyst: LBJ
Phenol	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
Pyrene	- 1.1	0.20	mg/Kg	. 1	1/12/2010 4:11:51 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 4:11:51 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 4:11:51 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg.	1	1/12/2010 4:11:51 PM
Surr: 2,4,6-Tribromophenol	53.0	35.5-141	%REC	10	1/13/2010 2:26:25 PM
Surr: 2-Fluorobiphenyl	57.1	30.4-128	%REC	1	1/12/2010 4:11:51 PM
Surr: 2-Fluorophenol	77.6	28.1-129	%REC	1	1/12/2010 4:11:51 PM
Surr: 4-Terphenyl-d14	44.2	34.6-151	%REC	1	1/12/2010 4:11:51 PM
Surr: Nitrobenzene-d5	62.4	26.5-122	%REC	1	1/12/2010 4:11:51 PM
Surr: Phenol-d5	78.5	37.6-118	%REC	1	1/12/2010 4:11:51 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Toluene	. ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Ethylbenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Methyl tert-butyl ether (MTBE)	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2,4-Trimethylbenzene	11	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,3,5-Trimethylbenzene	1.1	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2-Dichloroethane (EDC)	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2-Dipromoethane (EDB)	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Naphthalene	1.1	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
1-Methylnaphthalene	17	1.0	mg/Kg	5	1/12/2010 8:05:00 PM
2-Methylnaphthalene	35	2.0	mg/Kg	10	1/11/2010 4:50:35 PM
Acetone	ND	3.8	mg/Kg	5	1/12/2010 8:05:00 PM
Bromobenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Bromodichloromethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Bromoform	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Bromomethane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
2-Butanone	ND	2.5	mg/Kg	5	1/12/2010 8:05:00 PM
Carbon disulfide	ND	2.5	mg/Kg	5	1/12/2010 8:05:00 PM
Carbon tetrachloride	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
Chlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Chloroethane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
Chloroform	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Chloromethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
2-Chlorotoluene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
4-Chlorotoluene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
cis-1,2-DCE	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
cis-1,3-Dichloropropene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2-Dibromo-3-chloropropane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-04

Client Sample ID: API-S-4

Collection Date: 1/6/2010 11:15:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES			<u></u>	<u> </u>	Analyst: DAM
Dibromochloromethane	· ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Dibromomethane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
1,2-Dichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,3-Dichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,4-Dichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Dichlorodifluoromethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,1-Dichloroethane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
1,1-Dichloroethene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2-Dichloropropane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,3-Dichloropropane	ND	0.25	mg/Kg	. 5	1/12/2010 8:05:00 PM
2,2-Dichloropropane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
1,1-Dichloropropene	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
Hexachlorobutadiene	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
2-Hexanone	ND	2.5	mg/Kg	5	1/12/2010 8:05:00 PM
Isopropylbenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
4-Isopropyltoluene	0.44	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
4-Methyl-2-pentanone	ND	2.5	mg/Kg	5	1/12/2010 8:05:00 PM
Methylene chloride	ND	0.75	mg/Kg	5	1/12/2010 8:05:00 PM
n-Butylbenzene	0.72	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
n-Propylbenzene	0.43	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
sec-Butylbenzene	0.56	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Styrene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
tert-Butylbenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,1,1,2-Tetrachloroethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,1,2,2-Tetrachloroethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Tetrachloroethene (PCE)	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
trans-1,2-DCE	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
trans-1,3-Dichloropropene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2,3-Trichlorobenzene	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
1,2,4-Trichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,1,1-Trichloroethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,1,2-Trichloroethane	ND.	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Trichloroethene (TCE)	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Trichlorofluoromethane	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
1,2,3-Trichloropropane	ND	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
Vinyl chloride	ND	0.25	mg/Kg	5	1/12/2010 8:05:00 PM
Xylenes, Total	1.9	0.50	mg/Kg	5	1/12/2010 8:05:00 PM
Surr: 1,2-Dichloroethane-d4	97.3	59.5-119	%REC	5	1/12/2010 8:05:00 PM
Surr: 4-Bromofluorobenzene	114	57.9-141	%REC	5	1/12/2010 8:05:00 PM
Surr: Dibromofluoromethane	112	65.4-122	%REC	5	1/12/2010 8:05:00 PM
Surr: Toluene-d8	88.2	81.1-112	%REC	5	1/12/2010 8:05:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-W-5

Lab Order:

1001093

Collection Date: 1/6/2010 11:20:00 AM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-05

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	210	10	mg/Kg	1	1/12/2010 11:28:25 AM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/12/2010 11:28:25 AM
Surr: DNOP	108	61.7-135	%REC	1	1/12/2010 11:28:25 AM
EPA METHOD 8015B: GASOLINE RAI	NGE			• •	Analyst: NSE
Gasoline Range Organics (GRO)	ND .	- 25	mg/Kg	5	1/13/2010 2:03:00 PM
Surr: BFB	106	65.9-118	%REC	5	1/13/2010 2:03:00 PM
EPA METHOD 7471: MERCURY					Analyst: SNV
Mercury	ND	0.033	mg/Kg	1	1/12/2010 3:39:27 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 1:31:36 PM
Barium	130	0.50	mg/Kg	5	1/11/2010 1:31:36 PM
Cadmium	ND	0.50	mg/Kg	5	1/11/2010 1:31:36 PM
Chromium	1.7	1.5	mg/Kg	5	1/11/2010 1:31:36 PM
Lead	3.3	1.3	mg/Kg	5	1/11/2010 1:31:36 PM
Selenium	ND	13	mg/Kg	5	1/11/2010 1:31:36 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 1:31:36 PM
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: LBJ
Acenaphthene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Acenaphthylene	ND	0.20	mg/Kg	-1	1/12/2010 4:41:07 PM
Aniline	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Anthracene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Azobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Benz(a)anthracene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Benzo(a)pyrene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Benzo(g,h,i)perylene	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Benzoic acid	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
Benzyl alcohol	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Bis(2-chloroethoxy)methane	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Bis(2-chloroethyl)ether	NÐ	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Bis(2-ethylhexyl)phthalate	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
4-Bromophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Carbazole	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
4-Chloroaniline	ND	0.50	mg/Kg	. 1	1/12/2010 4:41:07 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-05

Client Sample ID: API-W-5

Collection Date: 1/6/2010 11:20:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL Q	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	ILES	····			Analyst: LB.
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 4:41:07 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010-4:41:07 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 4:41:07 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	. 1	1/12/2010 4:41:07 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 4:41:07 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 4:41:07 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 4:41:07 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 4:41:07 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
2-Methylnaphthalene	ND	0.25	mg/Kg	1	1/12/2010 4:41:07 PM
2-Methylphenoi	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Naphthalene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
I-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 4:41:07 PM
Nitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
2-Nitrophenol	ND -	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
1-Nitrophenol	ND	0.20	mg/ Kg	1	1/12/2010 4:41:07 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 4:41:07 PM
Phenanthrene	0.21	0.20	mg/Kg	1	1/12/2010 4:41:07 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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API Overflow Sample Points

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

1001093

Client Sample ID: API-W-5

Lab Order:

Collection Date: 1/6/2010 11:20:00 AM

Project: Lab ID:

1001093-05

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S	· · · · · · · · · · · · · · · · · · ·			Analyst: LBJ
Phenol	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 4:41:07 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
2,4,5-Trichlorophenol	NĐ	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 4:41:07 PM
Surr; 2,4,6-Tribromophenol	61.8	35.5-141	%REC	1	1/12/2010 4:41:07 PM
Surr: 2-Fluorobiphenyl	56.8	30.4-128	%REC	1	1/12/2010 4:41:07 PM
Surr: 2-Fluorophenol	54.6	28.1-129	%REC	1	1/12/2010 4:41:07 PM
Surr: 4-Terphenyl-d14	42.0	34.6-151	%REC	1	1/12/2010 4:41:07 PM
Surr: Nitrobenzene-d5	50.9	26.5-122	%REC	1	1/12/2010 4:41:07 PM
Surr: Phenol-d5	55.4	37.6-118	%REC	1	1/12/2010 4:41:07 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAN
Benzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Toluene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Ethylbenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,2,4-Trimethylbenzene	0.090	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,3,5-Trimethylbenzene	0.16	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	- 1/12/2010 9:01:34 PM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Naphthalene	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
1-Methylnaphthalene	0.35	0.20	mg/Kg	1	1/12/2010 9:01:34 PM
2-Methylnaphthalene	0.34	0.20	mg/Kg	1	1/12/2010 9:01:34 PM
Acetone	ND	0.75	mg/Kg	1	1/12/2010 9:01:34 PM
Вготовеплене	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Bromoform	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Bromomethane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
2-Butanone	ND	0.50	mg/Kg	1	1/12/2010 9:01:34 PM
Carbon disulfide	ND	0.50	mg/Kg	1	1/12/2010 9:01:34 PM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
Chlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Chloroethane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
Chloroform	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Chloromethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
2-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
4-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-05

Client Sample ID: API-W-5

Collection Date: 1/6/2010 11:20:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	***************************************			· · · · · · · · · · · · · · · · · · ·	Analyst: DAN
Dibromochloromethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Dibromomethane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,4-Dichlorobenzene	МD	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
Hexachlorobutadiene	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
2-Hexanone	ND	0.50	mg/Kg	1	1/12/2010 9:01:34 PM
Isopropylbenzene	ND	0.050	mg/ Kg	1	1/12/2010 9:01:34 PM
4-Isopropyltoluene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/12/2010 9:01:34 PM
Methylene chloride	ND	0.15	mg/Kg	1	1/12/2010 9:01:34 PM
n-Butylbenzene	0.13	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
n-Propyibenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Styrene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
tert-Butylbenzene	ND	0.050	mg/Kg	1	. 1/12/2010 9:01:34 PM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1 '	1/12/2010 9:01:34 PM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,1,1-Trichioroethane	ND	0.050	mg/ Kg	1	1/12/2010 9:01:34 PM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
/inyl chloride	ND	0.050	mg/Kg	1	1/12/2010 9:01:34 PM
Xylenes, Total	ND	0.10	mg/Kg	1	1/12/2010 9:01:34 PM
Surr: 1,2-Dichloroethane-d4	97.7	59.5-119	%REC	1	1/12/2010 9:01:34 PM
Surr: 4-Bromofluorobenzene	96.4	57.9-141	%REC	1	1/12/2010 9:01:34 PM
Surr: Dibromofluoromethane	109	65.4-122	%REC	1	1/12/2010 9:01:34 PM
Surr: Toluene-d8	88.6	81.1-112	%REC	1	1/12/2010 9:01:34 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order: 100

Project:

API Overflow Sample Points

Lab ID:

1001093-06

Client Sample ID: API-W-6

Collection Date: 1/6/2010 11:35:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	14	10	mg/Kg	1	1/12/2010 12:04:39 PM
Motor Oil Range Organics (MRO)	ND	50	mg/Kg	1	1/12/2010 12:04:39 PM
Surr: DNOP	99.1	61.7-135	%REC	1	1/12/2010 12:04:39 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/13/2010 2:31:49 PM
Surr: BFB	100	65.9-118	%REC	. 1	1/13/2010 2:31:49 PM
EPA METHOD 7471: MERCURY					Analyst: SNV
Mercury	0.035	0.033	mg/Kg	1	1/12/2010 3:41:16 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 1:35:42 PM
Barium	450	1.0	mg/Kg	10	1/11/2010 3:16:27 PM
Cadmium	ND	0.50	mg/Kg	5	1/11/2010 1:35:42 PM
Chromium	3.4	1.5	mg/Kg	5	1/11/2010 1:35:42 PM
Lead	ND	1.3	mg/Kg	5	1/11/2010 1:35:42 PM
Selenium	ND	13	mg/Kg	5	1/11/2010 1:35:42 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 1:35:42 PM
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: LBJ
Acenaphthene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Acenaphthylene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Aniline	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Anthracene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Azobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Benz(a)anthracene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Benzo(a)pyrene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Benzo(g,h,i)perylene	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Benzoic acid	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
Benzyl alcohol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Bis(2-chloroethoxy)methane	ND	0.20	mg/ K g	1	1/12/2010 5:10:29 PM
Bis(2-chloroethyl)ether	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Bis(2-ethylhexyl)phthalate	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
4-Bromophenyi phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Butyi benzyi phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Carbazole	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
4-Chloroaniline	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Project:

API Overflow Sample Points

Lab ID:

1001093-06

Client Sample ID: API-W-6

Collection Date: 1/6/2010 11:35:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLA	TILES		**************************************		Analyst: LB.
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 5:10:29 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 5:10:29 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 5:10:29 PM
2,4-Dimethylphenol	ND ·	0.30	mg/Kg	1	1/12/2010 5:10:29 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 5:10:29 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 5:10:29 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 5:10:29 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
2-Methylnaphthalene	ND	0.25	mg/Kg	1	1/12/2010 5:10:29 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
3+4-Methyiphenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Naphthalene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 5:10:29 PM
Vitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
2-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
I-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 5:10:29 PM
Phenanthrene	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-06

Client Sample ID: API-W-6

Collection Date: 1/6/2010 11:35:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATI	LES				Analyst: LBJ
Phenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Pyrene .	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 5:10:29 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	· 1	1/12/2010 5:10:29 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 5:10:29 PM
Surr: 2,4,6-Tribromophenol	79.5	35.5-141	%REC	1	1/12/2010 5:10:29 PM
Surr: 2-Fluorobiphenyl	66.6	30,4-128	%REC	1	1/12/2010 5:10:29 PM
Surr: 2-Fluorophenol	67.8	28.1-129	%REC	1	1/12/2010 5:10:29 PM
Surr: 4-Terphenyl-d14	43.5	34.6-151	%REC	1	1/12/2010 5:10:29 PM
Surr: Nitrobenzene-d5	58.6	26.5-122	%REC	1	1/12/2010 5:10:29 PM
Surr: Phenol-d5	62.4	37.6-118	%REC	1	1/12/2010 5:10:29 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAN
Benzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Toluene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Ethylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Naphthalene	. ND	0.40	mg/Kg	1	1/11/2010 5:46:49 PM
1-Methylnaphthalene	ND	0.20	mg/Kg	1	1/11/2010 5:46:49 PM
2-Methylnaphthalene	. ND	0.20	mg/Kg	1	1/11/2010 5:46:49 PM
Acetone	ND	0.75	mg/Kg	1	1/11/2010 5:46:49 PM
Bromobenzene	ND	0.050	mg/Kg	. 1	1/11/2010 5:46:49 PM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Bromoform	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Bromomethane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
2-Butanone	ND	0.50	mg/Kg	1	1/11/2010 5:46:49 PM
Carbon disulfide	ND	0.50	mg/Kg	1	1/11/2010 5:46:49 PM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
Chlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Chloroethane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
Chloroform	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Chloromethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
2-Chiorotoluene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
4-Chlorotoluene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	. 1	1/11/2010 5:46:49 PM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-06

Client Sample ID: API-W-6

Collection Date: 1/6/2010 11:35:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: DA₩
Dibromochloromethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Dibromomethane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,1-Dichtoroethane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
Hexachlorobutadiene	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
2-Hexanone	ND	0.50	mg/Kg	. 1	1/11/2010 5:46:49 PM
Isopropylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
4-Isopropyltoluene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/11/2010 5:46:49 PM
Methylene chloride	ND	0.15	mg/Kg	, 1	1/11/2010 5:46:49 PM
n-Butylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
n-Propylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Styrene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
tert-Butylbenzene	· ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
Vinyl chloride	ND	0.050	mg/Kg	1	1/11/2010 5:46:49 PM
Xylenes, Total	ND	0.10	mg/Kg	1	1/11/2010 5:46:49 PM
Surr: 1,2-Dichloroethane-d4	100	59.5-119	%REC	1	1/11/2010 5:46:49 PM
Surr: 4-Bromofluorobenzene	89.9	57.9-141	%REC	1	1/11/2010 5:46:49 PM
Surr: Dibromofluoromethane	109	65.4-122	%REC	1	1/11/2010 5:46:49 PM
Surr: Toluene-d8	92.6	81.1-112	%REC	1	1/11/2010 5:46:49 PM

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- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-07

Client Sample ID: BKT-E-7

Collection Date: 1/6/2010 11:50:00 AM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS		*************			Analyst: SCC
Diesel Range Organics (DRO)	31	10		mg/Kg	1	1/13/2010 6:05:11 AM
Motor Oll Range Organics (MRO)	ND	50		mg/Kg	1	1/13/2010 6:05:11 AM
Surr: DNOP	101	61.7-135		%REC	1	1/13/2010 6:05:11 AM
EPA METHOD 8015B: GASOLINE RAN	lGE					Analyst: NSB
Gasoline Range Organics (GRO)	26	5.0		mg/Kg	1	1/13/2010 3:00:37 PM
Surr: BFB	174	65.9-118	S	%REC	1	1/13/2010 3:00:37 PM
EPA METHOD 7471: MERCURY						Analyst: SNV
Mercury	0.071	0.033		mg/Kg	1	1/12/2010 3:46:46 PM
EPA METHOD 6010B: SOIL METALS						Analyst: SNV
Arsenic	ND	13		mg/Kg	5	1/11/2010 1:39:54 PM
Barium	500	2.0		mg/Kg	20	1/11/2010 3:43:35 PM
Cadmium	ND	0.50		mg/Kg	5	1/11/2010 1:39:54 PM
Chromium	8.7	1.5		mg/Kg	5	1/11/2010 1:39:54 PM
Lead'	5.6	1.3		mg/Kg	5	1/11/2010 1:39:54 PM
Selenium	ND	13		mg/Kg	5	1/11/2010 1:39:54 PM
Silver	ND	1.3		mg/Kg	5	1/11/2010 1:39:54 PM
EPA METHOD 8270C: SEMIVOLATILE	S					Analyst: LBJ
Acenaphthene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Acenaphthylene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Aniline	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Anthracene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Azobenzene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Benz(a)anthracene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Benzo(a)pyrene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Benzo(g,h,i)perylene	ND	0.50		mg/Kg	1	1/12/2010 5:39:41 PM
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Benzoic acid	ND	0.50		mg/Kg	1	1/12/2010 5:39:41 PM
Benzyl alcohol	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	1/12/2010 5:39:41 PM
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
Carbazole	ND	0.20		mg/Kg	1	1/12/2010 5:39:41 PM
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	1/12/2010 5:39:41 PM
4-Chloroaniline	ND	0.50		mg/Kg	1	1/12/2010 5:39:41 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Client Sample ID: BKT-E-7 Collection Date: 1/6/2010 11:50:00 AM

API Overflow Sample Points

Project: Lab ID:

1001093-07

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES	3		**************************************	**************************************	Anaiyst: LBJ
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 5:39:41 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 5:39:41 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 5:39:41 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 5:39:41 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
2,4-Dinitrophenol	ND	0.40	· mg/Kg	1	1/12/2010 5:39:41 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 5:39:41 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 5:39:41 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
2-Methylnaphthalene	ND	0.25	mg/Kg	1	1/12/2010 5:39:41 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Naphthalene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
I-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 5:39:41 PM
Nitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
2-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
I-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 5:39:41 PM
Phenanthrene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- NDNot Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: BKT-E-7

Lab Order:

1001093

Collection Date: 1/6/2010 11:50:00 AM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-07

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATIL	ES	· · · · · · · · · · · · · · · · · · ·			Analyst: LBJ
Pheno!	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 5:39:41 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
2,4,6-Trichtorophenol	ND	0.20	mg/Kg	1	1/12/2010 5:39:41 PM
Surr: 2,4,6-Tribromophenol	81.2	35.5-141	%REC	1	1/12/2010 5:39:41 PM
Surr: 2-Fluorobiphenyl	64.7	30.4-128	%REC	1	1/12/2010 5:39:41 PM
Surr: 2-Fluorophenol	72.9	28.1-129	%REC	1	1/12/2010 5:39:41 PM
Surr: 4-Terphenyl-d14	47.4	34.6-151	%REC	. 1	1/12/2010 5:39:41 PM
Surr: Nitrobenzene-d5	72.1	26.5-122	%REC	1	1/12/2010 5:39:41 PM
Surr:,Phenol-d5	77.8	37.6-118	%REC	1	1/12/2010 5:39:41 PM
PA METHOD 8260B: VOLATILES					Analyst: DAN
Benzene	0.15	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Toluene	0.82	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Ethylbenzene	0.28	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,2,4-Trimethylbenzene	0.80	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,3,5-Trimethylbenzene	0.31	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Naphthalene	0.24	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
1-Methylnaphthalene	0.38	0.20	mg/Kg	1	1/12/2010 9:57:39 PM
2-Methylnaphthalene	0.71	0.20	. mg/Kg	1	1/12/2010 9:57:39 PM
Acetone	ND	0.75	mg/Kg	1	1/12/2010 9:57:39 PM
Bromobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Bromoform	NĐ	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Bromomethane	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
2-Butanone	ND	0.50	mg/Kg	1	1/12/2010 9:57:39 PM
Carbon disulfide	ND	0.50	mg/Kg	1	1/12/2010 9:57:39 PM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
Chlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Chloroethane	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
Chloroform	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Chloromethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
2-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
4-Chlorotoluene	ND	0.050	mg/Kg	. 1	1/12/2010 9:57:39 PM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: BKT-E-7

Lab Order: Project:

1001093

Collection Date: 1/6/2010 11:50:00 AM

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-07

Matrix: SOIL

Analyses	Result	PQL (Qùal Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	<u> </u>				Analyst: DAM
Dibromochloromethane	ND.	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Dibromomethane	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
2,2-Dichloropropane	- ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
Hexachlorobutadiene	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
2-Hexanone	ND	0.50	mg/Kg	1	1/12/2010 9:57:39 PM
Isopropylbenzene	0.062	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
4-Isopropyltoluene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/12/2010 9:57:39 PM
Methylene chloride	ND	0.15	mg/Kg	1	1/12/2010 9:57:39 PM
n-Butylbenzene	0.13	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
n-Propylbenzene	0.12	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Styrene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
tert-Butylbenzene	ND	0.050	mg/Kg	1 ·	1/12/2010 9:57:39 PM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
trans-1,3-Dichloropropene	ND	0.050	mg/ Kg	1	1/12/2010 9:57:39 PM
1,2,3-Trichlorobenzene	ND	0.10	. mg/Kg	1	1/12/2010 9:57:39 PM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
Vinyl chloride	ND	0.050	mg/Kg	1	1/12/2010 9:57:39 PM
Xylenes, Total	2.0	0.10	mg/Kg	1	1/12/2010 9:57:39 PM
Surr: 1,2-Dichloroethane-d4	98.2	59.5-119	%REC	1	1/12/2010 9:57:39 PM
Surr: 4-Bromofluorobenzene	103	57.9-141	%REC	1	1/12/2010 9:57:39 PM
Surr: Dibromofluoromethane	110	65.4-122	%REC	1	1/12/2010 9:57:39 PM
Surr: Toluene-d8	88.7	81.1-112	%REC	1	1/12/2010 9:57:39 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-08

Client Sample ID: BKT-S-8

Collection Date: 1/6/2010 12:05:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS	······································	, , , , , , , , , , , , , , , , , , ,		****	Analyst: SCC
Diesel Range Organics (DRO)	1100	100		mg/Kg	10	1/13/2010 6:41:16 AM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	1/13/2010 6:41:16 AM
Surr: DNOP	95.7	61.7-135		%REC	10	1/13/2010 6:41:16 AM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	390	50		mg/Kg	10	1/13/2010 3:29:27 PM
Surr: BFB	185	65.9-118	S	%REC	10	1/13/2010 3:29:27 PM
EPA METHOD 7471: MERCURY						Analyst: SNV
Mercury	ND	0.033		mg/Kg	1	1/12/2010 3:48:35 PM
EPA METHOD 6010B: SOIL METALS						Analyst: SNV
Arsenic	ND	13		mg/Kg	5	1/11/2010 1:44:01 PM
Barium	360	1.0		mg/Kg	10	1/11/2010 3:20:31 PM
Cadmium	ND	0.50		mg/Kg	5	1/11/2010 1:44:01 PM
Chromium	7.6	1.5		mg/Kg	5	1/11/2010 1:44:01 PM
Lead	5.8	1.3		mg/Kg	5	1/11/2010 1:44:01 PM
Selenium	ND	13		mg/Kg	5	1/11/2010 1:44:01 PM
Silver	ND	1.3		mg/Kg	5	1/11/2010 1:44:01 PM
EPA METHOD 8270C: SEMIVOLATILE	ES.					Analyst: LBJ
Acenaphthene	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Acenaphthylene	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Aniline	ND.	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Anthracene	ND	0.20		mg/Kg	.1	1/12/2010 6:09:04 PM
Azobenzene	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Benz(a)anthracene	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Benzo(a)pyrene	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Benzo(g,h,i)perylene	ND	0.50		mg/Kg	1	1/12/2010 6:09:04 PM
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1 .	1/12/2010 6:09:04 PM
Benzoic acid	ND	0.50		mg/Kg	1	1/12/2010 6:09:04 PM
Benzyl alcohol	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Bis(2-chloroethyl)ether	ND	0,20		mg/Kg	1	1/12/2010 6:09:04 PM
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	1/12/2010 6:09:04 PM
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
Carbazole	ND	0.20		mg/Kg	1	1/12/2010 6:09:04 PM
4-Chloro-3-methylphenol	ND	0.50		mg/Kg	1	1/12/2010 6:09:04 PM
4-Chloroaniline	ND	0.50		mg/Kg	1	1/12/2010 6:09:04 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-08

Client Sample ID: BKT-S-8

Collection Date: 1/6/2010 12:05:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLAT	riles				Analyst: LB
2-Chloronaphthalene	ND	0.25	mg/Kg	1 '	1/12/2010 6:09:04 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
4-Chlorophenyl phenyl ether	ND	0.20	. mg/Kg	1	1/12/2010 6:09:04 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 6:09:04 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 6:09:04 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 6:09:04 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 6:09:04 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
Fluoranthene	· ND	0.25	mg/Kg	1	1/12/2010 6:09:04 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Hexachloroethane	. ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 6:09:04 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
2-Methylnaphthalene	8.7	1.3	mg/Kg	5	1/13/2010 2:55:36 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Naphthalene	2.5	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
1-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 6:09:04 PM
Nitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
2-Nitrophenol	ND	0.20	mg/Kg	.1	1/12/2010 6:09:04 PM
4-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 6:09:04 PM
Phenanthrene	2.0	0.20	mg/Kg	1	1/12/2010 6:09:04 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-08

Client Sample ID: BKT-S-8

Collection Date: 1/6/2010 12:05:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S		<u> </u>		Analyst: LBJ
Phenol	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Pyrene .	0.23	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 6:09:04 PM
1,2,4-Trichlorobenzene	ΝD	0.20	mg/Kg	†	1/12/2010 6:09:04 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 6:09:04 PM
Surr: 2,4,6-Tribromophenol	57.4	35.5-141	%REC	5	1/13/2010 2:55:36 PM
Surr: 2-Fluorobiphenyl	62.7	30.4-128	%REC	1	1/12/2010 6:09:04 PM
Surr: 2-Fluorophenol	47.6	28.1-129	%REC	1	1/12/2010 6:09:04 PM
Surr: 4-Terphenyl-d14	53.6	34.6-151	%REC	1	1/12/2010 6:09:04 PM
Surr: Nitrobenzene-d5	48.3	26.5-122	%REC	1	1/12/2010 6:09:04 PM
Surr: Phenol-d5	58.1	37.6-118	%REC	1	1/12/2010 6:09:04 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	0.91	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Toluene	14	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Ethylbenzene	5.1	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Methyl tert-butyl ether (MTBE)	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,2,4-Trimethylbenzene	22	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,3,5-Trimethylbenzene	7.9	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,2-Dichloroethane (EDC)	- ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,2-Dibromoethane (EDB)	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Naphthalene	10	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
1-Methylnaphthalene	17	1.0	mg/Kg	5	1/12/2010 10:54:12 PM
2-Methylnaphthalene	34	10	mg/Kg	50	1/11/2010 9:31:51 PM
Acetone	ND	3.8	mg/Kg	5	1/12/2010 10:54:12 PM
Bromobenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Bromodichloromethane	, ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Bromoform	ИD	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Bromomethane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
2-Butanone	ND	2.5	mg/Kg	5	1/12/2010 10:54:12 PM
Carbon disulfide	ND	2.5	mg/Kg	5	1/12/2010 10:54:12 PM
Carbon tetrachloride	ПN	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
Chlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Chloroethane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
Chloroform	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Chloromethane	ŊD	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
2-Chlorotoluene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
4-Chlorotoluene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
cis-1,2-DCE	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
cis-1,3-Dichloropropene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,2-Dibromo-3-chloropropane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-08

Client Sample ID: BKT-S-8

Collection Date: 1/6/2010 12:05:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES			· · · · · · · · · · · · · · · · · · ·		Analyst: DA ₩
Dibromochloromethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Dibromomethane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
1,2-Dichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,3-Dichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,4-Dichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Dichlorodifluoromethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,1-Dichloroethane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
1,1-Dichloroethene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,2-Dichloropropane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,3-Dichloropropane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
2,2-Dichloropropane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
1,1-Dichloropropene	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
Hexachlorobutadiene	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
2-Hexanone	ND	2.5	mg/Kg	5	1/12/2010 10:54:12 PM
Isopropylbenzene	1.4	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
4-Isopropyltoluene	0.88	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
4-Methyl-2-pentanone	ND	2.5	mg/Kg	5	1/12/2010 10:54:12 PM
Methylene chloride	ND	0.75	mg/Kg	5	1/12/2010 10:54:12 PM
n-Butylbenzene	3.5	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
n-Propylbenzene	3.0	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
sec-Butylbenzene	1.2	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Styrene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
tert-Butylbenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,1,1,2-Tetrachloroethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,1,2,2-Tetrachioroethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Tetrachloroethene (PCE)	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
trans-1,2-DCE	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
trans-1,3-Dichloropropene	ND	0.25	mg/Kg	. 5	1/12/2010 10:54:12 PM
1,2,3-Trichlorobenzene	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
1,2,4-Trichlorobenzene	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,1,1-Trichloroethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,1,2-Trichloroethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Trichloroethene (TCE)	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Trichlorofluoromethane	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
1,2,3-Trichloropropane	ND	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
Vinyl chloride	ND	0.25	mg/Kg	5	1/12/2010 10:54:12 PM
Xylenes, Total	36	0.50	mg/Kg	5	1/12/2010 10:54:12 PM
Surr: 1,2-Dichloroethane-d4	102	59.5-119	%REC	5	1/12/2010 10:54:12 PM
Surr: 4-Bromofluorobenzene	135	57.9-141	%REC	5	1/12/2010 10:54:12 PM
Surr: Dibromofluoromethane	112	65.4-122	%REC	5	1/12/2010 10:54:12 PM
Surr: Toluene-d8	90.0	81.1-112	%REC	5	1/12/2010 10:54:12 PM

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Oua	liti	ers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT: Lab Order: Western Refining Southwest, Gallup

Client Sample ID: BKT-W-9

Collection Date: 1/6/2010 12:20:00 PM

Project: Lab ID:

API Overflow Sample Points

Date Received: 1/8/2010

Matrix: SOIL 1001093-09

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS		<u> </u>			Analyst: SCC
Diesel Range Organics (DRO)	560	10		mg/Kg	1	1/13/2010 7:17:15 AM
Motor Oil Range Organics (MRO)	56	50		mg/Kg	1	1/13/2010 7:17:15 AM
Surr: DNOP	97.5	61.7-135		%REC	1	1/13/2010 7:17:15 AM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	2300	250		mg/Kg	50	1/13/2010 3:58:13 PM
Surr: BFB	156	65.9-118	S	%REC	50	1/13/2010 3:58:13 PM
EPA METHOD 7471: MERCURY	·					Analyst: SNV
Mercury	ND	0.033		mg/Kg	1	1/12/2010 3:50:25 PM
EPA METHOD 6010B: SOIL METALS						Analyst: SNV
Arsenic	ND	13		mg/Kg	5	1/11/2010 1:55:08 PM
Barium	640	2.0		mg/ Kg	20	1/11/2010 3:22:34 PM
Cadmium	ND	0.50		mg/Kg	5	1/11/2010 1:55:06 PM
Chromium	9.0	1.5		mg/Kg	5	1/11/2010 1:55:06 PM
Lead	6.8	1.3		mg/Kg	5	1/11/2010 1:55:06 PM
Selenium	ND	13		mg/Kg	5	1/11/2010 1:55:06 PM
Silver	ND	1.3		mg/Kg	5	1/11/2010 1:55:06 PM
EPA METHOD 8270C: SEMIVOLATILI	ES					Analyst: LBJ
Acenaphthene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Acenaphthylene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Aniline	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Anthracene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Azobenzene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Benz(a)anthracene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Benzo(a)pyrene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Benzo(g,h,i)perylene	ND	0.50		mg/Kg	1	1/12/2010 6:37:59 PM
Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Benzoic acid	ND	0.50		mg/Kg	1	1/12/2010 6:37:59 PM
Benzyl alcohol	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Bis(2-ethylhexyl)phthalate	ND	0.50		mg/Kg	1	1/12/2010 6:37:59 PM
4-Bromophenyl phenyl ether	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Butyl benzyl phthalate	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
Carbazole	ND	0.20		mg/Kg	1	1/12/2010 6:37:59 PM
4-Chioro-3-methylphenol	ND	0.50		mg/Kg	1	1/12/2010 6:37:59 PM
4-Chloroaniline	ND	0.50		mg/Kg	1	1/12/2010 6:37:59 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-09

Client Sample ID: BKT-W-9

Collection Date: 1/6/2010 12:20:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	ES				Analyst: LBJ
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 6:37:59 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1 '	1/12/2010 6:37:59 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1 (1/12/2010 6:37:59 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 6:37:59 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Dimethyl phthalate	ND ·	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 6:37:59 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	, , 1	1/12/2010 6:37:59 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 6:37:59 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 6:37:59 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 6:37:59 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
2-Methylnaphthalene	3.5	0.25	mg/Kg	1	1/12/2010 6:37:59 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
3+4-Methylphenoi	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Naphthalene	1.5	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
2-Nitroaniline	, ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
4-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 6:37:59 PM
Nitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
2-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
4-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 6:37:59 PM
Phenanthrene	0.60	0.20	mg/Kg	1	1/12/2010 6:37:59 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-09

Client Sample ID: BKT-W-9

Collection Date: 1/6/2010 12:20:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES				***	Analyst: LBJ
Phenol	0.36	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 6:37:59 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	. 1	1/12/2010 6:37:59 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 6:37:59 PM
Surr: 2,4,6-Tribromophenol	68.5	35.5-141	%REC	1	1/12/2010 6:37:59 PM
Surr: 2-Fluorobiphenyl	77.8	30.4-128	%REC	1	1/12/2010 6:37:59 PM
Surr: 2-Fluorophenol	54.5	28.1-129	%REC	1	1/12/2010 6:37:59 PM
Surr: 4-Terphenyl-d14	58.4	34.6-151	%REC	1	1/12/2010 6:37:59 PM
Surr: Nitrobenzene-d5	70.3	26.5-122	%REC	1	1/12/2010 6:37:59 PM
Surr: Phenol-d5	73.9	37.6-118	%REC	1	1/12/2010 6:37:59 PM
PA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	6.9	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Toluene	110	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Ethylbenzene	28	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Methyl tert-butyl ether (MTBE)	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2,4-Trimethylbenzene	53	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,3,5-Trimethylbenzene	20	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2-Dichloroethane (EDC)	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2-Dibromoethane (EDB)	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Naphthalene	13	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
1-Methylnaphthalene	14	10	mg/Kg	50	1/11/2010 9:59:49 PM
2-Methylnaphthalene	27	10	mg/Kg	5Ò	1/11/2010 9:59:49 PM
Acetone	ND	38	mg/Kg	50	1/11/2010 9:59:49 PM
Bromobenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Bromodichloromethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Bromoform	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Bromomethane	ИD	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
2-Butanone	ND	25	mg/Kg	50	1/11/2010 9:59:49 PM
Carbon disulfide	ND	25	mg/Kg	50	1/11/2010 9:59:49 PM
Carbon tetrachloride	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
Chlorobenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Chloroethane	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
Chloroform	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Chloromethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
2-Chlorotoluene	ПИ	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
4-Chlorotoluene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
cis-1,2-DCE	ND .	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
cis-1,3-Dichloropropene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2-Dibromo-3-chloropropane	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-09

Client Sample ID: BKT-W-9

Collection Date: 1/6/2010 12:20:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Dibromochloromethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Dibromomethane	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
1,2-Dichlorobenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,3-Dichlorobenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,4-Dichlorobenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Dichlorodifluoromethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,1-Dichloroethane	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
1,1-Dichloroethene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2-Dichloropropane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,3-Dichloropropane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
2,2-Dichloropropane	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
1,1-Dichloropropene	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
Hexachlorobutadiene	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
2-Hexanone	ND	25	mg/Kg	50	1/11/2010 9:59:49 PM
Isopropylbenzene	5.4	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
4-isopropyitoluene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
4-Methyl-2-pentanone	ND	25	mg/Kg	50	1/11/2010 9:59:49 PM
Methylene chloride	ND	7.5	mg/Kg	50	1/11/2010 9:59:49 PM
n-Butylbenzene	6.2	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
n-Propylbenzene	10	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
sec-Butylbenzene	2.6	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Styrene	ND	2.5	. mg/Kg	50	1/11/2010 9:59:49 PM
tert-Butylbenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,1,1,2-Tetrachloroethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,1,2,2-Tetrachloroethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Tetrachloroethene (PCE)	ND	2.5	mg/Kg	50 .	1/11/2010 9:59:49 PM
trans-1,2-DCE	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
trans-1,3-Dichloropropene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2,3-Trichlorobenzene	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
1,2,4-Trichlorobenzene	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,1,1-Trichloroethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,1,2-Trichloroethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Trichloroethene (TCE)	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Trichlorofluoromethane	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
1,2,3-Trichloropropane	ND	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
Vinyl chloride	ND	2.5	mg/Kg	50	1/11/2010 9:59:49 PM
Xylenes, Total	180	5.0	mg/Kg	50	1/11/2010 9:59:49 PM
Surr: 1,2-Dichloroethane-d4	102	59.5-119	%REC	50	1/11/2010 9:59:49 PM
Surr: 4-Bromofluorobenzene	100	57.9-141	%REC	50	1/11/2010 9:59:49 PM
Surr: Dibromofluoromethane	111	65.4-122	%REC	. 50	1/11/2010 9:59:49 PM
Surr: Toluene-d8	95.4	81.1-112	%REC	50	1/11/2010 9:59:49 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

1001093

Client Sample ID: CHN-C-10

Lab Order:

Collection Date: 1/6/2010 1:30:00 PM

API Overflow Sample Points

Date Received: 1/8/2010 Matrix: SOIL

Project: Lab ID:

1001093-10

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE O	RGANICS				Analyst: SCC
Diesel Range Organics (DRO)	88	10	mg/Kg	1	1/13/2010 1:21:02 PM
Motor Oil Range Organics (MRO)	72	50	mg/Kg	1	1/13/2010 1:21:02 PM
Surr: DNOP	116	61.7-135	%REC	1	1/13/2010 1:21:02 PM
EPA METHOD 8015B: GASOLINE RANGI	=				Analyst: NSB
Gasoline Range Organics (GRO)	ND	10	mg/Kg	2	1/13/2010 4:27:05 PM
Surr: BFB	106	65.9-118	%REC	2	1/13/2010 4:27:05 PM
EPA METHOD 7471: MERCURY					Analyst: SNV
Mercury	ND	0.033	mg/Kg	1	1/12/2010 3:52:16 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 2:03:30 PM
Barium	350	1.0	mg/Kg	10	1/11/2010 3:24:37 PM
Cadmium	ND	0.50	mg/Kg	5	1/11/2010 2:03:30 PM
Chromium	9.1	1.5	mg/Kg	5	1/11/2010 2:03:30 PM
Lead	7.2	1.3	mg/Kg	5	1/11/2010 2:03:30 PM
Selenium	ND	13	mg/Kg	5	1/11/2010 2:03:30 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 2:03:30 PM
EPA METHOD 8270C: SEMIVOLATILES					Analyst: LBJ
Acenaphthene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Acenaphthylene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Aniline	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Anthracene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Azobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Benz(a)anthracene	ND	0.40	mg/Kg	,1	1/12/2010 7:06:49 PM
Benzo(a)pyrene	ND -	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Benzo(b)fluoranthene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Benzo(g,h,i)perylene	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
Benzo(k)fluoranthene	· ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Benzoic acid	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
Benzyl alcohol	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Bis(2-chloroethoxy)methane	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Bis(2-ethylhexyl)phthalate	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
4-Bromophenyl phenyl ether	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Butyl benzyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Carbazole	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
4-Chloro-3-methylphenol	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
4-Chloroaniline	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order: Project:

1001093

API Overflow Sample Points

Lab ID:

1001093-10

Client Sample ID: CHN-C-10

Collection Date: 1/6/2010 1:30:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES	· · · · · · · · · · · · · · · · · · ·			Analyst: LB.
2-Chioronaphthaiene	ND	0.50	mg/Kg	1 .	1/12/2010 7:06:49 PM
2-Chlorophenol	ND	0.40	mg/Kg	1.1	1/12/2010 7:06:49 PM
4-Chlorophenyl phenyl ether	ND	0.40	mg/Kg	1 -	1/12/2010 7:06:49 PM
Chrysene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Di-n-butyl phthalate	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
Di-n-octyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Dibenz(a,h)anthracene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Dibenzofuran	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
1,2-Dichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
1,3-Dichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
1,4-Dichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
3,3'-Dichlorobenzidine	ND	0.50	mg/Kg	. 1	1/12/2010 7:06:49 PM
Diethyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Dimethyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
2,4-Dichlorophenol	ND	0.80	mg/Kg	1	1/12/2010 7:06:49 PM
2,4-Dimethylphenol	ND	0.60	mg/Kg	1	1/12/2010 7:06:49 PM
4,6-Dinitro-2-methylphenol	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
2,4-Dinitrophenol	ND	0.80	mg/Kg	1	1/12/2010 7:06:49 PM
2,4-Dinitrotoluene	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
2,6-Dinitrotoluene	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
Fluoranthene	ND	0.50	mg/Kg	1	1/12/2010 7:06:49 PM
Fluorene	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
Hexachlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Hexachlorobutadiene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Hexachlorocyclopentadiene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Hexachloroethane	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Indeno(1,2,3-cd)pyrene	ND	0.50	mg/Kg	1	1/12/2010 7:06:49 PM
Isophorone	ND	1.0	mg/Kg	1,	1/12/2010 7:06:49 PM
2-Methylnaphthalene	ND	0.50	mg/Kg	1	1/12/2010 7:06:49 PM
2-Methylphenol	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
3+4-Methylphenol	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
N-Nitrosodiphenylamine	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Naphthalene	ND	0.40	mg/Kg	1	. 1/12/2010 7:06:49 PM
2-Nitroaniline	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
3-Nitroaniline	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
1-Nitroaniline	ND	0.50	mg/Kg	1	1/12/2010 7:06:49 PM
Nitrobenzene	ND	1.0	mg/Kg	1	1/12/2010 7:06:49 PM
2-Nitrophenol	ND	0.40	mg/Kg	. 1	1/12/2010 7:06:49 PM
4-Nitrophenol	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM
Pentachlorophenol	. ND	0.80	mg/Kg	1	1/12/2010 7:06:49 PM
Phenanthrene	ND	0.40	mg/Kg	1	1/12/2010 7:06:49 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J. Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

1001093-10

Client Sample ID: CHN-C-10

Collection Date: 1/6/2010 1:30:00 PM

Project: Lab ID: API Overflow Sample Points

Date Received: 1/8/2010

Matrix: SOIL

Result **POL Qual Units** DE Date Analyzed Analyses Analyst: LBJ **EPA METHOD 8270C: SEMIVOLATILES** ND 0.40 mg/Kg 1 1/12/2010 7:06:49 PM Phenol Pyrene ND 0.40 mg/Kg 1 1/12/2010 7:06:49 PM ND 1/12/2010 7:06:49 PM 1.0 mg/Kg 1 Pyridine ND 0.40 ma/Ka 1 1/12/2010 7:06:49 PM 1,2,4-Trichlorobenzene 2,4,5-Trichlorophenol ND 0.40 mg/Kg 1 1/12/2010 7:06:49 PM ND 0.40 mg/Kg 1/12/2010 7:06:49 PM 2,4,6-Trichlorophenol 44.9 35.5-141 %REC 1 1/12/2010 7:06:49 PM Surr: 2,4,6-Tribromophenol 36.5 30.4-128 %REC 1/12/2010 7:06:49 PM Surr: 2-Fluorobiphenyl 32.9 28.1-129 %REC Surr: 2-Fluorophenol 1 1/12/2010 7:06:49 PM Surr: 4-Terphenyl-d14 28.8 34,6-151 %REC 1/12/2010 7:06:49 PM 1 39.4 26.5-122 %REC 1/12/2010 7:06:49 PM Surr: Nitrobenzene-d5 Surr: Phenol-d5 39.5 37.6-118 %REC 1/12/2010 7:06:49 PM **EPA METHOD 8260B: VOLATILES** Analyst: DAM Benzene ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.050 1/11/2010 10:28:04 PM Toluene mg/Kg 1 Ethylbenzene ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.050 1/11/2010 10:28:04 PM Methyl tert-butyl ether (MTBE) mg/Kg 1 1,2,4-Trimethylbenzene ND 0.050 mg/Kg 1/11/2010 10:28:04 PM 1,3,5-Trimethylbenzene ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM 1,2-Dichloroethane (EDC) ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM 1,2-Dibromoethane (EDB) ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM Naphthalene ND 0.10 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.20 1 1-Methylnaphthalene mg/Kg 1/11/2010 10:28:04 PM 2-Methylnaphthalene ND 0.20 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.75 Acetone mg/Kg 1 1/11/2010 10:28:04 PM ND 0.050 mg/Kg 1/11/2010 10:28:04 PM Bromobenzene 1 Bromodichloromethane ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.050 mg/Kg 1/11/2010 10:28:04 PM **Bromoform** 1 ND 0.10 mg/Kg Bromomethane 1 1/11/2010 10:28:04 PM ND 0.50 1 2-Butanone mg/Kg 1/11/2010 10:28:04 PM Carbon disulfide ND 0.50 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.10 1 Carbon tetrachloride mg/Kg 1/11/2010 10:28:04 PM ND 0.050 1 Chlorobenzene mg/Kg 1/11/2010 10:28:04 PM ND 0.10 Chloroethane mg/Kg 1 1/11/2010 10:28:04 PM Chloroform ND 0.050 mg/Kg 1 1/11/2010 10:28:04 PM ND 0.050 mg/Kg 1 Chloromethane 1/11/2010 10:28:04 PM ND 0.050 mg/Kg 2-Chlorotoluene 1 1/11/2010 10:28:04 PM ND 0.050 mg/Kg 1 4-Chlorotoluene 1/11/2010 10:28:04 PM

Qualifiers:

cis-1,2-DCE

cis-1,3-Dichloropropene

1,2-Dibromo-3-chloropropane

Value exceeds Maximum Contaminant Level

ND

ND

ND

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank

1

1

- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

mg/Kg

mg/Kg

mg/Kg

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1/11/2010 10:28:04 PM

1/11/2010 10:28:04 PM

1/11/2010 10:28:04 PM

0.050

0.050

0.10

API Overflow Sample Points

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Collection Date: 1/6/2010 1:30:00 PM

Client Sample ID: CHN-C-10

Project:

Date Received: 1/8/2010

Lab ID:

1001093-10

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES		····			Analyst: DAM
Dibromochloromethane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Dibromomethane	ND	0.10	mg/Kg	1	1/11/2010 10:28:04 PM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Dichlorodifluoromethane	ND	0.050	mg/Kg	-1	1/11/2010 10:28:04 PM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/11/2010 10:28:04 PM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
2,2-Dichloropropane	ND	0.10	mg/Kg	1 .	1/11/2010 10:28:04 PM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/11/2010 10:28:04 PM
Hexachlorobutadiene	ND	0.10	mg/Kg	· 1	1/11/2010 10:28:04 PM
2-Hexanone	· ND	0.50	mg/Kg	1	1/11/2010 10:28:04 PM
Isopropylbenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
4-isopropyltoluene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/11/2010 10:28:04 PM
Methylene chloride	ND	0.15	mg/Kg	1	1/11/2010 10:28:04 PM
n-Butylbenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
n-Propylbenzene	, ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Styrene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
tert-Butylbenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/11/2010 10:28:04 PM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,1,1-Trichloroethane	ND	0.050	mg/ K g	1	1/11/2010 10:28:04 PM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/11/2010 10:28:04 PM
Vinyl chloride	ND	0.050	mg/Kg	1	1/11/2010 10:28:04 PM
Xylenes, Total	ND	0.10	mg/Kg	1	1/11/2010 10:28:04 PM
Surr: 1,2-Dichloroethane-d4	94.3	59.5-119	%REC	1	1/11/2010 10:28:04 PM
Surr: 4-Bromofluorobenzene	94.0	57.9-141	%REC	1	1/11/2010 10:28:04 PM
Surr: Dibromofluoromethane	109	65.4-122	%REC	1	1/11/2010 10:28:04 PM
Surr: Toluene-d8	90.3	81.1-112	%REC	1	1/11/2010 10:28:04 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-11

Client Sample ID: CHN-C-11

ione sumple in the sint of the

Collection Date: 1/6/2010 1:45:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	120	10	mg/Kg	1	1/13/2010 1:58:03 PM
Motor Oil Range Organics (MRO)	100	50	mg/Kg	1	1/13/2010 1:58:03 PM
Surr: DNOP	121	61.7-135	%REC	1	1/13/2010 1:58:03 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	10	mg/Kg	2	1/13/2010 4:55:53 PM
Surr: BFB	104	65.9-118	%REC	. 2	1/13/2010 4:55:53 PM
EPA METHOD 7471: MERCURY		•			Analyst: SNV
Mercury	0.077	0.033	m g/Kg	1	1/12/2010 3:54:06 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 2:36:22 PM
Barium	380	1.0	mg/Kg	10	1/11/2010 3:26:43 PM
Cadmium	ND	0.50	mg/Kg	5	1/11/2010 2:36:22 PM
Chromium	11	1.5	mg/Kg	5	1/11/2010 2:36:22 PM
Lead	5.8	1.3	mg/Kg	5	1/11/2010 2:36:22 PM
Selenium	ND	13	mg/Kg	5	1/11/2010 2:36:22 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 2:36;22 PM
EPA METHOD 8270C: SEMIVOLATILI	ES				Analyst: LBJ
Acenaphthene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Acenaphthylene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Aniline	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Anthracene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Azobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Benz(a)anthracene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Benzo(a)pyrene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Benzo(b)fluoranthene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Benzo(g,h,i)perylene	ND	1:0	mg/Kg	1	1/12/2010 7:35:40 PM
Benzo(k)fluoranthene	ND	. 0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Benzoic acid	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
Benzyl alcohol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Bis(2-chloroethoxy)methane	ND .	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Bis(2-chloroethyl)ether	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Bis(2-chloroisopropyl)ether	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Bis(2-ethylhexyl)phthalate	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
4-Bromophenyl phenyl ether	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Butyl benzyl phthalate	ND	0.40	mg/Kg	· 1	1/12/2010 7:35:40 PM
Carbazole	ND	0.40	mg/Kg	1 .	1/12/2010 7:35:40 PM
4-Chloro-3-methylphenol	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
4-Chloroaniline	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-11

Client Sample ID: CHN-C-11

Collection Date: 1/6/2010 1:45:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES			- Indo-	Analyst: LBJ
2-Chloronaphthalene	ND	0.50	mg/Kg	1	1/12/2010 7:35:40 PM
2-Chlorophenol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
4-Chlorophenyl phenyl ether	· ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Chrysene	ND	0:40	mg/Kg	1	1/12/2010 7:35:40 PM
Di-n-butyl phthalate	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
Di-n-octyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Dibenz(a,h)anthracene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Dibenzofuran	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
1,2-Dichlorobenzene	ND	0.40	mg/Kg	1 -	1/12/2010 7:35:40 PM
1,3-Dichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
1,4-Dichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
3,3'-Dichlorobenzidine	ND	0.50	mg/Kg	` 1	1/12/2010 7:35:40 PM
Diethyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Dimethyl phthalate	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
2,4-Dichlorophenol	ND	0.80	mg/Kg	· 1	1/12/2010 7:35:40 PM
2,4-Dimethylphenol	ND	0.60	mg/Kg	1	1/12/2010 7:35:40 PM
4,6-Dinitro-2-methylphenol	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
2,4-Dinitrophenol	ND	0.80	mg/Kg	1	1/12/2010 7:35:40 PM
2,4-Dinitrotoluene	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
2,6-Dinitrotoluene	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
Fluoranthene	ND	0.50	mg/Kg	1	1/12/2010 7:35:40 PM
Fluorene	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
Hexachlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Hexachlorobutadiene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Hexachlorocyclopentadiene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Hexachloroethane	ND	0.40	m g/Kg	. 1	1/12/2010 7:35:40 PM
Indeno(1,2,3-cd)pyrene	ИĎ	0.50	mg/Kg	1	1/12/2010 7:35:40 PM
Isophorone	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
2-Methylnaphthalene	ND	0.50	mg/Kg	· 1	1/12/2010 7:35:40 PM
2-Methylphenol	ND	1.0	mg/Kg	1 _n	1/12/2010 7:35:40 PM
3+4-Methylphenol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
N-Nitrosodi-n-propylamine	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
N-Nitrosodiphenylamine	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Naphthalene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
2-Nitroaniline	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
3-Nitroaniline	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
4-Nitroaniline	ND	0.50	mg/Kg	1	1/12/2010 7:35:40 PM
Nitrobenzene	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
2-Nitrophenol	· ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
4-Nitrophenol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Pentachlorophenol	ND	0.80	mg/Kg	1	1/12/2010 7:35:40 PM
Phenanthrene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 42 of 56

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-11

Client Sample ID: CHN-C-11

Collection Date: 1/6/2010 1:45:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES		1.740	,		Analyst: LBJ
Phenol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Pyrene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Pyridine	ND	1.0	mg/Kg	1	1/12/2010 7:35:40 PM
1,2,4-Trichlorobenzene	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
2,4,5-Trichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
2,4,6-Trichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 7:35:40 PM
Surr: 2,4,6-Tribromophenol	53.9	35.5-141	%REC	1	1/12/2010 7:35:40 PM
Surr: 2-Fluorobiphenyl	45.7	30.4-128	%REC	1	1/12/2010 7:35:40 PM
Surr: 2-Fluorophenol	49.1	28.1-129	%REC	1	1/12/2010 7:35:40 PM
Surr: 4-Terphenyl-d14	42.9	34.6-151	%REC	1	1/12/2010 7:35:40 PM
Surr: Nitrobenzene-d5	45.1	26.5-122	%REC	1	1/12/2010 7:35:40 PM
Surr: Phenol-d5	50.9	37.6-118	%REC	1	1/12/2010.7:35:40 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAW
Benzene	ND .	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Toluene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Ethylbenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
1,2,4-Trimethylbenzene	0.13	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
1,3,5-Trimethylbenzene	0.059	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
1,2-Dibromoethane (EDB)	. ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Naphthalene	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM
1-Methylnaphthalene	ND	0.20	mg/Kg	1	1/14/2010 4:24:05 AM
2-Methylnaphthalene	0.23	0.20	mg/Kg	1	1/14/2010 4:24:05 AM
Acetone	ND	0.75	mg/Kg	1	1/14/2010 4:24:05 AM
Bromobenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Bromodichloromethane	ND	0.050	rng/Kg	1	1/14/2010 4:24:05 AM
Bromoform	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Bromomethane	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM
2-Butanone	ND	0.50	mg/Kg	1	1/14/2010 4:24:05 AM
Carbon disulfide	ND	0.50	mg/Kg	1	1/14/2010 4:24:05 AM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM
Chlorobenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Chloroethane	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM
Chloroform	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
Chloromethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
2-Chlorotoluene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
4-Chlorotoluene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM
1,2-Dibromo-3-chloropropane	ND	0.00	mg/Kg	1	1/14/2010 4:24:05 AM

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- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Client Sample ID: CHN-C-11

Collection Date: 1/6/2010 1:45:00 PM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Lab ID:

1001093-11

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed	
EPA METHOD 8260B: VOLATILES		The System Community of the Community of			Analyst: DAN	
Dibromochloromethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
Dibromomethane	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1 .	1/14/2010 4:24:05 AM	
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,4-Dichiorobenzene	ND ·	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,3-Dichloropropane	ND	0.050	mg/Kg	1.	1/14/2010 4:24:05 AM	
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
Hexachlorobutadiene	. ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
2-Hexanone	ND	0.50	mg/Kg	1	1/14/2010 4:24:05 AM	
Isopropylbenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
4-Isopropyltoluene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/14/2010 4:24:05 AM	
Methylene chloride	ND	0.15	mg/Kg	1	1/14/2010 4:24:05 AM	
n-Butylbenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
n-Propylbenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
Styrene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
tert-Butylbenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1 .	1/14/2010 4:24:05 AM	
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
trans-1,3-Dichtoropropene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/14/2010 4:24:05 AM	
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
Vinyl chloride	ND	0.050	mg/ K g	1	1/14/2010 4:24:05 AM	
Xylenes, Total	ND	0.10	mg/Kg	1	1/14/2010 4:24:05 AM	
Surr: 1,2-Dichloroethane-d4	98.2	59.5-119	%REC	1	1/14/2010 4:24:05 AM	
Surr: 4-Bromofluorobenzene	94.9	57.9-141	%REC	1	1/14/2010 4:24:05 AM	
Surr: Dibromofluoromethane	108	65.4-122	%REC	1 -	1/14/2010 4:24:05 AM	
Surr: Toluene-d8	91.7	81.1-112	%REC	1	1/14/2010 4:24:05 AM	

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Value exceeds Maximum Contaminant Level

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Estimated value Е

Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-12

Client Sample ID: NBT-W-12

Collection Date: 1/6/2010 2:00:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS		\	THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TWO IS NAMED IN COLUMN TW	Analyst: SCC
Diesel Range Organics (DRO)	32	10	mg/Kg	1	1/13/2010 2:34:48 PM
Motor Oil Range Organics (MRO)	78	50	mg/Kg	1	1/13/2010 2:34:48 PM
Surr: DNOP	118	61.7-135	%REC	. 1	1/13/2010 2:34:48 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/13/2010 5:24:36 PM
Surr: BFB	101	65.9-118	%REC	1	1/13/2010 5:24:36 PM
EPA METHOD 7471: MERCURY					Analyst: SNV
Mercury	0.068	0.033	mg/Kg	1	1/12/2010 3:55:57 PM
EPA METHOD 6010B: SOIL METALS					Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 2:40:38 PM
Barium	350	1.0	mg/Kg	10	1/11/2010 3:28:46 PM
Cadmium	ND	0.50	mg/Kg	5	1/11/2010 2:40:38 PM
Chromium	9.1	1.5	mg/Kg	5	1/11/2010 2:40:38 PM
Lead	7.7	1.3	mg/Kg	5	1/11/2010 2:40:38 PM
Selenium	ND	13	mg/Kg	5	1/11/2010 2:40:38 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 2:40:38 PM
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: LBJ
Äcenaphthene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Acenaphthylene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Aniline	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Anthracene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Azobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Benz(a)anthracene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Benzo(a)pyrene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Benzo(b)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Benzo(g,h,i)perylene	ND	0.50	mg/Kg	1 .	1/12/2010 8:04:24 PM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Benzoic acid	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
Benzyl alcohol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Bis(2-chloroethoxy)methane	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Bis(2-chloroethyl)ether	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Bis(2-ethylhexyl)phthalate	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
4-Bromophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Butyl benzyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Carbazole	. ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
4-Chloroaniline	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

Page 45 of 56

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Project:

API Overflow Sample Points

Lab ID:

1001093-12

Client Sample ID: NBT-W-12

Collection Date: 1/6/2010 2:00:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLAT	TILES	20 C C C C C C C C C C C C C C C C C C C			Analyst: LB.
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 8:04:24 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Di-n-butyl phthalate	, ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 8:04:24 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 8:04:24 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 8:04:24 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1 .	1/12/2010 8:04:24 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 8:04:24 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 8:04:24 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Hexachlorobutadiene	ND	0.20	mg/ K g	1	1/12/2010 8:04:24 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
ndeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 8:04:24 PM
sophorone	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
?-Methylnaphthalene	ND	0.25	mg/Kg	1	1/12/2010 8:04:24 PM
2-Methylphenot	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
N-Nitrosodiphenylamine	· ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Naphthalene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
?-Nitroaniline	ND	0.20	′ mg/Kg	1	1/12/2010 8:04:24 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 8:04:24 PM
Vitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
!-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
I-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
^o entachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 8:04:24 PM
Phenanthrene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Client Sample ID: NBT-W-12

Collection Date: 1/6/2010 2:00:00 PM

Project: Lab ID:

API Overflow Sample Points

1001093-12

Date Received: 1/8/2010 Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S),,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Analyst: LBJ
Phenol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 8:04:24 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 8:04:24 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1 .	1/12/2010 8:04:24 PM
Surr: 2,4,6-Tribromophenol	99.8	35.5-141	%REC	1	1/12/2010 8:04:24 PM
Surr: 2-Fluorobiphenyl	71.5	30.4-128	%REC	1	1/12/2010 8:04:24 PM
Surr: 2-Fluorophenol	59.3	28.1-129	%REC	1	1/12/2010 8:04:24 PM
Surr: 4-Terphenyl-d14	44.7	34.6-151	%REC	1	1/12/2010 8:04:24 PM
Surr: Nitrobenzene-d5	- 77.1	26.5-122	%REC	1	1/12/2010 8:04:24 PM
Surr: Phenol-d5	76.2	37.6-118	%REC	1	1/12/2010 8:04:24 PM
EPA METHOD 8260B: VOLATILES	•			•	Analyst: DAM
Benzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Toluene	МĐ	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Ethylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Naphthalene	ND	0.10	mg/Kg	1	1/13/2010 12:18:36,AM
1-Methylnaphthalene	·-·ND	0.20	mg/Kg	1	1/13/2010 12:18:36 AM
2-Methylnaphthalene	ND	0.20	mg/Kg	1	1/13/2010 12:18:36 AM
Acetone	ND	0.75	mg/Kg	1	1/13/2010 12:18:36 AM
Bromobenzene	ND	0.050	mg/Kg	1.	1/13/2010 12:18:36 AM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Bromoform	ND.	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Bromomethane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
2-Butanone	ND	0.50	mg/Kg	1	1/13/2010 12:18:36 AM
Carbon disulfide	ND	0.50	mg/Kg	1	1/13/2010 12:18:36 AM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
Chlorobenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Chloroethane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
Chloroform	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Chloromethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
2-Chlorotoluene	NĎ	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
4-Chlorotoluene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Project:

API Overflow Sample Points

Lab ID:

1001093-12

Client Sample ID: NBT-W-12

Collection Date: 1/6/2010 2:00:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Dibromochloromethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Dibromomethane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	. 1	1/13/2010 12:18:36 AM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1 1	1/13/2010 12:18:36 AM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2-Dichloropropane	ND [*]	0.050	mġ/Kg	1	1/13/2010 12:18:36 AM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
1,1-Dichloropropene	· ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
Hexachlorobutadiene	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
2-Hexanone	ND	0.50	mg/Kg	1	1/13/2010 12:18:36 AM
Isopropylbenzene	ND	0.050	mg/Kg	1 .	1/13/2010 12:18:36 AM
4-Isopropyltoluene	ND	Ö.050	mg/Kg	1	1/13/2010 12:18:36 AM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/13/2010 12:18:36 AM
Methylene chloride	ND	0.15	mg/Kg	1	1/13/2010 12:18:36 AM
n-Butylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
n-Propylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Styrene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
tert-Butylbenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
Vinyl chloride	ND	0.050	mg/Kg	1	1/13/2010 12:18:36 AM
Xylenes, Total	ND	0.10	mg/Kg	1	1/13/2010 12:18:36 AM
Surr: 1,2-Dichloroethane-d4	97.5	59.5-119	%REC	1	1/13/2010 12:18:36 AM
Surr: 4-Bromofluorobenzene	89.4	57.9-141	%REC	1	1/13/2010 12:18:36 AM
Surr: Dibromofluoromethane	109	65.4-122	%REC	1	1/13/2010 12:18:36 AM
Surr: Toluene-d8	94.9	81.1-112	%REC	1	1/13/2010 12:18:36 AM

Qualifiers:

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^{*} Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

1001093

Client Sample ID: NBT-N-13

Lab Order:

Collection Date: 1/6/2010 2:20:00 PM

Project:

API Overflow Sample Points

Lab ID:

1001093-13

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Lab ID: 1001093-13							
Diesel Range Organics (DRO) 390 10 mg/Kg 1 1/13/2010 3:11:19 PM	Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	
Motor Oil Range Organics (MRO)	EPA METHOD 8015B: DIESEL RANG	E ORGANICS			<u> </u>		Analyst: SCC	
Surr: DNOP	Diesel Range Organics (DRO)	390	10		mg/Kg	1	1/13/2010 3:11:19 PM	
EPA METHOD 80158: GASOLINE RANGE Gasoline Range Organics (GRO) 210 50 mg/Kg 10 1/13/2010 5:53:18 PM	Motor Oil Range Organics (MRO)	120	50		mg/Kg	1	1/13/2010 3:11:19 PM	
Gasoline Range Organics (GRO) 210 50 mg/Kg 10 1/13/2010 5:53:18 PM	Surr: DNOP	105	61.7-135		%REC	1	1/13/2010 3:11:19 PM	
Surr: BFB	EPA METHOD 8015B: GASOLINE RA	NGE	•				Analyst: NSB	
Part	Gasoline Range Organics (GRO)	210	50		mg/Kg	10	1/13/2010 5:53:18 PM	
Marcury 0.067 0.033 mg/Kg 1 1/12/2010 3:57:40 PM	Surr: BFB	172	- 65.9-118	S	%REC	10	1/13/2010 5:53:18 PM	
Marcury 0.067 0.033 mg/Kg 1 1/12/2010 3:57:40 PM	EPA METHOD 7471: MERCURY						Analyst: SNV	
Arsenic	Mercury	0.067	0.033		mg/Kg	1	•	
Barium	EPA METHOD 6010B: SOIL METALS						Analyst: SNV	
Cadmium ND 0.50 mg/Kg 5 1/11/2010 2:51:26 PM Chromium 7.3 1.5 mg/Kg 5 1/11/2010 2:51:26 PM Lead 6.5 1.3 mg/Kg 5 1/11/2010 2:51:26 PM Selenium ND 13 mg/Kg 5 1/11/2010 2:51:26 PM Silver ND 1.3 mg/Kg 5 1/11/2010 2:51:26 PM Selenium ND 1.3 mg/Kg 5 1/11/2010 2:51:26 PM Selenium ND 1.3 mg/Kg 5 1/11/2010 2:51:26 PM Selenium ND 0.20 mg/Kg 1 1/12/2010 2:51:26 PM Selenium ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Acenaphthere ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Acenaphthylighene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Anithracene ND 0.20 mg/Kg 1	Arsenic	ND	13		mg/Kg	5	1/11/2010 2:51:26 PM	
Chromium	Barium	350	1.0	•	mg/Kg	10	1/11/2010 3:30:49 PM	
Lead 6.5	Cadmium	ND	0.50		mg/Kg	5	1/11/2010 2:51:26 PM	
Selenium	Chromium	7.3	1.5		mg/Kg	5	1/11/2010 2:51:26 PM	
EPA METHOD 8270C: SEMIVOLATILES	Lead	6.5	1.3		mg/Kg	5	1/11/2010 2:51:26 PM	
Analyst: LBJ	Selenium	ND	13		mg/Kg	5	1/11/2010 2:51:26 PM	
Acenaphthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Aniline ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benza(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)phyloranthene ND 0.50 mg/Kg 1 <td>Silver</td> <td>ND</td> <td>1.3</td> <td></td> <td>mg/Kg</td> <td>5</td> <td>1/11/2010 2:51:26 PM</td>	Silver	ND	1.3		mg/Kg	5	1/11/2010 2:51:26 PM	
Acenaphthylene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Aniline ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g, h, i)per/lene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a) (h)iperylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b) (liuoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.50 mg/Kg	EPA METHOD 8270C: SEMIVOLATILI	ES					Analyst: LBJ	
Aniline ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg <	Acenaphthene	ND	0.20		mg/Kg	. 1	1/12/2010 8:33:01 PM	
Anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Azobenzene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 <t< td=""><td>Acenaphthylene</td><td>ND</td><td>0.20</td><td></td><td>mg/Kg</td><td>1</td><td>1/12/2010 8:33:01 PM</td></t<>	Acenaphthylene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Azobenzene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50	Aniline	ND	0.20		mg/Kg	i	1/12/2010 8:33:01 PM	
Benz(a)anthracene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND <td>Anthracene</td> <td>ND</td> <td>0.20</td> <td></td> <td>mg/Kg</td> <td>1</td> <td>1/12/2010 8:33:01 PM</td>	Anthracene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Benzo(a)pyrene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND <td>Azobenzene</td> <td>ND</td> <td>0.20</td> <td></td> <td>mg/Kg</td> <td>1</td> <td>1/12/2010 8:33:01 PM</td>	Azobenzene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Benzo(b)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND	Benz(a)anthracene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Benzo(g,h,i)perylene ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzo(k)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND	Benzo(a)pyrene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Benzo(k)fluoranthene ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Benzo(b)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Benzoic acid ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Benzo(g,h,i)perylene	ND	0.50		mg/Kg	1	1/12/2010 8:33:01 PM	
Benzyl alcohol ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Benzo(k)fluoranthene	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Bis(2-chloroethoxy)methane ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Benzoic acid	ND	0.50		mg/Kg	1	1/12/2010 8:33:01 PM	
Bis(2-chloroethyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Benzyl alcohol	МD	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Bis(2-chloroisopropyl)ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Bis(2-chloroethoxy)methane	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
Bis(2-ethylhexyl)phthalate ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM 4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Bis(2-chloroethyl)ether	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Bis(2-chloroisopropyl)ether	ND	0.20		mg/Kg	1	1/12/2010 8:33:01 PM	
4-Bromophenyl phenyl ether ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM	Bis(2-ethylhexyl)phthalate	ND	0.50			1	1/12/2010 8:33:01 PM	
Butyl benzyl phthalate ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM						1		
Carbazole ND 0.20 mg/Kg 1 1/12/2010 8:33:01 PM 4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM		ND	0.20			1		
4-Chloro-3-methylphenol ND 0.50 mg/Kg 1 1/12/2010 8:33:01 PM			0.20			1		
	4-Chloro-3-methylphenol					1		
	• •				-		•	

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Collection Date: 1/6/2010 2:20:00 PM

Project:

API Overflow Sample Points

Date Received: 1/8/2010

Client Sample ID: NBT-N-13

Matrix: SOIL

Lab ID: 1001093-13

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES				Analyst: LB.
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 8:33:01 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
4-Chlorophenyl phenyl ether	ND ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
Di-n-octyl phthalate	NĐ	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 8:33:01 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 8:33:01 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 8:33:01 PM
4.6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 8:33:01 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
2.6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 8:33:01 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 8:33:01 PM
sophorone	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
2-Methylnaphthalene	0.89	0.25	mg/Kg	1	1/12/2010 8:33:01 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Naphthalene	0.24	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
2-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
I-Nitroaniline	ND	0.25	mg/Kg	1	1/12/2010 8:33:01 PM
Vitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 8:33:01 PM
2-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
I-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 8:33:01 PM
Phenanthrene	0.65	0.20	mg/Kg	1	1/12/2010 8:33:01 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-13

Client Sample ID: NBT-N-13

Collection Date: 1/6/2010 2:20:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: LBJ
Phenol	ND	0.20	mg/Kg	. 1	1/12/2010 8:33:01 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Pyridine	ND	0.50	mg/Kg	1 .	1/12/2010 8:33:01 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 8:33:01 PM
Surr: 2,4,6-Tribromophenol	52.8	35.5-141	%REC	1	1/12/2010 8:33:01 PM
Surr: 2-Fluorobiphenyl	51.8	30.4-128	%REC	1	1/12/2010 8:33:01 PM
Surr: 2-Fluorophenol	42.1	28.1-129	%REC	1	1/12/2010 8:33:01 PM
Surr: 4-Terphenyl-d14	36.9	34.6-151	%REC	1	1/12/2010 8:33:01 PM
Surr: Nitrobenzene-d5	63.8	26.5-122	%REC	1	1/12/2010 8:33:01 PM
Surr: Phenol-d5	60.2	37.6-118	%REC	1	1/12/2010 8:33:01 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	0.25	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Toluene	5.8	0.25	mg/ Kg	5	1/13/2010 12:46:49 AM
Ethylbenzene	2.6	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Methyl tert-butyl ether (MTBE)	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,2,4-Trimethylbenzene	7.5	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,3,5-Trimethylbenzene	3.4	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,2-Dichloroethane (EDC)	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,2-Dibromoethane (EDB)	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Naphthalene	0.81	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
1-Methylnaphthalene	2.4	1.0	mg/Kg	5	1/13/2010 12:46:49 AM
2-Methylnaphthalene	3.0	1.0	mg/Kg	5	1/13/2010 12:46:49 AM
Acetone	ND	3.8	mg/Kg	5	1/13/2010 12:46:49 AM
Bromobenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Bromodichloromethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Bromoform	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Bromomethane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
2-Butanone	ND	2.5	mg/Kg	5	1/13/2010 12:46:49 AM
Carbon disulfide	ND	2.5	mg/Kg	5	- 1/13/2010 12:46:49 AM
Carbon tetrachloride	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
Chlorobenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Chloroethane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
Chioroform	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Chloromethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
2-Chlorotoluene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
4-Chlorotoluene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
cis-1,2-DCE	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
cis-1,3-Dichloropropene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,2-Dibromo-3-chloropropane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-13

Client Sample ID: NBT-N-13

Collection Date: 1/6/2010 2:20:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES				2	Analyst: DAM
Dibromochloromethane	, ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Dibromomethane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
1,2-Dichlorobenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,3-Dichlorobenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,4-Dichlorobenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Dichlorodifluoromethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,1-Dichloroethane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
1,1-Dichloroethene	ND	0.25		5	1/13/2010 12:46:49 AM
1,2-Dichloropropane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,3-Dichloropropane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
2,2-Dichloropropane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
1,1-Dichloropropene	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
Hexachlorobutadiene	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
2-Hexanone	ND	2.5	mg/Kg	5	1/13/2010 12:46:49 AM
Isopropylbenzene	0.69	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
4-Isopropyltoluene	0.32	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
4-Methyl-2-pentanone	ND	2.5	mg/Kg	5	1/13/2010 12:46:49 AM
Methylene chloride	ND	0.75	mg/Kg	5	1/13/2010 12:46:49 AM
n-Butylbenzene	1.0	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
n-Propylbenzene	1.3	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
sec-Butylbenzene	0.44	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Styrene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
tert-Butylbenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,1,1,2-Tetrachloroethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,1,2,2-Tetrachloroethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Tetrachloroethene (PCE)	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
trans-1,2-DCE	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
trans-1,3-Dichloropropene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,2,3-Trichlorobenzene	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
1,2,4-Trichlorobenzene	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,1,1-Trichloroethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,1,2-Trichloroethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Trichloroethene (TCE)	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Trichlorofluoromethane	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
1,2,3-Trichloropropane	ND	0.50	mg/Kg	5	1/13/2010 12:46:49 AM
Vinyl chloride	ND	0.25	mg/Kg	5	1/13/2010 12:46:49 AM
Xylenes, Total	19	0.50	mg/Kg	5 .	1/13/2010 12:46:49 AM
Surr: 1,2-Dichloroethane-d4	103	59.5-119	%REC	5	1/13/2010 12:46:49 AM
Surr: 4-Bromofluorobenzene	113	57.9-141	%REC	. 5	1/13/2010 12:46:49 AM
Surr: Dibromofluoromethane	113	65.4-122	%REC	5	1/13/2010 12:46:49 AM
Surr: Toluene-d8	87.5	81.1-112	%REC	5	1/13/2010 12:46:49 AM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Client Sample ID: NBT-E-14

Collection Date: 1/6/2010 2:45:00 PM

Project: Lab ID: API Overflow Sample Points 1001093-14

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	, ND	10	mg/Kg	1	1/12/2010 3:06:05 PM
Motor Oil Range Organics (MRO)	ND	.50	mg/Kg	1	1/12/2010 3:06:05 PM
Surr: DNOP	99.4	61.7-135	%REC	1	1/12/2010 3:06:05 PM
EPA METHOD 8015B: GASOLINE RA	ANGE			•	Analyst: NSE
Gasoline Range Organics (GRO)	ND	5.0	mg/Kg	1	1/13/2010 6:22:08 PM
Surr: BFB	106	65.9-118	%REC	1	1/13/2010 6:22:08 PM
EPA METHOD 7471: MERCURY					Analyst: SNV
Mercury	ND	0.033	mg/Kg	1	1/12/2010 3:59:24 PM
EPA METHOD 6010B: SOIL METALS	;	1999			Analyst: SNV
Arsenic	ND	13	mg/Kg	5	1/11/2010 2:55:36 PM
Barium	310	1.0	mg/Kg	10	1/11/2010 3:32:53 PM
Cadmium	ND .	0.50	mg/Kg	5	1/11/2010 2:55:36 PM
Chromium	5.0	1.5	mg/Kg	5	1/11/2010 2:55:36 PM
Lead	6.2	1.3	mg/Kg	5	1/11/2010 2:55:36 PM
Selenium	ND	13	mg/Kg	5	1/11/2010 2:55:36 PM
Silver	ND	1.3	mg/Kg	5	1/11/2010 2:55:36 PM
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: LBJ
Acenaphthene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Acenaphthylene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Aniline	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Anthracene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Azobenzene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Benz(a)anthracene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Benzo(a)pyrene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Benzo(b)fluoranthene	ŅD	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Benzo(g,h,i)perylene	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
Benzo(k)fluoranthene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Benzoic acid	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
Benzyl alcohol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Bis(2-chloroethoxy)methane	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Bis(2-chloroethyl)ether	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Bis(2-chloroisopropyl)ether	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Bis(2-ethylhexyl)phthalate	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
4-Bromophenyl phenyl ether	ND	0.20	mg/Kg	. 1	1/12/2010 9:01:37 PM
Butyl benzyl phthalate	ND	0.20	mg/Kg	. 1	1/12/2010 9:01:37 PM
Carbazole	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
4-Chloro-3-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
4-Chloroaniline	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM

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Value exceeds Maximum Contaminant Level

Page 53 of 56

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

Project:

API Overflow Sample Points

Lab ID:

1001093-14

Client Sample ID: NBT-E-14

Collection Date: 1/6/2010 2:45:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL Q	al Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES		**************************************		Analyst: LB .
2-Chloronaphthalene	ND	0.25	mg/Kg	1	1/12/2010 9:01:37 PM
2-Chlorophenol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
4-Chlorophenyl phenyl ether	ND	0.20	mg/Kg	. 1	1/12/2010 9:01:37 PM
Chrysene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Di-n-butyl phthalate	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
Di-n-octyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Dibenz(a,h)anthracene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Dibenzofuran	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
1,2-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
1,3-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
1,4-Dichlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	1/12/2010 9:01:37 PM
Diethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Dimethyl phthalate	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
2,4-Dichlorophenol	ND	0.40	mg/Kg	1	1/12/2010 9:01:37 PM
2,4-Dimethylphenol	ND	0.30	mg/Kg	1	1/12/2010 9:01:37 PM
4,6-Dinitro-2-methylphenol	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
2,4-Dinitrophenol	ND	0.40	mg/Kg	1	1/12/2010 9:01:37 PM
2,4-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
2,6-Dinitrotoluene	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
Fluoranthene	ND	0.25	mg/Kg	1	1/12/2010 9:01:37 PM
Fluorene	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
Hexachlorobenzene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Hexachlorobutadiene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Hexachlorocyclopentadiene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Hexachloroethane	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Indeno(1,2,3-cd)pyrene	ND	0.25	mg/Kg	1	1/12/2010 9:01:37 PM
Isophorone	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
2-Methylnaphthalene	ND	0.25	mg/Kg	1	1/12/2010 9:01:37 PM
2-Methylphenol	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
3+4-Methylphenol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
N-Nitrosodi-n-propylamine	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
N-Nitrosodiphenylamine	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Naphthalene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
2-Nitroaniline	ND	0.20	mg/Kg	1 .	1/12/2010 9:01:37 PM
3-Nitroaniline	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
4-Nitroaniline	ND	0.25	mg/Kg	1,	1/12/2010 9:01:37 PM
Nitrobenzene	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
2-Nitrophenol	ND	0.20	m g/Kg	. 1	1/12/2010 9:01:37 PM
4-Nitrophenol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Pentachlorophenol	ND	0.40	mg/Kg	1	1/12/2010 9:01:37 PM
Phenanthrene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-14

Client Sample ID: NBT-E-14

Collection Date: 1/6/2010 2:45:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES					Analyst: LBJ
Phenol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Pyrene	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Pyridine	ND	0.50	mg/Kg	1	1/12/2010 9:01:37 PM
1,2,4-Trichlorobenzene	ND	0.20	mg/Kg	. 1	1/12/2010 9:01:37 PM
2,4,5-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
2,4,6-Trichlorophenol	ND	0.20	mg/Kg	1	1/12/2010 9:01:37 PM
Surr: 2,4,6-Tribromophenol	89.6	35.5-141	%REC	1	1/12/2010 9:01:37 PM
Surr: 2-Fluorobiphenyl	71.4	30.4-128	%REC	1	1/12/2010 9:01:37 PM
Surr: 2-Fluorophenol	60.4	28.1-129	%REC	1	1/12/2010 9:01:37 PM
Surr: 4-Terphenyl-d14	65.0	34.6-151	%REC	1	1/12/2010 9:01:37 PM
Surr: Nitrobenzene-d5	67.2	26.5-122	%REC .	1	1/12/2010 9:01:37 PM
Surr: Phenol-d5	67.4	37.6-118	%REC	1	1/12/2010 9:01:37 PM
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Toluene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Ethylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Naphthalene	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
1-Methylnaphthalene	ND	0.20	mg/Kg	· 1	1/12/2010 12:20:53 AM
2-Methylnaphthalene	ND	0.20	mg/Kg	1	1/12/2010 12:20:53 AM
Acetone	ND	0.75	mg/Kg	1	1/12/2010 12:20:53 AM
Bromobenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Bromodichloromethane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Bromoform	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Bromomethane	ND	0.10	mg/Kg	4	1/12/2010 12:20:53 AM
2-Butanone	ND	0.50	mg/Kg	1	1/12/2010 12:20:53 AM
Carbon disulfide	ND	0.50	mg/Kg	1	1/12/2010 12:20:53 AM
Carbon tetrachloride	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
Chlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Chloroethane	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
Chloroform	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Chloromethane	ND	0.050	mg/Kg	. 1	1/12/2010 12:20:53 AM
2-Chlorotoluene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
4-Chlorotoluene	. ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
cis-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
cis-1.3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2-Dibromo-3-chloropropane	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 15-Jan-10

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

1001093

API Overflow Sample Points

Project: Lab ID:

1001093-14

Client Sample ID: NBT-E-14

Collection Date: 1/6/2010 2:45:00 PM

Date Received: 1/8/2010

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES	ريندين پرهسمنيه برون				Analyst: DAM
Dibromochloromethane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Dibromomethane	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Dichlorodifluoromethane	ND	0.050	mg/ K g	1	1/12/2010 12:20:53 AM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
2,2-Dichloropropane	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
1,1-Dichloropropene	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
Hexachlorobutadiene	. ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
2-Hexanone	ND	0.50	mg/Kg	1	1/12/2010 12:20:53 AM
Isopropylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
4-isopropyltoluene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	1/12/2010 12:20:53 AM
Methylene chloride	ND	0.15	mg/Kg	1	1/12/2010 12:20:53 AM
n-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
n-Propylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
sec-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Styrene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
tert-Butylbenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
trans-1,2-DCE	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,1,1-Trichloroethane	· ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1 .	1/12/2010 12:20:53 AM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
Vinyl chloride	ND	0.050	mg/Kg	1	1/12/2010 12:20:53 AM
Xylenes, Total	ND	0.10	mg/Kg	1	1/12/2010 12:20:53 AM
Surr: 1,2-Dichloroethane-d4	97.5	59.5-119	%REC	1	1/12/2010 12:20:53 AM
Surr: 4-Bromofluorobenzene	88.5	57.9-141	%REC	1	1/12/2010 12:20:53 AM
Surr: Dibromofluoromethane	111	65.4-122	%REC	1	1/12/2010 12:20:53 AM
Surr: Toluene-d8	92.2	81.1-112	%REC	1	1/12/2010 12:20:53 AM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec LowLimit HighLimit		%RPD	RPDLimit	Qual	
Method: EPA Method 8015B: D	lesel Range	•									
Sample ID: MB-21091		MBLK				Batch ID:	21091	Analysi	s Date:	1/12/2010	6:18:37 AN
Diesel Range Organics (DRO)	ND	mg/Kg	10								
Motor Oil Range Organics (MRO)	ND	mg/Kg	50								
Sample ID: LCS-21091		LCS				Batch ID:	21091	Analysi	s Date:	1/12/2010 (6:55:05 AN
Diesel Range Organics (DRO)	47.00	mg/Kg	10	50	0	94.0	64.6	116		•	
Sample ID: LCSD-21091		LCSD				Batch ID:	21091	Analysi	s Date:	1/12/2010	7:31:21 AN
Diesel Range Organics (DRO)	40.86	mg/Kg	10	50	0	81.7	64.6	116	14.0	17.4	
Method: EPA Method 8015B: G	asoline Rar	ge									
Sample ID: 1001093-14A MSD		MSD				Batch ID:	21087	Analysis	s Date:	1/13/2010 7	7:19:45 PM
Gasoline Range Organics (GRO)	23.53	mg/Kg	5.0	25	1.65	87.5	69.5	120	6.14	11.6	
Sample ID: MB-21087		MBLK				Batch ID:	21087	Analysis	s Date:	1/13/2010 8	3:17:18 PM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0								
Sample ID: LCS-21087		LCS		٠		Batch ID:	21087	Analysis	s Date:	1/13/2010 7	7:48:32 PM
Gasoline Range Organics (GRO)	26.11	mg/Kg	5.0	25	О	104	77.7	135			
Sample ID: 1001093-14A MS		MS				Batch ID:	21087	Analysis	Date:	1/13/2010 6	6:50:58 PM
Gasoline Range Organics (GRO)	25.02	mg/Kg	5.0	25	1.65	93.5	69.5	120			

Qualifiers:

E Estimated value

Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va S	PK ref	%Rec L	owLimit Hig	hLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B:	VOLATILES										
Sample ID: 1001093-14a msd	-	MSD				Batch ID:	21087	Analys	sis Date:	1/12/2010	1:17:20 AN
Benzene	0.9231	mg/Kg	0.050	, 1	0	92.3	82.3 ^	107	4.24	20	
Toluene	0.9387	mg/Kg	0.050	. 1	0	93.9	79.8	104	1.44	20	
Chlorobenzene	0.9839	mg/Kg	0.050	. 1	0	98.4	84.8	103	4.38	20	
1,1-Dichloroethene	0.9009	mg/Kg	0.050	1	0	90.1	55.9	129	4.83	20	
Trichloroethene (TCE)	1.074	mg/Kg	0.050	1	0	107	77.5	102	2.69	20	S
Sample ID: mb-21087		MBLK				Batch ID:	21087	Analys	sis Date:	1/11/2010	7:10:45 PN
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Methyl tert-butyl ether (MTBE)	ND	mg/Kg	0.050								
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050								
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050								
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050								
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050							*	
•	ND	mg/Kg	0.10								
Naphthalene	ND	mg/Kg	0.20				•				
1-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylnaphthalene	ND	mg/Kg	0.75								
Acetone	ND	mg/Kg	0.050								
Bromobenzene Bromo diebleromethene	ND	mg/Kg	0.050								
Bromodichloromethane	ND	mg/Kg	0.050								
Bromoform	ND	mg/Kg	0.10								
Bromomethane	ND	mg/Kg	0.50								
2-Butanone	ND	mg/Kg	0.50								
Carbon disulfide	ND	mg/Kg	0.10								
Carbon tetrachloride		mg/Kg	0.050								
Chlorobenzene	ND ND	mg/Kg	0.10								
Chloroethane	ND ND		0.050								
Chloroform	ND	mg/Kg	0.050								
Chloromethane	DN	mg/Kg	0.050								
2-Chlorotoluene	ND	mg/Kg	0.050								•
4-Chlorotoluene	ND	mg/Kg	0.050							*	
cis-1,2-DCE	ND ND	mg/Kg									•
cis-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.050						•		
Dibromochloromethane	ND ND	mg/Kg mg/Kg	0.000								
Dibromomethane	ND ND	mg/Kg mg/Kg	0.050								
1,2-Dichlorobenzene	ND	mg/Kg	0.050								
1,3-Dichlorobenzene	ND	mg/Kg	0.050								
1,4-Dichlorobenzene		mg/Kg	0.050								
Dichlorodifluoromethane	ND		0.10								
1,1-Dichloroethane	ND ND	mg/Kg	0.050								-
1,1-Dichloroethene	ND	mg/Kg	0.050								
1,2-Dichloropropane	ND	mg/Kg									
1,3-Dichloropropane	ND	mg/Kg	0.050							_	

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va SF	K ref	%Rec	LowLimit H	lighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B	: VOLATILES	. , , , , , , , , , , , , , , , , , , ,			_,			******			
Sample ID: mb-21087		MBLK				Batch ID	21087	Analys	is Date:	1/11/2010	7:10:45 Pi
2,2-Dichtoropropane	ND	mg/Kg	0.10								
1,1-Dichloropropene	ND	mg/Kg	0.10								
Hexachlorobutadiene	. ND	mg/Kg	0.10								
2-Hexanone	ND ·	mg/Kg	0.50								
Isopropylbenzene	ND	mg/Kg	0.050								
4-Isopropyltoluene	ND	mg/Kg	0.050								
4-Methyl-2-pentanone	ND	mg/Kg	0.50	•							
Methylene chloride	ND	mg/Kg	0.15								
n-Butylbenzene	ND	mg/Kg	0.050								
n-Propylbenzene	ND	mg/Kg	0.050								
sec-Butylbenzene	ND	mg/Kg	0.050								
Styrene	ND	mg/Kg	0.050								
tert-Butylbenzene	ND	mg/Kg	0.050								
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050								
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050								
Tetrachloroethene (PCE)	ND	mg/Kg	0.050							•	
trans-1,2-DCE	ND	mg/Kg	0.050								
trans-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2,3-Trichlorobenzene	ND	mg/Kg	0.10								
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050								
1,1,1-Trichloroethane	ND	mg/Kg	0.050								
1,1,2-Trichloroethane	ND	mg/Kg	0.050								
Trichloroethene (TCE)	ND	mg/Kg	0.050							•	
Trichlorofluoromethane	ND	mg/Kg	0.050								
1,2,3-Trichloropropane	ND	mg/Kg	0.10	•							
/inyl chloride	ND	mg/Kg	0.050								
Kylenes, Total	ND	mg/Kg	0.10							•	
Sample ID: Ics-21087	No	LCS	0.10			Batch ID:	21087	Analysis	s Date:	1/11/2010 6	:43:28 PN
Benzene	0.9522	mg/Kg	0.050	1	0	95.2	84.5	114			
Foluene	1.001	mg/Kg	0.050	1	0	100	85.4	109			
Chlorobenzene	1.000	mg/Kg	0.050	1	0	100	86.8	110			
,1-Dichloroethene	0.9937	mg/Kg	0.050	1	0	99.4	74.4	129			
richtoroethene (TCE)	1.084	mg/Kg	0.050	1	0	108	77.8	114			
Sample ID: 1001093-14a ms		MS	4	•	•	Batch ID:	21087	Analysis	Date:	1/12/2010 12	-AQ-1Ω ΔΜ
_	0.0040		0.050		^				u.u.	TIMEVIU IZ.	.70. IQ AN
Benzene Toluene	0.8848	mg/Kg mg/Kg	0.050	1	0	88.5	82.3	107			
	0.9253	mg/Kg mg/Kg	0.050	1	0	92.5	79.8	104			
hlorobenzene	0.9418	mg/Kg	0.050	1	0	94.2	84.8	103			
,1-Dichloroethene	0.8584	mg/Kg	0.050	1	0	85.8.	55.9	129			_
richloroethene (TCE)	1.045	mg/Kg	0.050	1	0 .	105	77.5	102			S

Qualifiers

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec Lov	vLimit Hig ———	3hLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8270C	: Semivolatiles									
Sample ID: mb-21093		MBLK			Batch ID:	21093	Analysi	s Date:	1/12/2010 12	2:17:03 PI
Acenaphthene	ND	mg/Kg	0.20			·				
Acenaphthylene	ND	mg/Kg	0.20							
Aniline	ND	mg/Kg	0.20							
Anthracene	ND	mg/Kg	0.20							
Azobenzene	ND	mg/Kg	0.20		=					
Benz(a)anthracene	ND	mg/Kg	0.20							
Benzo(a)pyrene	ND	mg/Kg	0.20							
Benzo(b)fluoranthene	ND	mg/Kg	0.20							٠
Зenzo(g,h,i)peryleпе	ND	mg/Kg	0.50	•			•			
Benzo(k)fluoranthene	ND	mg/Kg	0.20							
Benzoic acid	ND	mg/Kg	0.50	•						
Benzyl alcohol	ND	mg/Kg	0.20							
Bis(2-chloroethoxy)methane	ND	mg/Kg	0.20							
Bis(2-chloroethyl)ether	ND	mg/Kg	0.20						•	
Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.20							
Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.50							
l-Bromophenyl phenyl ether	ND	mg/Kg	0.20							
Butyl benzyl phthalate	ND	mg/Kg	0.20							
Carbazole	ND	mg/Kg	0.20							-
-Chloro-3-methylphenol	ND	mg/Kg	0.50							
-Chloroaniline	ND	mg/Kg	0.50							
-Chloronaphthalene	ND	mg/Kg	0.25		•					
-Chlorophenol	ND	mg/Kg	0.20							
-Chlorophenyl phenyl ether	ND	mg/Kg	0.20							
Chrysene	ND	mg/Kg	0.20							
i-n-butyl phthalate	ND	mg/Kg	0.50					•		
Pi-n-octyl phthalate	ND	mg/Kg	0.20							
Pibenz(a,h)anthracene	ND	mg/Kg	0.20							
ibenzofuran	ND	mg/Kg	0.20				•			٠
,2-Dichlorobenzene	ND	mg/Kg	0.20	•						
,3-Dichlorobenzene	ND	mg/Kg	0.20							
4-Dichlorobenzene	ND	mg/Kg	0.20							
3'-Dichlorobenzidine	ND	mg/Kg	0.25							
iethyl phthalate	ND	mg/Kg	0.20							
imethyl phthalate	ND	mg/Kg	0.20							
4-Dichlorophenol	ND	mg/Kg	0.40							
4-Dimethylphenol	ND	mg/Kg	0.30	•						
6-Dinitro-2-methylphenol	ND	mg/Kg	0.50							
4-Dinitrophenol	ND	mg/Kg	0.40							
4-Dinitrotoluene	ND	mg/Kg	0.50							
6-Dinitrotoluene	ND	mg/Kg	0.50							
uoranthene	ND	mg/Kg	0.25							
notene	ND	mg/Kg	0.50							
exachlorobenzene	ND	mg/Kg	0.20							

Qualifiers:

E Estimated value

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S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va SP	K ref	%Rec L	owLimit H	ighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 82700	C: Semivolatile	s									
Sample ID: mb-21093		MBLK		•		Batch ID:	21093	Analysi	s Date:	1/12/2010 12	2:17:03 PM
Hexachlorobutadiene	ND	mg/Kg	0.20								
Hexachlorocyclopentadiene	ND	mg/Kg	0.20								
Hexachloroethane	ND	mg/Kg	0.20								
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.25			•					
Isophorone	ND	mg/Kg	0.50		•						
2-Methylnaphthalene	ND	mg/Kg	0.25								
2-Methylphenol	ND	mg/Kg	0.50								
3+4-Methylphenol	ND	mg/Kg	0.20								
N-Nitrosodi-n-propylamine	ND	mg/Kg	0.20								
N-Nitrosodiphenylamine	ND	mg/Kg	0.20								
Naphthalene	ND	mg/Kg	0.20								
2-Nitroaniline	ND	mg/Kg	0.20								
3-Nitroaniline	ND	mg/Kg	0.20								
4-Nitroaniline	ND	mg/Kg	0.25								
Nitrobenzene	ND	mg/Kg	0.50								
2-Nitrophenol	ND	mg/Kg	0.20								
4-Nitrophenol	ND	mg/Kg	0.20								
Pentachlorophenol	ND	mg/Kg	0.40	•							
Phenanthrene	ND	mg/Kg	0.20		•						
Phenol	ND	mg/Kg	0.20								
Pyrene	ND	mg/Kg	0.20								
Pyridine	ND	mg/Kg	0.50	`							
1,2,4-Trichlorobenzene	ND	mg/Kg	0.20								
2,4,5-Trichlorophenol	ND	mg/Kg	0.20								
2,4,6-Trichlorophenol	ND	mg/Kg	0.20								
Sample ID: lcs-21093		LCS				Batch ID:	21093	Analysi	s Date:	1/12/2010 12	:46:17 PM
Acenaphthene	1.353	mg/Kg	0.20	1.67	0	81.0	42.5	90			
4-Chloro-3-methylphenol	2.753	mg/Kg	0.50	3.33	0	82.7	39.6	101			
2-Chlorophenol	2.371	mg/Kg	0.20	3.33	0	71.2	40.1	96.7			
1,4-Dichlorobenzene	1.222	mg/Kg	0.20	1.67	0	73.2	34.6	95.3			
2,4-Dinitrotoluene	1.471	mg/Kg	0.50	1.67	0	88.1	37.1	101			
N-Nitrosodi-n-propylamine	1.157	mg/Kg	0.20	1.67	0	69.3	33.3	103			
4-Nitrophenol	2.705	mg/Kg	0.20	3.33	0	81.2	32.7	125			*
Pentachlorophenol	2.429	mg/Kg	0.40	3.33	0	72.9	35.5	99.3			
Phenol	2.338	mg/Kg	0.20	3.33	0	70.2	35.5	104			
Pyrene	1.101	mg/Kg .	0.20	1.67	0	65.9	34.4	90.6			
1,2,4-Trichlorobenzene	1.313	mg/Kg	0.20	1.67	0	78.6	38.5	95			

Qua	lifi	ers
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E Estimated value

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ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va SPK re	Rec L	owLimit Hi	ghLimit %R	PD RPDLimit Qual
Method: EPA Method 7471: M Sample ID: 1001093-02AMSD	ercury	MSD			Batch ID:	21100	Analysis Dat	e: 1/12/2010 3:34:04 PN
Mercury Sample ID: MB-21100	0.2095	mg/Kg <i>MBLK</i>	0.033	0.157 0.0319	113 Batch ID:	75 21100	125 3.1 Analysis Date	_
Mercury Sample ID: LCS-21100	ND	mg/Kg LCS	0.033		Batch ID:	21100	Analysis Date	e: 1/12/2010 3;27:01 PN
Mercury Sample ID: 1001093-02AMS	0.1708	mg/Kg <i>MS</i>	0.033	0.167 0	102 Batch ID:	80 21100	120 Analysis Date	e: 1/12/2010 3:32:18 PN
Mercury	0.2175	mg/Kg	0.033	0.154 0.0319	121	75	125	

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK V	a SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 6010B				. •			, , , , , , , , , , , , , , , , , , ,				
Sample ID: 1001093-10AMSD		MSD				Batch ID:	21084	Analys	is Date:	1/11/2010	2:07:44 PN
Arsenic	22.87	mg/Kg	13	24.8	0	92.2	75	125	1.50	20	
Cadmium	25.07	mg/Kg	0.50	24.8	0	101	75	125	2.15	20	
Chromium	33.79	mg/Kg	1.5	24.8	9.088	99.6	75	125	2.43	20	
Lead	30.06	mg/Kg	1.3	24.8		92.1	75	125	2.56	20	
Selenium	22.00	mg/Kg	13	24.8	0	88.7	75	125	6.74	20	
Silver	24.43	mg/Kg	1.3	24.8	0	98.5	75	125	1.29	20	
Sample ID: MB-21084		MBLK				Batch ID:	21084	Analysi	is Date:	1/11/2010 12	2:24:38 PN
Arsenic	ND	mg/Kg	2.5								
Barium	ND	mg/Kg	0.10								
Cadmium	ND	mg/Kg	0.10				•		•		
Chromium	ND	mg/Kg	0.30								
Lead	ND	mg/Kg	0.25								
Selenium	ND	mg/Kg	2.5							•	
Silver	ND	mg/Kg	0.25								
Sample ID: MB-21085		MBLK				Batch ID:	21085	Analysi	s Date:	1/11/2010 12	2:29:16 PM
Arsenic	ND	mg/Kg	2.5								
8arium -	ND	mg/Kg	0.10								
Cadmium	ND	mg/Kg	0.10						-		
Chromium	ND	mg/Kg	0.30								
Lead	ND	mg/Kg	0.25								
Selenium	ND	mg/Kg	2.5								
Silver	ND	mg/Kg	0.25								
Sample ID: LCS-21084		LCS				Batch ID:	21084	Analysi	s Date:	1/11/2010 12	:26:52 PM
Arsenic	24.60	mg/Kg	2.5	25	0	98.4	80	120			
Barium	25.75	mg/Kg	0.10	25	0	103	80	120			
Cadmium	24.82	mg/Kg	0.10	25	0	99.3	80	120			
Chromium	25.67	mg/Kg	0.30	25	0	103	80	120			*
.ead	25.15	mg/Kg	0.25	25	0.2253	99.7	80	120			
Selenium	25.03	mg/Kg	2.5	25	0	100	80	120			
Silver	25.66	mg/Kg	0.25	25	0.101	102	80	120			
Sample ID: LCS-21085		LCS				Batch ID:	21085	Analysis	s Date:	1/11/2010 12	:31:29 PM
Arsenic	24.06	mg/Kg	2.5	25	0	96.2	80	120			
3arium	25.50	mg/Kg	0.10	25	0	102	80	120			
Cadmium	24.35	mg/Kg	0.10	25	0	97.4	80	120			
Chromium	25.50	mg/Kg	0.30	25	0	102	80	120			
ead	24.75	mg/Kg	0.25	25	0.1573	98.4	80	120			
Selenium	24.29	mg/Kg	2.5	25	0	97.1	80	120			
Bilver	25.37	mg/Kg	0.25	25	0.0325	101	80	120			
Sample ID: 1001093-10AMS		MS				Batch ID:	21084	Analysis	s Date:	1/11/2010 2	:05:36 PM
Arsenic	22.53	mg/Kg	13	24.89	0	90.5	75	125			
Cadmium	24.54	mg/Kg	0.50	24.89	0	98.6	75	125			*
Chromium	32.98	mg/Kg	1.5	24.89	9.088	96.0	75	125			
ead	30.84	mg/Kg	1.3	24.89	7.228	94.9	75	125			

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

1001093

Analyte	Result	Units	PQL	SPK Va S	PK ref	%Rec Lo	wLimit Hig	ghLimit %RPD	RPDLimit Qual
Method: EPA Method 6010B: Sample ID: 1001093-10AMS	Soil Metals	MS				Batch ID:	21084	Analysis Date:	1/11/2010 2:05:36 PM
Selenium Silver	20.56 24.75	mg/Kg mg/Kg	13 1.3	24.89 24.89	0 0	82.6 99.4	75 75	12 5 125	,

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E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU	•	Date Received:		1/8/2010
Work Order Number 1001093		Received by:	ARS	
Checklist completed by:	De De	ale 10		initials
Matrix:	Carrier name: FedEx		·	
Shipping container/cooler in good condition?	Yes 🗸		Not Present	
Custody seals intact on shipping container/cooler?	Yes 🗹	AT	Not Present	Not Shipped
Custody seals intact on sample bottles?	Yes 🔽	1/8/6	WA.	
Chain of custody present?	Yes 🗹	No 🗆		
Chain of custody signed when relinquished and receive	ved? Yes ✓	No 🗌		
Chain of custody agrees with sample labels?	Yes 🗸	No 🗌		
Samples in proper container/bottle?	Yes 🗹	No 🗆		
Sample containers Intact?	Yes 🗹	No 🗆		
Sufficient sample volume for indicated test?	Yes 🗹	No 🗌		
All samples received within holding time?	Yes 🗹	No 🗌		Number of preserved bottles checked for
Water - VOA vials have zero headspace? No	VOA vials submitted 🗹	Yes 🗀	No 🗀	pH:
Water - Preservation labels on bottle and cap match?	Yes 🗌	No 🗆	N/A 🗹	
Water - pH acceptable upon receipt?	Yes 🗌	No 🗌	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?	4.1°	<6° C Acceptable		20,047
COMMENTS:		If given sufficient tir	ne to cool.	
				•
Client contacted Date	contacted:	Person	contacted	
Contacted by: Rega	rding:		· · · · · · · · · · · · · · · · · · ·	
Comments:				
Corrective Action				
·	**************************************			

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	H Method 8015B (Gas/Diesel) H (Method 418.1) B (Method 504.1) 10 (PNA or PAH) 10 (Semi-VOA) 10 (Semi-VOA) 10 (Semi-VOA) 10 (Semi-VOA)	13 88 14 7 80 808 28 X	X	X	X		XXX	Remarks: Sale Time Remarks: Remarks:
490 Tel	.EX + MTBE + TMB's (8021) .EX + MTBE + TPH (Gas only)							Remarks:
Turn-Around Time: Standard KRush Project Name: A P T O VE F ROW SAMP LE POLUTE Project #:	Project Manager: BECK LOTSEN Sampler: ALVIN DOFSEY Ontoiner Preservative The	8 oz - 1 N/A i - 20 8	-1 P/A	8-02-1 N/A 4	802-1 MA 5	6/4 a/4	N/A	
ustody Record 1- Refining Kinery Box 9 R 87301 T22 3833	722 02/ Level 4 (Full Ve	01-06-10 1030 SOIL API - N-1	1045	Soil API-5-	01-06-10 1120 5012 API-W-5 01-06-10 1135 5012 API-W-6		1220 Soll BKT-W-	Ol-67-j O (20 (20 Lur)) Date: Time: Relinquished by: Received by: Received by: Received by:

HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH (Method 8015B (Gas/Diesel) TPH (Method 418.1) EDB (Method 504.1) B310 (PNA or PAH) Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) B260B (VOA) B260B (VOA) B270 (Semi-VOA) B270 (Semi-VOA)		Time: Relinquished by: Received by: Receiv
Turn-Around Time: Standard Rush Project Name: Er Rtow Somple Points Project #:	Project Manager: BECK LASEN Sampler: ALUIN DORSEY Onice: A Preservative Type and # Type	802-1 N/A 10 802-1 N/A 12 802-1 N/A 12 802-1 N/A 13	Received by: Received by: Received by: Bate Time Time Date Time
Chain-of-Custody Record Client: VESTETN-Re FINING Splly PREFINETY Mailing Address: RT 3 Box 9 Spolly PNONE #: 505 722 3833	email or Fax#: SOS 70200 QA/QC Package: Standard	ot-66-10 11:30 Soil CHN-C-10 ot-66-10 11:45 Soil CHN-C-10 ot-66-10 2:00 Soil NBT-W-12 ot-66-10 2:45 Soil NBT-E-14	Date: Time: Relinquished by: Giも7-10 1200 GQLury Date: Time: Relinquished by:

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Monday, January 25, 2010 2:45 PM

To:

Monzeglio, Hope, NMENV

Cc:

Chavez, Carl J, EMNRD

Subject:

API OVERFLOW EVENTS of September 5 and December 8, 2009

Attachments:

API NMED RESPONSE LETTER-Part 1.pdf; HALL LAB DATA SUMMARY-Part 2.xls

Dear Ms Monzeglio and Mr. Chavez.

Please accept the following attachments in response to NMED request concerning the API overflows that occurred on September 5, 2009 and December 8, 2009. The response letter to NMED for the September 5, 2009 API over flow is due on February 1, 2010. Consequently, the response letter to NMED for the December 8, 2009 is due on January 25, 2010 via e-mail. This cover letter addresses both API over flow events due to their chronological sequence and will be explained in greater detail. The above attachments are divided into the following two parts as indicated below:

Part 1 ("pdf") - Cover Letter, NMED correspondence (January 7, 2010 and October 27, 2009); C-141 (December 8 and September 5, 2009 events); Drawings (API Area, Confirmation Samples, Sampling Plans (12/8/2009 and 9/5/2009))

Part 2 ("Excel")- Hall Environmental Laboratory Data Summary (Confirmation Sampling of January 6, 2010 for Part 3)

NOTE: The Hall Environmental Laboratory Analytical Data for the Confirmation Sampling of January 6, 2010 will be submitted as a hard copy in the final version of this report due to the size of the file.(68 psges) A hard copy of the entire report will be submitted forth coming.

Sincerely, Beck Larsen

This inbound email has been scanned for malicious software and transmitted safely to you using Webroot Email Security.

CERTIFIED MAIL: 7008 2810 0000 4726 1680

January 25, 2010

New Mexico Environmental Department (NMED) Hazardous Waste Bureau (HWB)

2905 Rodeo Park Drive East, Building 1

Santa Fe, New Mexico 87505

Attention: Ms Hope Monzeglio

New Mexico Energy Minerals and Natural Resources Department New Mexico Oil Conservation Division (NMOCD) 1220 South Saint Francis Drive

Santa Fe, New Mexico 87505 Attn: Mr. Carl J. Chavez

Reference:

CLEANUP STATUS for Western Refining (Gallup Refinery) for API OVERFLOW on SEPTEMBER 5, 2009 and API OVERFLOW on DECEMBER 8, 2009 EPA ID NO. NMD000333211

HWB-GRCC-MISC

Dear Ms Monzeglio and Mr. Chavez;

Please accept the following letter in response to a letter from Ms Hope Monzeglio of the New Mexico Environmental Department (NMED) (Hazardous Waste Bureau (HWB) (January 7, 2010) that references an API overflow that occurred on December 8, 2009. Additionally, this letter will be in response to the API overflow that also occurred on September 5, 2009. This letter will address these two events as a combination due to the close proximity of these two events and due to the required remedial activities. A separate C-141 (Final Report) for each event will be pending at the completion of the remediation project. The following information shall address the nature of the API overflow events of September 5, 2009 and December 8, 2009, remedial actions that have been performed to date, and additional remediation activity that will be required based on analytical data

I. THE INCIDENT: "API OVER FLOW on SEPTEMBER 5, 2009" (Report due 2/1/2010)

Preliminary analytical samples were originally collected on September 16, 2009. The laboratory results were received on October 8, 2009. Gallup received a letter from the New Mexico Environmental Department-Hazardous Waste Bureau on October 27, 2009 requiring additional cleanup and sampling activities to be performed.

The following items are to address the issues as originally prescribed in the October 27 letter from the New Mexico Environmental Department-Hazardous Waste Bureau

a. "The Permittee must remove additional contaminated soil in the vicinity of the API Separator and the Baker Tank within the hatched area identified in the "Sampling Plan" figure."

Cleanup efforts began around the first week of November and continued through the third week of November 2009. Contaminated soil in the vicinity of the API Separator and the Baker Tank areas as indicated on the revised Sampling Plan from the Hazardous Waste Bureau was excavated. This excavated material was put in a roll-off box for disposal off-site as Hazardous Waste. The amount of material excavated was approximately 18 to 25 cu yd. This material was later manifested and shipped off-site as Hazardous Waste via Rinchem (US. Ecology, Beatty, NV).

b. "The Permittee must collect confirmation soil samples from the approximate locations of the former sample locations with the exception the roll-off box location. The Permittee must also collect samples from the additional sample locations identified in the attached figure. All samples must be collected from the limit of the excavation not to exceed six inches in depth."

The confirmation sampling was originally scheduled to be collected during the first week of December 2009. On December 8, Gallup had an area wide power outage from the Utility Company that supplies electrical power to the plant. Due to this power outage at our facility, the plant was without power in order to prevent the API from overflowing. As a result of the December 8 event and clean up efforts merging with the clean up efforts of the September 5 event, confirmation sampling was not conducted until January 6, 2010. Discussion on the API overflow from the event on December 8, 2009 will be provided below.

c. "All confirmation samples must be analyzed for DRO extended. In addition, samples collected from locations API-E-2 and BKT-E-7, BKT-S-8 and BKT-W-9 must also be analyzed for gasoline range organics."

Due to issues addressed above, confirmation samples were not collected until January 6, 2009. All fourteen (14) sample points as previously identified and directed by the Agency were to be collected and analyzed for the following: Volatile Organic Compounds (VOC) (Method 8260), Semi-volatile Compounds (Method 8270), Total Petroleum Hydrocarbon (THP) (including DRO/MRO/GRO) (Method 8015) and RCRA 8 Metals. The sampling methodology and the analytical results from the confirmation sampling event will be discussed below.

d. "The confirmation samples must not exceed organic concentrations of 200 mg/kg, if such concentrations exceed 200 mg/kg then additional soil removal will be required until detected concentrations are less than 200 mg/kg."

As previously identified above (b) due to overlapping API overflow events, confirmation samples were not collected until January 6, 2010. The results were received on January 15, 2010. As determined from the analytical, it was determined that additional soil remediation will be necessary. An explanation of the sampling and analytical results will be discussed in detail below.

e. "The Permittee must submit a report (letter format is acceptable) that describes the additional soil clean up activities, explain how additional contaminated soil was removed, describe how confirmation samples are collected and documents the disposal of the contaminated soils. The Permittee must also include all analytical data in table format, copies

API OF Ltr.120809-090509.doc 2

of the final laboratory reports, and include a figure that identifies the locations of all confirmation samples.

As previously noted above, remediation was concluded near the end of November 2009, but, confirmation sampling was not conducted until January 6, 2010. The additional remedial activities including contaminated soil removal, confirmation sampling, and disposal methods of the contaminated soil will be discussed below for the December 8, 2009 API Overflow. Additionally, analytical data of the confirmation sampling will be discussed below.

II. THE INCIDENT- "API OVER FLOW on DECEMBER 8, 2009" (Report due 1/25/2010)

Gallup received a follow-up e-mail from the New Mexico Environmental Department-HWB on December 21, 2009 requesting additional information about the API overflow that occurred on December 8, 2009. A response e-mail to that request was submitted to HWB on December 23, 2009. Gallup received additional correspondence (via e-mail) on January 7, 2010 requesting a formal report addressing additional concerns. The following addresses issues as identified by the HWB based on the Agency's concerns.

a. Soil Remediation Activities-

Clean up efforts for the API overflow on September 5 was completed by the end of November 2009. Contaminated soil in the vicinity of the API Separator and the Baker Tank areas as indicated on the revised Sampling Plan from the Hazardous Waste Bureau was excavated. This excavated material was put in a roll-off box for disposal off-site as Hazardous Waste. The amount of material excavated was approximately 18 to 25 cu yd. This material was later manifested and shipped off-site as Hazardous Waste via Rinchem (US. Ecology, Beatty, NV). Confirmation sampling had not been conducted at this time.

The API overflows from December 8 cleanup efforts around the API and Baker Tank area coincide with clean up operations from September 5, 2009 event. Contamination was localized within the API and Baker Tank containment areas providing a similar contamination foot print for confirmation sampling. Confirmation samples were collected on January 6, 2010 for both events. Based on the analytical results, it is determined that additional remediation and confirmation sampling will be required.

b. Hazardous Waste Management / Transportation Procedures-

The contaminated soil and gravel from both API overflows, September 5 and December 8, will be treated and managed as a Listed Hazardous Waste in accordance with applicable generator requirements as found in 40CFR262 and 40CFR265 (Subpart I). All contaminated soil and gravel will be containerized in a roll-off box, manifested as Hazardous Waste with a designated Hazardous Waste Code (F037/F038/K051), and transported off-site for disposal via Rinchem to US Ecology, Beatty, NV, an approved TSD Facility. A profile has already been established for this waste stream through Rinchem.

c. Revised Sampling Plan-

Due to the containment areas surrounding the API and Baker Tanks, the spill foot print for both incidents are the same. Fourteen sample points were previously identified through an approved sampling plan by the New Mexico Environmental Department-Hazardous Waste Bureau (HWB) as

addressed in correspondence via e-mail of October 27, 2009 (for September 5 API overflow) and January 7, 2010 (for the December 8 API overflow). Therefore, sampling will be in accordance with the HWB direction.

d. Confirmation Sampling-

After the contaminated soil and gravel from the API overflows events of September 5 and December 8, 2009 were excavated and placed in roll-off boxes, confirmation sampling was conducted. On January 6, 2010, confirmation sampling was conducted as required by the Agency. The analysis was directed by the HWB based on the approved sampling plan.

The sampler excavated potentially contaminated soil at the locations as designated on the sampling plan to a maximum depth of 6 inches. The sampler followed proper decontamination procedures between all fourteen sample points in order to minimize any cross contamination. The samples were collected in an 8 oz jar for shipment to Hall Environmental Laboratory. The laboratory analyzed each sample received for the following: Volatile Organic Compounds (VOC) (Method 8260), Semi-volatile Compounds (Method 8270), Total Petroleum Hydrocarbon (THP) (including DRO/MRO/GRO) (Method 8015) and RCRA 8 Metals.

e. Laboratory Results-

Gallup received analytical results from Hall Environmental Laboratories on January 15, 2010 for the contaminated soil as a result of the two API overflows that occurred on September 5 and December 8, 2009. The analysis indicated nine sample areas with TPH (DRO and GRO) values exceeding the 200 mg/kg (>200 mg/kg) in accordance with NMED "TPH Screening Guidelines". The contaminated areas identified are as follows: API-N-1, API-E-2, API-E-3, API-S-4, API-W-5, BKT-S-8, BKT-W-9, CHN-C-11, NBT-N-13. Additionally, BKT-W-9 indicated an elevated level of Xylene (180 mg/kg) which is above the NMED screening levels of 82 mg/kg as indicated in NMED "Technical Background Document for development of Soil Screening Levels". These contaminated areas are indicated on the attached "Hall Environmental Laboratory Data Summary" spreadsheet.

Based on the analysis as indicated above and the attached spreadsheet with inclusive data, it is concluded that additional remedial activities and confirmation sampling will be required for the API area.

f. Over flow volume determination-

The initial C-141 indicated 739 bbls of API oily/water overflow during a 10 to 12 hour intermittent discharge as a result of the API overflow of December 8, 2009. During this time frame, the facility was experiencing an area wide power outage as a result of storms at Tristate Power Company distribution center (substation) located in Albuquerque. During this time period, many pumps and auxiliary equipment were not operational in order to handle normal flow conditions. A material balance was primarily used to determine the quantity of API oily/water that was discharged. The amount of oily/water mixture recovered was determined from information supplied by vacuum truck operators after this event. The oily/water was retrieved via a vacuum truck and routed to the process sewer system for reprocessing through the API. A quantification of oil recovery could not be determined.

III. SUMMARY:

As indicated from the confirmation samples that were collected on January 6, 2010, additional remediation of the API area contamination will be required. Gallup received analysis from Hall Environmental Laboratories on January 15, 2010. The analysis indicated nine sample areas with TPH (DRO and GRO) values exceeding the 200 mg/kg (>200 mg/kg) level as specified in accordance with NMED "TPH Screening Guidelines". These contaminated areas are indicated on the attached "Hall Environmental Laboratory Data Summary" spreadsheet.

Gallup is proceeding to excavate contaminated soil based on the analysis received from Hall Environmental Laboratories. The Hall Analytical Summary and Confirmation Sample drawing defines the locations that will be required to be excavated. Confirmation samples will then be collected.

The soil will be treated as Hazardous Waste (F037/F038/K051), placed in roll-off boxes under the 90 day status requirements, and be properly disposed in accordance with all Federal and State Regulations.

Both of these API overflows were the direct result of inclement weather conditions that were beyond the control of the Refinery. Gallup is in the design phase of a new "Stormwater Diversion Project" in order to eliminate overflows from the new API due to unexpected or inundated stormwater discharges. This project will be composed of two (2) Stormwater Diversion Tanks (T-27 and T-28) and an additional diversionary tank. This new system will connect directly into the current stormwater system. A new twenty-four inch (24") pipe will connect the old system to the Stormwater Diversion Tanks (T-27 and T-28). The stormwater will be pumped from the diversion tanks (T-27 and T-28) to the new API.

IV. DOCUMENT ENCLOSURE/ATTACHMENTS:

The following enclosures or attachments have been included in order to provide the Agency with a visual reference in order to aid in a better understanding of the event surrounding the API overflows that occurred on September 5 and December 8, 2009. These enclosures include the following: drawing of the API area indicating the extent of overflow contamination, Release Notification Forms (C-141) (Initial) Reports Filed with OCD/NMED, NMED correspondence, approved API Sampling Plan, Hall Environmental Laboratory Data Summary Spreadsheet, Hall Environmental Laboratory Analysis.

If you require additional information concerning this matter, please contact me at (505) 722-0258.

Sincerely,

Beck Larsen-CHMM, REM

Environmental Engineer

Western Refining (Southwest) (Gallup Refinery)

Enc: NMED correspondence letters of January 7, 2010 and October 27, 2009

Drawing of the API area

Drawing of the API area-confirmation samples

Drawing of API Sampling Plan, API Overflow of 12/8/2009

Drawing of API Sampling Plan, API Overflow of 09/5/2009

Drawing of NMED Corrected Sampling Plan (Refer to October 27, 2009 NMED Letter)

OCD (Release Notification and Corrective Action, C-141 (Initial) Report Submittals

for September 5 and December 8, 2009 API Overflow events

Hall Environmental Laboratory Data Summary Spreadsheet

Hall Environmental Laboratory Analytical Report

Cc: Mr. Mark Turri, Gallup (Southwest), Refinery Manager

Mr. Ed Riege, Gallup (Southwest), Environmental Manager)

File

Larsen, Thurman

From: Monzeglio, Hope, NMENV [hope.monzeglio@state.nm.us]

Sent: Thursday, January 07, 2010 7:27 AM

To: Larsen, Thurman; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Cc: Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV; Riege, Ed; Turri, Mark; Kieling, John, NMENV

Subject: RE: Initial Report (C-141) for API Spill of December 8, 2009

Beck

All contaminated soil and gravel must be removed, managed as hazardous waste, and shipped off-site for disposal. The contaminated soil and gravel must comply with the generator requirements found in 40 CFR 262 (e.g., compliance with 90-day storage requirements and all recordkeeping, waste profiling, transport, and disposal requirements). Confirmation samples must be collected from the locations identified in the "Proposed Sampling Plan." The soil samples must be analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi volatile organic compounds (SVOCs) by EPA Method 8270, diesel range organics extended (DRO) and gasoline range organics (GRO) by EPA Method 8015M, and RCRA metals.

Please revise and resend the Proposed Sampling Plan (email is acceptable) to identify the locations of all containment structures, berms, roads, natural levee etc., in reference to the area in which the release occurred. Also explain how Gallup determined the volume of the spill. This information must be submitted by January 25, 2010.

Gallup must make note that the API separator has leaked in the past and contaminated groundwater in this area; therefore, NMED does not agree that the environmental impact from the API overflows (which are becoming routine) is minimized by the permeability of the containment and the surrounding soils in the API and Baker tank areas. Gallup must eliminate releases from the API separator. NMED is evaluating additional requirements to address these frequent API overflows.

Let me know if you have any questions.

Hope

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Wednesday, December 23, 2009 2:04 PM

To: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Cc: Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV; Riege, Ed; Turri, Mark

Subject: RE: Initial Report (C-141) for API Spill of December 8, 2009

Dear Hope,

The following e-mail is a follow-up response to the e-mail that we received on December 21, 2009, in reference to the API overflow that occurred on December 8. The overflow as mentioned previously on the initial C-141 was due to inclement weather and storm conditions that passed through the area that resulted in a power loss to the Refinery. The power loss was due to "mother nature" that caused the power company to experience a loss of incoming power supplied to the Refinery, and therefore, was beyond our control. I have included a "pdf" drawing indicating the extent of the API overflow contamination area, and a picture reflecting this area as well.

The extent of the API overflow contamination was similar to the one that was experienced on September 5, 2009 except that the overflow on December 8, 2009 did not reach the lagoons due to the road berm that was constructed previously. When the power was lost, the Refinery did not have any operational controls that could retard or restrict the effluent flow to the API. The liquid began coming out of the overflow spouts as noted previously on the C-141. The API is bordered by a road between the Aeration Basins/Lagoons and the API on the west side of the API that acted as a containment preventing overflows from reaching the basins or lagoons. The road also extends past the Baker frac tank which is used to catch API overflows during brief periods. This road in conjunction with the natural levee on the east side creates a containment area so as to localize any API overflow that may occur. The road base, the containment, and the surrounding soil in the areas of the API are primarily clay. Any environmental impact due to API overflow (primarily water) is minimized due to the permeability of this containment and the surrounding soils in the API and Baker tank areas.

Attached is the proposed sampling plan for the API Overflow area. Please provide the required analysis that the agency is requiring for this event.

Sincerely, Beck Larsen

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Monday, December 21, 2009 9:22 AM

To: Larsen, Thurman; Chavez, Carl J; EMNRD; Powell, Brandon, EMNRD **Cc:** Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV **Subject:** RE: Initial Report (C-141) for API Spill of December 8, 2009

Beck

Please provide NMED with a drawing showing the extent of this release, include any photographic documentation if there is any. Include a detailed description of the areas the release covered and clarify if the release entered into the Aeration Lagoons, Evaporation Ponds 1 and 2? If the release entered the Aeration Lagoons or the Evaporation Ponds, describe all cleanup activities. Submittal of this information by email is acceptable.

Thanks Hope

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Friday, December 18, 2009 6:11 PM

To: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Subject: Initial Report (C-141) for API Spill of December 8, 2009

Dear Hope, Carl, and Brandon,

The following attachment is for the API Spill that occurred on December 8, 2009 due to a winter storm that caused a power outage at Western Refining (Gallup Refinery). Initial cleanup has been completed. Please contact me if you require additional information.

Sincerely, Beck Larsen

This inbound email has been scanned for malicious software and transmitted safely to you using Webroot Email Security.

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BILL RICHARDSON Governor

DIANE DENISH Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505-6303 Phone (505) 476-6000 Fax (505) 476-6030

www.nmenv.state.nm.us



RON CURRY Secretary

JON GOLDSTEIN
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 27, 2009

Mr. Ed Riege Environmental Superintendent Western Refining, Southwest Inc., Gallup Refinery Route 3 Box 7 Gallup, New Mexico 87301 Mr. Beck Larsen
Environmental Engineer
Western Refining, Southwest Inc.,
Gallup Refinery
Route 3 Box 7
Gallup, New Mexico 87301

SUBJECT:

SEPTEMBER 5, 2009 API SEPARATOR OVERFLOW REPORT WESTERN REFINING, SOUTHWEST INC., GALLUP REFINERY EPA ID NO. NMD000333211 HWB-GRCC-MISC

Dear Messrs Riege and Larsen:

The New Mexico Environment Department (NMED) received the Western Refining Southwest Inc., Gallup Refinery (the Permittee) Report summarizing the overflow and interim measures remedial actions at the API separator on September 5, 2009. The Permittee collected ten soil samples and presented the analytical results in a table titled "Hall Environmental Laboratory Data Summary." The analytical results identified diesel range organics (DRO) extended (which include motor oil range organics (MRO)) ranging from 229 mg/kg to 11,000 mg/kg, all exceeding the NMED's Total Petroleum Screening (TPH) Guidelines of 200 mg/kg for "unknown oil." NMED compared the cumulative values of the DRO and MRO detections when comparing the values to the NMED TPH standard for unknown oil of 200 mg/kg (e.g., sample BKT-E-7 had a DRO detection of 150 mg/kg and a MRO detection of 79 mg/kg with a cumulative value of 229 mg/kg). Because the release came from the API separator, the exact source(s) of the hydrocarbons are unknown.

Mr. Ed Riege Gallup Refinery October 27, 2009 Page 2 of 2

The Permittee must complete additional cleanup activities as follows:

- a. The Permittee must remove additional contaminated soils in the vicinity of the API Separator and the Baker Tank within the hatched area identified in the "Sampling Plan" figure (attached).
- b. The Permittee must collect confirmation samples from the approximate locations of all of the former sampling locations with the exception the roll-off box location. The Permittee must also collect samples from the additional sample locations identified in the attached figure. All samples must be collected from the limits of the excavation not to exceed six inches in depth.
- c. All confirmation samples must be analyzed for DRO extended. In addition, samples collected from locations API-E-2 and BKT-E-7, BKT-S-8, and BKT-W-9 must also be analyzed for gasoline range organics.
- d. The confirmation samples must not exceed organics concentrations of 200 mg/kg, if such concentrations exceed 200 mg/kg then additional soil removal will be required until detected concentrations are less than 200 mg/kg.
- e. The Permittee must submit a report (letter format'is acceptable) that describes the additional soil clean up activities, explains how additional contaminated soil was removed, describes how confirmation samples are collected and documents the disposal of the contaminated soils. The Permittee must also include all analytical data in table format, copies of the final laboratory reports, and include a figure that identifies the locations of all confirmation samples.

Mr. Ed Riege Gallup Refinery October 27, 2009 Page 3 of 3

The Permittee must submit the report to NMED on or before February 1, 2010. If you have questions please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,

John E. Kieling Program Manager

Permits Management Program

Hazardous Waste Bureau

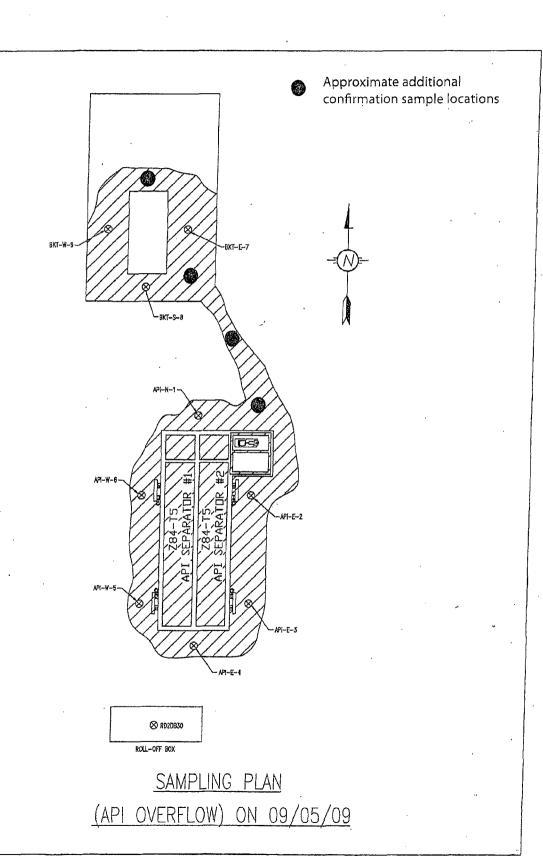
cc: D. Cobrain, NMED HWB

H. Monzeglio, NMED HWB

C. Chavez, NMEMNRD OCD

File: Reading GRCC 2009

GRCC-MISC



District !
1625 N. French Dr., Hohbs, NM 88240
District !!
1301 W. Grand Avenue, Artesia, NM 88210
District !!!
1000 Rio Brazos Road, Aztec, NM 87410
District !V
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

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

Revised October 10, 2003

Form C-141

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

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Describe Area Affected and Cleanup Action Taken.* The affected area was localized around the API and baker frac tank containment areas. Initial cleanup efforts began immediately on Tuesday, December 8, 2009 during this event utilizing an onsite vacuum truck. Maintenance and Contract personnel began cleaning up the any aqueous/oily portion of overflow contamination and any contaminated soil and rock debris surrounding the API area. Personnel conduct cleanup of areas such as depressions or other conveyances adjacent to the API area in order that contamination would not spread. Initial cleanup efforts were completed on Monday, December 14, 2009. All contaminated material were put into a roll-off box to be tested (analyzed by an outside lab), prior to shipment off site for disposal to an approved facility. Final cleanup of this area will be determined based on laboratory analysis. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger												
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Printed Name: Beck Larsen						Approved by District Supervisor						

Title: Environmental Engineer		Approval Date:	Expiration D	Pate:
E-mail Address: Thurman.larser	n@wnr.com	Conditions of Approval:		Attached
Date: 12/18/2009	Phone: (505) 722-0258			

* Attach Additional Sheets If Necessary

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

State of New Mexico Energy Minerals and Natural Resources

Revised October 10, 2003

Form C-141

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

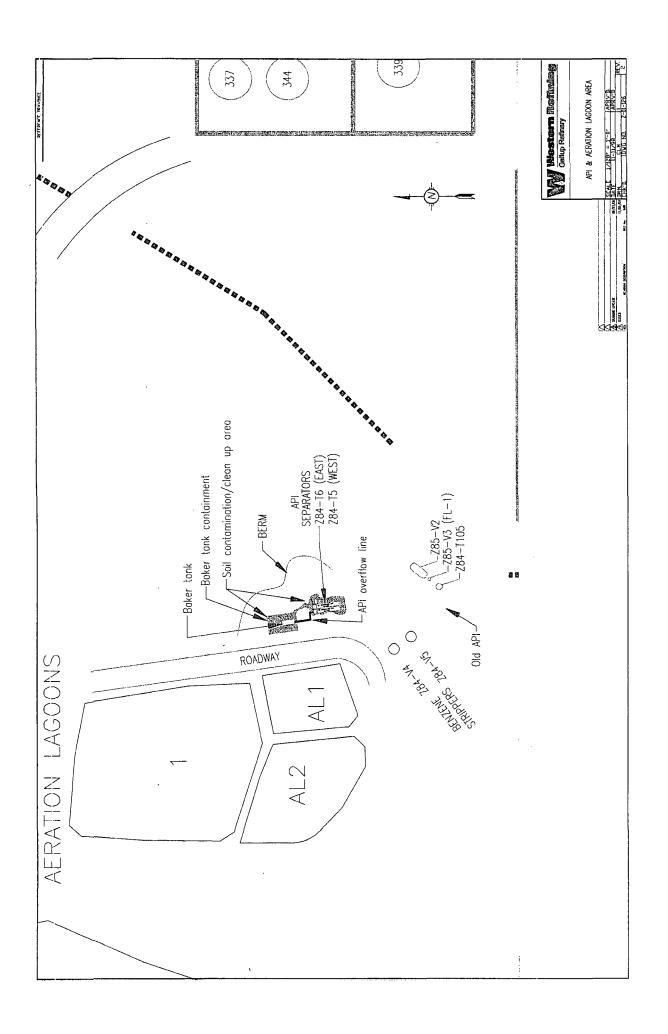
Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back side of form

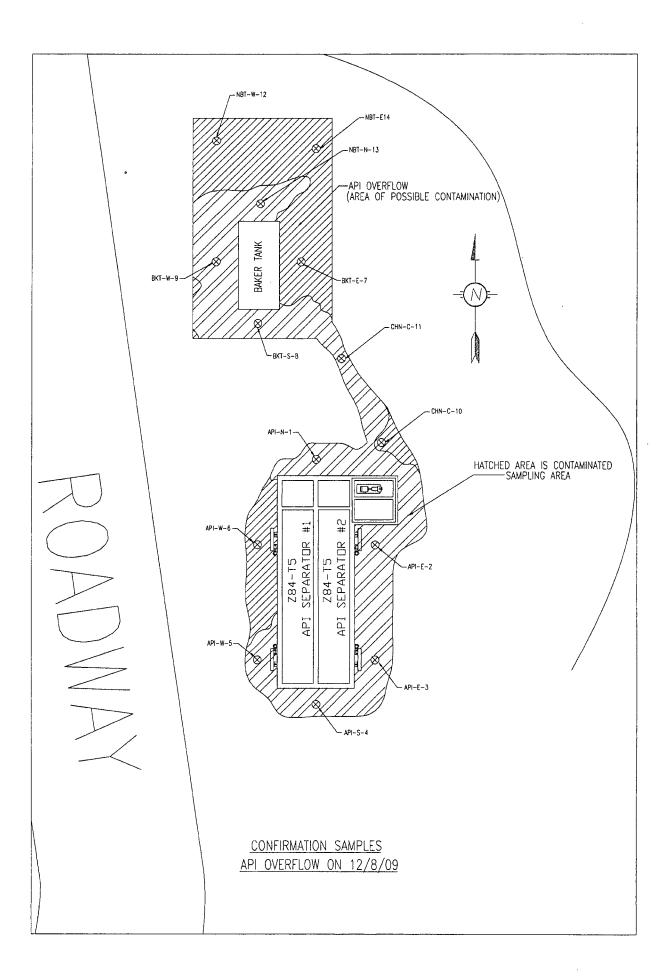
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		L) 168 E	7 140							
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pe su the int pe	rsonnel be rrounding at any cont to a roll-of rsonnel de	gan cleaning the API area amination m f box to be to	up the a Personr lay or dicested (and spread ne	ny aqueous/oily nel conduct clea I spread. After i alyzed by an ou	portion nup of a mmedia tside lab	of overflow treas such as te cleanup e b), prior to s	v contamination s depressions or efforts were con hipment off site	n and any contam other conveyand apleted, all conta for disposal to a	. Maintenance and Contract inated soil and rock debris ses adjacent to the API area minated material were put in approved facility. Contract its area was completed on o		
regulations public health should their	all operators or the env operations	s are required ironment. The have failed to	to report a e acceptan adequatel	and/or file certain ace of a C-141 rep y investigate and	release nort by the remediate	notifications a le NMOCD nate contaminate	and perform corre parked as "Final I ion that pose a th	ective actions for re Report" does not re treat to ground wat	rsuant to NMOCD rules and sleases which may endanger slieve the operator of liability er, surface water, human health compliance with any other		

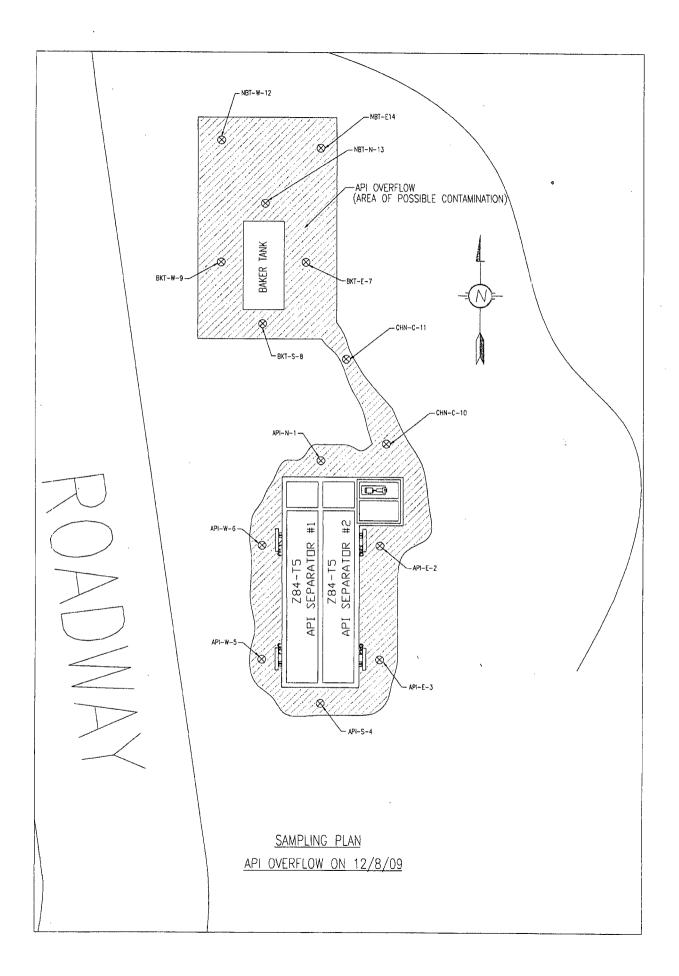
federal, state, or local laws and/or regulations.

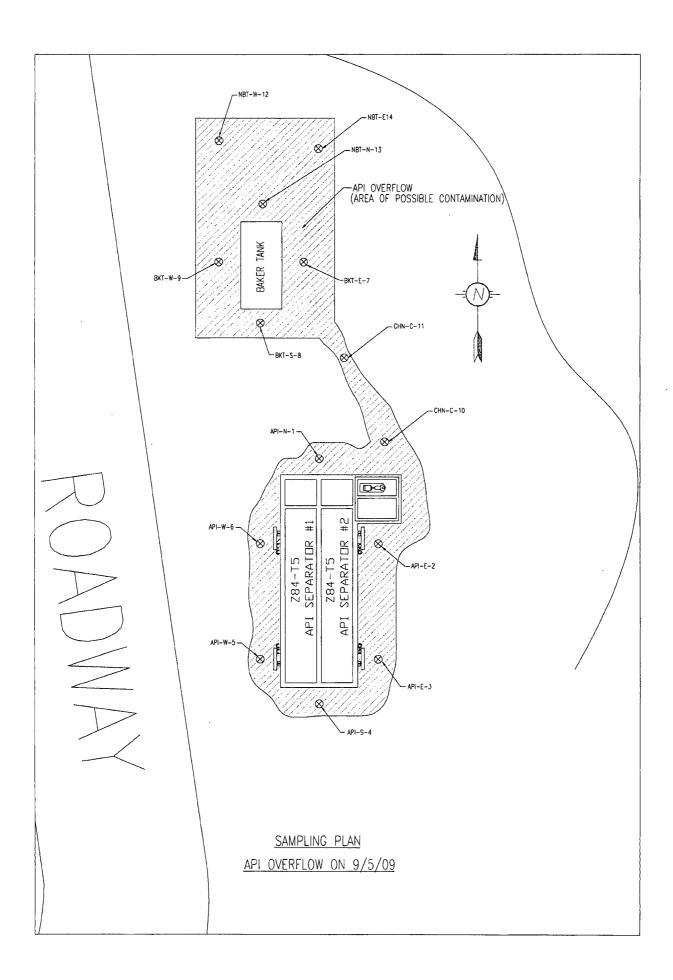
Signature:	OIL CONS	ERVATION	DIVISION			
Printed Name: Beck Larsen	Approved by District Superviso	r:				
Title: Environmental Engineer	Approval Date:	Approval Date: Expiration Date:				
E-mail Address: Thurman.larsen@wnr.com	Conditions of Approval:		Attached			
Date: 7/21/2009 Phone: (505) 722-0258			,			

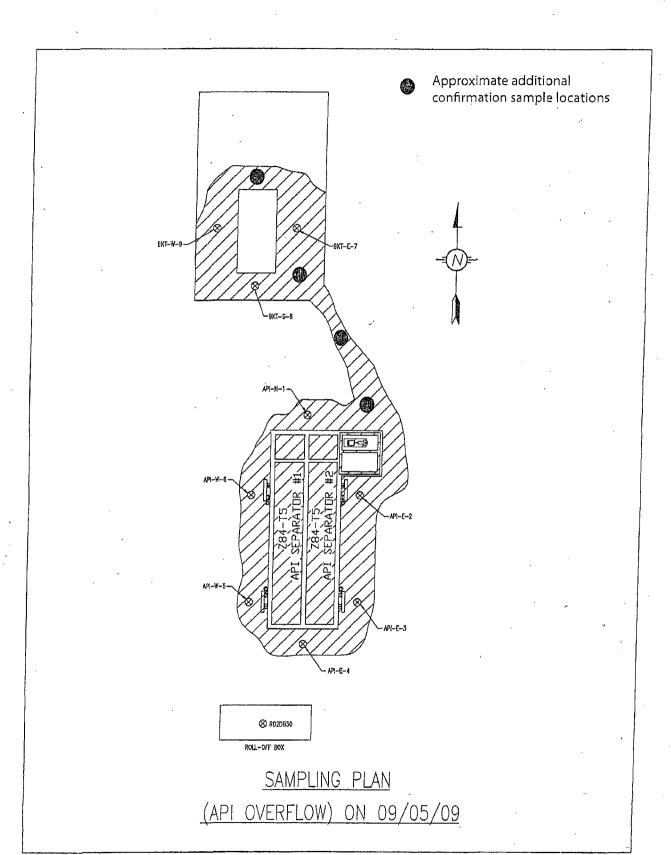
^{*} Attach Additional Sheets If Necessary











HALL ENVIRONMENTAL LABORATORY DATA SUMMARY

(API Spill on 12/08/09)

Sample ID: 1001093 (SOIL CONFIRMATION SAMPLING EVENT)	_
ample ID: 1001093 (SOIL CONFIRMATION SAMPLIN	ш
sample ID: 1001093 (SOIL CONFIRMATION SA	APLIN
ample ID: 1001093 (SOIL CONFIRMA	ON SA
sample ID: 1001093 (SOIL CO	IRMA
ample ID: 1001093 (OIL CO
ample ID: 1	1093 (
Samp	Ë
	Samp

SOIL CLEANUP NING CLEANUP LS STATUS	200 N/A N/A N/A	N/A O.K.I N/A O.K.I N/A O.K.I	17.7 O.K 1000000 O.K			258 O.K.I 252 O.K.I 128 O.K.I	269 0.K.! 69.2 0.K.!	300 O.K.I O.K.I	0.K:	0.KI 0.KI 0.KI	62.1 O.K.! 60.6 O.K.! 82 Contaminated	26500 O.K.I 20500 O.K.I	30900 O.K.I O.K.I 300 O.K.I	
MAXIMUM SCREENING CONTAMINATION LEVELS FOLIND	930 870 50 230		640	0.11		6.9 14 28	53	13 N/A	35 N/A	0.88 N/A 6.2	10, 2.6 180	0.0	2.50 N/A 2.9 N/A 5.9	
NBT-E-14 CO	65 10 50 5	,	310	5.0 6.2										
NBT-N-13 NE	720 390 120 210		350	7.3 6.5 0.067		0.25 5.8 2.6	7.5	0.81	3.0	0.32 1.0	1.3 0.44 19	0.65	0.89	
NBT-W-12 NB	115 32 78 5		350	. 9.1 7.7 0.068										
	230 120 100		380	11 5.8 0.077			0.13 0.059		0.23					
CHN-C-10 CHN-C-11	170 88 72 10	PERFORMED	350	9.1										
6-2	2916 560 56 2300		640	0.0 8.8		6.9 11 28	53 20	61 41	27	4. 0.	10 2.6 	9.0	3.5 1.5	
Sample ID: 1001093 (SOIL CONFINMATION SAMPLING EVER	1990 1100 500 390	NO RCI ANALYTICAL TEST	360	7.6 5.8		0.91 14 5.1	22 7.9	10	. 8° ,	0.88 3.5	3.0 1.2 36	2.0	0.23 8.7 2.5	
SKT-E-7 B	107 31 50 26	NALYTI	200	8.7 5.6 0.071		0.15 0.82 0.28	0.8	0.24	0.71	0.13	0.12			
API-N-1 API-E-2 API-E-3 API-S-4 API-W-5 API-W-6 BKT-E-7	69 14 50 5	O RCI A	450	3.4 1.3 0.035										
API-W-5 /	285 210 50 25	Z	130	1.7			0.09	0.35	0.34	0.13		0.21		
API-S-4	9300 8700 500 100		480	5.2 4.0			= :	1.1	35	0.44	0.43 0.56 1.9	1.9	1.1 29 59	
REID. IL	1620 1500 0 120		380	73 3.5 0.11		0.06	I I	0.74	2.3	0.11	0.097 0.11 0.8		2.1	
Samp	920 870 0 50		500	4.0 6.1			0.081	0.22	1.6		pu	7	0.26	
API-N-1	802 710 67 25		420	6.6 1.9 0.048			0.88	0.32	1.6	0.64	0.055	0.47	0.5	ĺ
Units	mg/Kg mg/Kg mg/Kg mg/Kg	s.u. mg/Kg mg/Kg	ng/Kg mg/Kg	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		тg/Kg тg/Kg тg/Kg		mg/Kg ma/Ka	mg/Kg	######################################	mg/Kg mg/Kg mg/Kg	п <i>9/</i> Кд ву/Кд	m g/Kg m g/Kg m g/Kg	
ANALYTES	TPH DRO MRO GRO Ignibility	Corrosivity Reactivity (CN) Reactivity (S)	METALS As Ba Ba	S S d d S S S	VOLATILES	Benzene Toluene Ethylbenzene	1,2,4-Trimethylbenzene 1,3,5-Trimethylbenzene	Naphthlene 1-Methylnaphthalene	2-Methylnaphthalene	4-Isopropyltoluene n-butylbenzene	n-propylbenzene sec-butylbenzene Xylene, Total	SEMIVOLATILES Fluorene Phenanthrene	Pyrene Pyrene 2-Methylnaphthalene Naphthlene	

NOTE: BLANKS indicate a Non-detect (ND).

"Light Blue" color area highlights (DRO" REQUIRED); IF DRO> 200 ppm, 8270 method was to be run. However, Method 8270 (Semi-volatiles was run on ALL sample points).

"Yellow" color area highlights the maximum contaminant for a particular sample ID above.
"Green" highlights the NMED Soil Screen Levels (mg/Kg) for Industrial Facilities for a particular contaminant.
"Green" highlights the NMED Soil Screen Levels (mg/Kg) for Industrial Facilities for a particular contaminant.
"Brown" (CLEANUR STATUS) indicates that cleanup was sufficient based on NMED Soil Screening Levels for Industrial Facilities.

Chavez, Carl J, EMNRD

From:

Strange, Aaron [aaron.strange@hollycorp.com]

Sent:

Thursday, January 14, 2010 4:07 PM

To:

Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc:

Moore, Darrell

Subject: Attachments: 2010-1-10 API lift station fire 2010-1-10 API lift station fire.pdf

Carl and Hope,

Please see the attached C-141.

Thanks,

Aaron Strange

Environmental Technician, Senior

Environmental Department Navajo Refining Co, LLC Artesia NM

Off: (575) 746-5468 Cell: (575) 703-5057

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State of New Mexico Energy Minerals and Natural Resources

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

Form C-141 Revised October 10, 2003

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Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company: Navajo Refining Co. LLC Contact: Aaron Strange Telephone No. 575-748-3311 Facility Type: Petroleum Refinery Mineral Owner Lease No.

Address: 501 E. Main Street Artesia, N.M. 88210 Facility Name: Artesia Refinery Surface Owner LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County Latitude Longitude NATURE OF RELEASE Volume Recovered: NA Type of Release: Fire Volume of Release: NA Source of Release: API (Oil Water Separator) lift station at north end of Date and Hour of Occurrence: Date and Hour of Discovery: 1/10/10 API. $1/10/10 \sim 12:05$ ~ 12:05 Was Immediate Notice Given? If YES, To Whom? Left voicemail with OCD District Supervisor (575-748-1283 extension 104). By Whom? Aaron Strange Date and Hour: 1/10/2010 at ~12:29 If YES, Volume Impacting the Watercourse. Was a Watercourse Reached? ☐ Yes 🛛 No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* On 1/10/2010 at ~12:05 there was a fire at the API (Oil Water Separator) lift station in the WWT (Waste Water Treater Unit # 80). The fire was extinguished with dry chemical and steam hoses then a foam blanket was placed inside the API Sump. All Electrical boxes and pumps were shut off after the fire because of unknown damages. The fire damaged electrical wiring, the platform, and possibly the pumps. Two spare tramp pumps are being used in place of the lift pumps. No one was injured from the event. No waste spilled out or got onto the ground. It is believed that one of the pumps had a non oil resistant power cord that swelled up and allowed the wires to short. Describe Area Affected and Cleanup Action Taken.* The area affected was a fire at the API (Oil Water Separator) lift station in the WWT (Waste Water Treater Unit #80). The fire was extinguished by Navajo Employees. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Buras Signature: Printed Name: Aaron Strange Approved by District Supervisor: Title: Sr. Environmental Technician Approval Date: Expiration Date: E-mail Address: aaron.strange@hollycorp.com Conditions of Approval: Attached [

Phone: 575-703-5057

* Attach Additional Sheets If Necessary

Date: 1/14/2010

Chavez, Carl J, EMNRD

From:

Monzeglio, Hope, NMENV

Sent:

Thursday, January 07, 2010 7:27 AM

To:

Larsen, Thurman; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Cc:

Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV; Riege, Ed; Turri, Mark;

Kielina, John, NMENV

Subject:

RE: Initial Report (C-141) for API Spill of December 8, 2009

Beck

All contaminated soil and gravel must be removed, managed as hazardous waste, and shipped off-site for disposal. The contaminated soil and gravel must comply with the generator requirements found in 40 CFR 262 (e.g., compliance with 90-day storage requirements and all recordkeeping, waste profiling, transport, and disposal requirements). Confirmation samples must be collected from the locations identified in the "Proposed Sampling Plan." The soil samples must be analyzed for volatile organic compounds (VOCs) by EPA Method 8260, semi volatile organic compounds (SVOCs) by EPA Method 8270, diesel range organics extended (DRO) and gasoline range organics (GRO) by EPA Method 8015M, and RCRA metals.

Please revise and resend the Proposed Sampling Plan (email is acceptable) to identify the locations of all containment structures, berms, roads, natural levee etc., in reference to the area in which the release occurred. Also explain how Gallup determined the volume of the spill. This information must be submitted by January 25, 2010.

Gallup must make note that the API separator has leaked in the past and contaminated groundwater in this area; therefore, NMED does not agree that the environmental impact from the API overflows (which are becoming routine) is minimized by the permeability of the containment and the surrounding soils in the API and Baker tank areas. Gallup must eliminate releases from the API separator. NMED is evaluating additional requirements to address these frequent API overflows.

Let me know if you have any questions.

Hope

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Wednesday, December 23, 2009 2:04 PM

To: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Cc: Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV; Riege, Ed; Turri, Mark

Subject: RE: Initial Report (C-141) for API Spill of December 8, 2009

Dear Hope,

The following e-mail is a follow-up response to the e-mail that we received on December 21, 2009, in reference to the API overflow that occurred on December 8. The overflow as mentioned previously on the initial C-141 was due to inclement weather and storm conditions that passed through the area that resulted in a power loss to the Refinery. The power loss was due to "mother nature" that caused the power company to experience a loss of incoming power supplied to the Refinery, and therefore, was beyond our control. I have included a "pdf" drawing indicating the extent of the API overflow contamination area, and a picture reflecting this area as well.

The extent of the API overflow contamination was similar to the one that was experienced on September 5, 2009 except that the overflow on December 8, 2009 did not reach the lagoons due to the road berm that was constructed previously. When the power was lost, the Refinery did not have any operational controls that could retard or restrict the effluent flow to the API. The liquid began coming out of the overflow spouts as noted previously on the C-141. The API is bordered by a road between the Aeration Basins/Lagoons and the API on the west side of the API that acted as a containment preventing overflows from reaching the basins or lagoons. The road also extends past the Baker frac tank which is used to catch API overflows during brief periods. This road in conjunction with the natural levee on the east side creates a containment area so as to localize any API overflow that may occur. The road base, the containment, and the surrounding

soil in the areas of the API are primarily clay. Any environmental impact due to API overflow (primarily water) is minimized due to the permeability of this containment and the surrounding soils in the API and Baker tank areas.

Attached is the proposed sampling plan for the API Overflow area. Please provide the required analysis that the agency is requiring for this event.

Sincerely, Beck Larsen

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Monday, December 21, 2009 9:22 AM

To: Larsen, Thurman; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD **Cc:** Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV **Subject:** RE: Initial Report (C-141) for API Spill of December 8, 2009

Beck

Please provide NMED with a drawing showing the extent of this release, include any photographic documentation if there is any. Include a detailed description of the areas the release covered and clarify if the release entered into the Aeration Lagoons, Evaporation Ponds 1 and 2? If the release entered the Aeration Lagoons or the Evaporation Ponds, describe all cleanup activities. Submittal of this information by email is acceptable.

Thanks Hope

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Friday, December 18, 2009 6:11 PM

To: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Subject: Initial Report (C-141) for API Spill of December 8, 2009

Dear Hope, Carl, and Brandon,

The following attachment is for the API Spill that occurred on December 8, 2009 due to a winter storm that caused a power outage at Western Refining (Gallup Refinery). Initial cleanup has been completed. Please contact me if you require additional information.

Sincerely, Beck Larsen

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Chavez, Carl J, EMNRD

From: Rajen, Gaurav [Gaurav.Rajen@wnr.com]
Sent: Wednesday, December 30, 2009 1:40 PM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV Cc: Riege, Ed; Turri, Mark; Allen, Ann; Riley, Don

Subject: C-141 release notification form for spill on 12-23-2009

Attachments: C-141 signed copy.pdf

Dear Carl:

This form is being mailed out to you regarding a spill on 12-23-2009 at the Gallup Refinery.

My best wishes for the coming New Year! It is a real pleasure working with you.

Regards,

Raj

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Release Notification and Corrective Action

			Keie	ase nound	cation	ranu Co	orrective A	cuon			
						OPERA	ГOR		M Initia	al Report	
		estern Refin				Contact Gaurav Rajen					
		Jamestown,	NM 8734	17			No. 505-722-383	33			
Facility Na	me Gallup	Refinery				Facility Typ	e Oil refinery				
Surface Ow	vner Weste	rn Refining		Mineral C	Owner V	Vestern Ref	ning		Lease N	Vo.	
				LOCA	ATIO	N OF RE	LEASE				
Unit Letter	Section 23&33	Township 15N	Range 15W	Feet from the		North/South Line Feet from the East/West Line County McKinley					
		Lati	tude3:	5°29'22"		Longitud	le108°25'24	,,,			
				NAT	TURE	OF REL	EASE				
Type of Rele	ease Ultra-le	ow Sulfur Dies	sel		-		Release 44 barre Sulfur Diesel (184 timate		and water	Recovered 68 barrels of an oil mixture (with 40 barrels or ons of oil in the mixture)	
Source of Re	elease Leak	ing undergrou	nd pipeline	at truck loading	rack	1	lour of Occurrence	ce	Date and 4:00 pm	Hour of Discovery 12/23/2009;	
Was Immed	iate Notice		Yes _	No Not R	equired	If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division;					
By Whom?	Ed Riege				-	Date and F	lour 12/23/2009 6	6:30 pm	(approxim	ately)	
Was a Water	rcourse Rea		Yes 🗵	No		If YES, Volume Impacting the Watercourse. Not applicable					
If a Waterco	urse was In	pacted, Descr	ibe Fully.*	Not applicable							
At approxim the truck load collect approgallons of th mixture had were picked	nately 4 pm ding rack. I eximately 7 he wash wate run off the up by the v	mmediate acti 50 gallons of per was capture truck loading tacuum truck.	y, maintena on was tak product fro d by the va rack area a We estima	ince personnel no en to isolate the m the hole aroun acuum truck. This nd into an adjace	line. Soil d the lea s mixture ent field v	l was excavat king line. Lat e was approxi where it had p	ed to uncover the ser, the asphalt in mately 5% produpooled in a depres	leaking the area act, or 35 ssion. Ap	line, and a was washe gallons. S pproximate	puried pipe at the west end of vacuum truck was used to ed down, and approximately 700 tome of the ULSD and water ly 1400 gallons of these liquids esser fraction. We have collected	
Near the lea soil that was as this is an adjacent fiel frozen, mate of the area. A down and th from the dep	aking line, the excavated extremely a d. There is a crial could n A vacuum the oily-water oression who	to find the lead ctive area of the also the channed of penetrate veruck was used mixture was cre it had pool-	area affect is current ne refinery el along th ery deep in to collect also collect cd. The so	ed is approximate ily being stored of There is another of flow path which to the ground. Im- product emanating ted by the vacuum ils in this area area	on plastic r area of h is appr nmediate ig from the m truck. c stained	sheeting in a approximate oximately 25 ly on noting the leaking un Material that with ULSD.	staging area, away 10 feet by 20 feet in length ar the leak, the ULS derground line, whad run off the as In further cleanup	aiting fir eet where nd about D sales l while it w sphalt and p actions	nal disposite an oily-wall foot wide ine was she was being is and into an author contamin	to get to the leak. Contaminated tion. The pit has been back-filled vater mixture had pooled in the le. Because the ground was ut down and trucks moved out solated. The asphalt was washed adjacent field was also collected ated soils will be excavated, accordance with applicable	

I hereby certify that the information given above is true and con								
regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger								
public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability								
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health								
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other								
federal, state, or local laws and/or regulations.								
Signature:	OIL COI	NSERVATION	DIVISION					
Mark S. Quin	harl & limi							
	Approved by District Superv	visor:	į					
Printed Name: Mark B. Turri								
Title: Refinery Manager – Gallup								
	Approval Date:	Expiration I	Date:					
E-mail Address: Mark.Turri@wnr.com			,					
	Conditions of Approval:		Attached					
Date: 12-29-2009 Phone: 505-72	2-3833							

Attach Additional Sheets If Necessary

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Form C-141 Revised October 10, 2003

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District Office in accordance
with Rule 116 on back
side of form

Santa	Fe, NM 87505		CD	Side of form
	2010	JM -4 P 18	2. 10	
Release Notification	on and Corrective A	etion	4 1Z	
	OPERATOR		al Report	Final Report
Name of Company Western Refining Southwest Inc.	Contact Gaurav Rajen			<u> </u>
Address I-40 Exit 39, Jamestown, NM 87347	Telephone No. 505-722-383	33		
Facility Name Gallup Refinery	Facility Type Oil refinery	·		
Surface Owner Western Refining Mineral Owne	r Western Refining	Lease N	Jo.	
LOCATION	ON OF RELEASE			
	th/South Line Feet from the	East/West Line	County McKinley	
Latitude 35°29'22"	Longitude 108°25'24	,,		
NATUR	E OF RELEASE			
Type of Release Ultra-low Sulfur Diesel	Volume of Release 44 barre Ultra-low Sulfur Diesel (184 gallons) estimate	48 and water	Recovered 68 ba mixture (with 40 ons of oil in the 1	0 barrels or
Source of Release Leaking underground pipeline at truck loading rack	Date and Hour of Occurrenc 12/23/2009; 4 pm	Date and 4:00 pm	Hour of Discove	ry 12/23/2009;
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Require	If YES, To Whom? Carl J. C	Chavez, NMEMNR		
By Whom? Ed Riege	Date and Hour 12/23/2009 6	5:30 pm (approxima	ately)	: : : : : :
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting t	the Watercourse. N	ot applicable	
If a Watercourse was Impacted, Describe Fully.* Not applicable				
Describe Cause of Problem and Remedial Action Taken.* At approximately 4 pm on 12/23/2009, maintenance personnel noticed the truck loading rack. Immediate action was taken to isolate the line. S collect approximately 750 gallons of product from the hole around the legallons of the wash water was captured by the vacuum truck. This mixt mixture had run off the truck loading rack area and into an adjacent fiel were picked up by the vacuum truck. We estimate conservatively that 6 soil samples in this area, which will allow for a better estimate.	oil was excavated to uncover the leaking line. Later, the asphalt in ure was approximately 5% produd where it had pooled in a depress	leaking line, and a the area was washe ct, or 35 gallons. So sion. Approximatel	vacuum truck ward down, and appose of the ULSI by 1400 gallons of	as used to roximately 700 D and water of these liquids
Describe Area Affected and Cleanup Action Taken.* Near the leaking line, the subsurface area affected is approximately 5 fs soil that was excavated to find the leak is currently being stored on plas as this is an extremely active area of the refinery. There is another area adjacent field. There is also the channel along the flow path which is ap frozen, material could not penetrate very deep into the ground. Immedia of the area. A vacuum truck was used to collect product emanating fron down and the oily-water mixture was also collected by the vacuum truc from the depression where it had pooled. The soils in this area are stain confirmatory environmental samples will be collected and analyzed, and regulations.	tic sheeting in a staging area, awa of approximately 10 feet by 20 feet proximately 250 feet in length an ately on noting the leak, the ULSI the leaking underground line, was the Material that had run off the as ed with ULSD. In further cleanup	atting final disposited where an oily-ward about 1 foot wide D sales line was shuthile it was being is sphalt and into an actions, contaminates.	ion. The pit has bater mixture had e. Because the grut down and truc olated. The asphalacent field was ated soils will be	poeen back-filled pooled in the round was ks moved out alt was washed also collected excavated,

regulations all operators are required to re	eport and/or file certain release	notifications and perform correct	tive actions for rele	ases which may endanger
public health or the environment. The acc	ceptance of a C-141 report by t	he NMOCD marked as "Final Re	eport" does not relie	eve the operator of liability
should their operations have failed to adec	quately investigate and remedia	ate contamination that pose a thre	at to ground water,	surface water, human health
or the environment. In addition, NMOCE	acceptance of a C-141 report	does not relieve the operator of r	esponsibility for co	mpliance with any other
federal, state, or local laws and/or regulation	ions			
Signature:		OIL CONS	SERVATION	DIVISION
Signature: Mark S. Quin		0.15 00 1,10		<u> </u>
		Approved by District Supervisor	or:	
Printed Name: Mark B. Turri				
Title: Refinery Manager – Gallup				
		Approval Date:	Expiration I	Date:
E-mail Address: Mark.Turri@wnr.com				
		Conditions of Approval:		Attached
Date: 12-29-2009	Phone: 505-722-3833			

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and

Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Wednesday, December 23, 2009 2:04 PM

To:

Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV; Riege, Ed; Turri, Mark

Cc: Subject:

RE: Initial Report (C-141) for API Spill of December 8, 2009

Attachments:

API OVERFLOW CONTAMINATION AREA.pdf; DSCN0164.JPG

Dear Hope,

The following e-mail is a follow-up response to the e-mail that we received on December 21, 2009, in reference to the API overflow that occurred on December 8. The overflow as mentioned previously on the initial C-141 was due to inclement weather and storm conditions that passed through the area that resulted in a power loss to the Refinery. The power loss was due to "mother nature" that caused the power company to experience a loss of incoming power supplied to the Refinery, and therefore, was beyond our control. I have included a "pdf" drawing indicating the extent of the API overflow contamination area, and a picture reflecting this area as well.

The extent of the API overflow contamination was similar to the one that was experienced on September 5, 2009 except that the overflow on December 8, 2009 did not reach the lagoons due to the road berm that was constructed previously. When the power was lost, the Refinery did not have any operational controls that could retard or restrict the effluent flow to the API. The liquid began coming out of the overflow spouts as noted previously on the C-141. The API is bordered by a road between the Aeration Basins/Lagoons and the API on the west side of the API that acted as a containment preventing overflows from reaching the basins or lagoons. The road also extends past the Baker frac tank which is used to catch API overflows during brief periods. This road in conjunction with the natural levee on the east side creates a containment area so as to localize any API overflow that may occur. The road base, the containment, and the surrounding soil in the areas of the API are primarily clay. Any environmental impact due to API overflow (primarily water) is minimized due to the permeability of this containment and the surrounding soils in the API and Baker tank areas.

Attached is the proposed sampling plan for the API Overflow area. Please provide the required analysis that the agency is requiring for this event.

Sincerely, Beck Larsen

From: Monzeglio, Hope, NMENV [mailto:hope,monzeglio@state.nm.us]

Sent: Monday, December 21, 2009 9:22 AM

To: Larsen, Thurman; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD **Cc:** Cobrain, Dave, NMENV; Riege, Ed; Van Horn, Kristen, NMENV **Subject:** RE: Initial Report (C-141) for API Spill of December 8, 2009

Beck

Please provide NMED with a drawing showing the extent of this release, include any photographic documentation if there is any. Include a detailed description of the areas the release covered and clarify if the release entered into the Aeration Lagoons, Evaporation Ponds 1 and 2? If the release entered the Aeration Lagoons or the Evaporation Ponds, describe all cleanup activities. Submittal of this information by email is acceptable.

Thanks Hope

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Friday, December 18, 2009 6:11 PM

To: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Subject: Initial Report (C-141) for API Spill of December 8, 2009

Dear Hope, Carl, and Brandon,

The following attachment is for the API Spill that occurred on December 8, 2009 due to a winter storm that caused a power outage at Western Refining (Gallup Refinery). Initial cleanup has been completed. Please contact me if you require additional information.

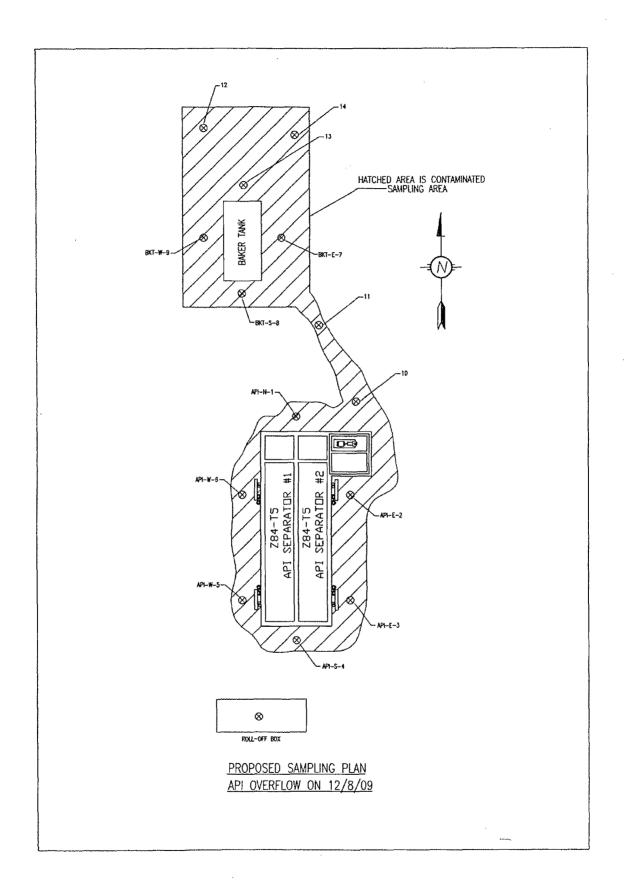
Sincerely, Beck Larsen

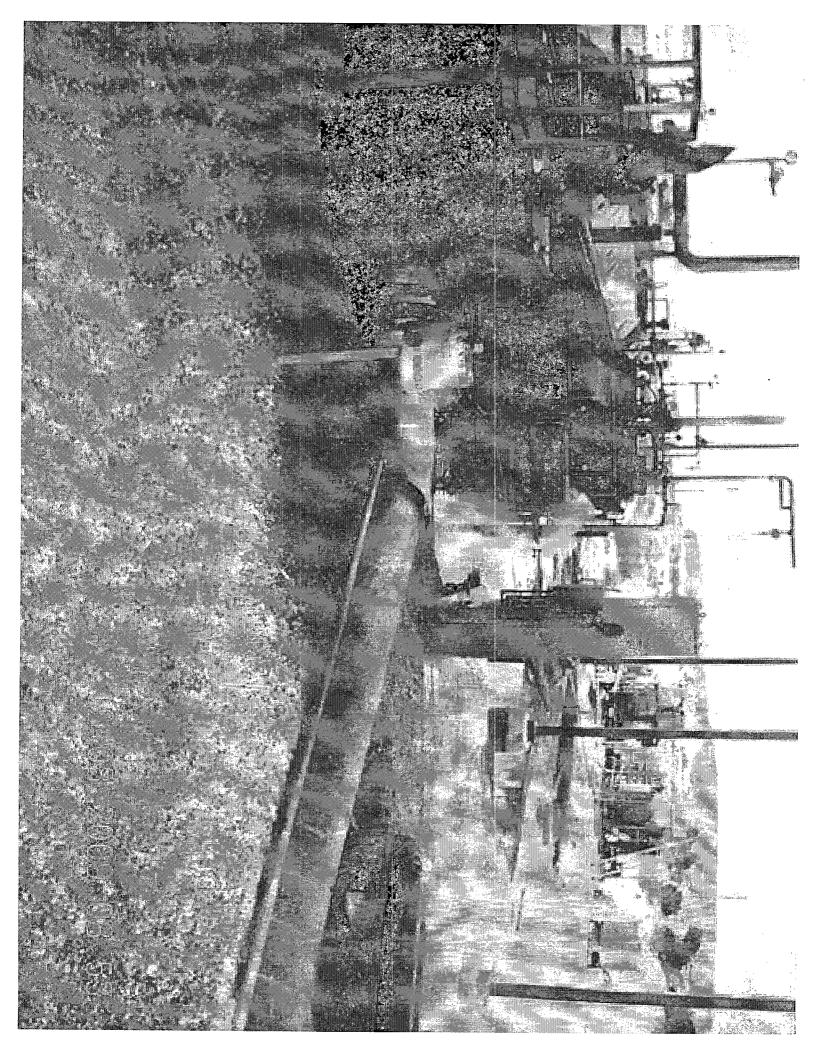
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This email has been scanned using Webroot Email Security.





Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Friday, December 18, 2009 6:11 PM

To:

Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Subject:

Initial Report (C-141) for API Spill of December 8, 2009

Attachments:

C-141 Initial_120809.pdf

Dear Hope, Carl, and Brandon,

The following attachment is for the API Spill that occurred on December 8, 2009 due to a winter storm that caused a power outage at Western Refining (Gallup Refinery). Initial cleanup has been completed. Please contact me if you require additional information.

Sincerely, Beck Larsen

This inbound email has been scanned for malicious software and transmitted safely to you using Webroot Email Security.

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State of New Mexico Energy Minerals and Natural Resources

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

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

Form C-141

Revised October 10, 2003

Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company Western Refining-Southwest Contact Beck Larsen Address 1-40/Exit 39, Jamestown, NM 87347 Telephone No.(505) 722-0258 Facility Name Gallup Refinery Facility Type Refinery Surface Owner Mineral Owner Lease No. LOCATION OF RELEASE Feet from the North/South Line Unit Letter Section Township Range Feet from the East/West Line County 28 15N 15W McKinley Latitude 35° 29′030′′ Longitude 108° 24′040′′ NATURE OF RELEASE Type of Release Volume of Release Volume Recovered API Overflow 739 bbls (API oily water) >720 bbls (API oily Water) Source of Release API UNIT Date and Hour of Occurrence Date and Hour of Discovery 12/08/2009; 0300 hrs 12/05/2009; 0300 hrs Was Immediate Notice Given? If YES, To Whom? OCD & NMED (Carl Chavez, Steve Conley, Hope Monzeglio) By Whom? Beck Larsen Date and Hour 12/08/2009 / ~ 1030 hrs Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes 🖾 No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* At or about midnight on Tuesday, December 8, a winter storm passed through the area precipitating heavy snow and high winds. Due to this event at 0300 hrs (December 8), a plant wide electrical power failure occurred to all units throughout the facility. After a thorough power distribution evaluation, the cause of this incident was found to be resultant of several power glitches or amperage line deviations from Tristate Power Company in Albuquerque. As a result of high winds in the Albuquerque area, several power deviations occurred between 0241 to 0249 hours causing two power lines to slap together creating a Phase A / Phase C power line short at the Tristate distribution center or substation. These power glitches were transmitted to Western Refinery (Gallup Refinery) as an incoming line fluctuation or line distortion in amperage. This transmitted to a decrease in amperage of 15 to 20 percent. This distortion caused two of compressors to go off line initiating a plant wide electrical power failure to all units. After all information was collected from various sources, it was estimated that due to this power failure, the API incurred intermittently overflowed for about 10 to 12 hours. An onsite vacuum truck was immediately dispatched during this event in order to minimize and spread of contamination and to begin cleanup operations. No injuries were incurred during this event as a result of this power failure. Describe Area Affected and Cleanup Action Taken.* The affected area was localized around the API and baker frac tank containment areas. Initial cleanup efforts began immediately on Tuesday, December 8. 2009 during this event utilizing an onsite vacuum truck. Maintenance and Contract personnel began cleaning up the any aqueous/oily portion of overflow contamination and any contaminated soil and rock debris surrounding the API area. Personnel conduct cleanup of areas such as depressions or other conveyances adjacent to the API area in order that contamination would not spread. Initial cleanup efforts were completed on Monday, December 14, 2009. All contaminated material were put into a roll-off box to be tested (analyzed by an outside lab), prior to shipment off site for disposal to an approved facility. Final cleanup of this area will be determined based on laboratory analysis. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Printed Name: Beck Larsen Approved by District Supervisor:

Title: Environmental Engineer		Approval Date:	Expiration D	Date:
E-mail Address: Thurman.larsen@wnr.co	m	Conditions of Approval:		Attached
Date: 12/18/2009	Phone: (505) 722-0258			Attached

^{*} Attach Additional Sheets If Necessary



BILL RICHARDSON Governor

DIANE DENISH Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505-6303
Phone (505) 476-6000 Fax (505) 476-6030

www.nmenv.state.nm.us



RON CURRY Secretary

JON GOLDSTEIN Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 27, 2009

Mr. Ed Riege Environmental Superintendent Western Refining, Southwest Inc., Gallup Refinery Route 3 Box 7 Gallup, New Mexico 87301 Mr. Beck Larsen Environmental Engineer Western Refining, Southwest Inc., Gallup Refinery Route 3 Box 7 Gallup, New Mexico 87301

SUBJECT:

SEPTEMBER 5, 2009 API SEPARATOR OVERFLOW REPORT WESTERN REFINING, SOUTHWEST INC., GALLUP REFINERY EPA ID NO. NMD000333211 HWB-GRCC-MISC

Dear Messrs Riege and Larsen:

The New Mexico Environment Department (NMED) received the Western Refining Southwest Inc., Gallup Refinery (the Permittee) Report summarizing the overflow and interim measures remedial actions at the API separator on September 5, 2009. The Permittee collected ten soil samples and presented the analytical results in a table titled "Hall Environmental Laboratory Data Summary." The analytical results identified diesel range organics (DRO) extended (which include motor oil range organics (MRO)) ranging from 229 mg/kg to 11,000 mg/kg, all exceeding the NMED's Total Petroleum Screening (TPH) Guidelines of 200 mg/kg for "unknown oil." NMED compared the cumulative values of the DRO and MRO detections when comparing the values to the NMED TPH standard for unknown oil of 200 mg/kg (e.g., sample BKT-E-7 had a DRO detection of 150 mg/kg and a MRO detection of 79 mg/kg with a cumulative value of 229 mg/kg). Because the release came from the API separator, the exact source(s) of the hydrocarbons are unknown.

Mr. Ed Riege Gallup Refinery October 27, 2009 Page 2 of 2

The Permittee must complete additional cleanup activities as follows:

- a. The Permittee must remove additional contaminated soils in the vicinity of the API Separator and the Baker Tank within the hatched area identified in the "Sampling Plan" figure (attached).
- b. The Permittee must collect confirmation samples from the approximate locations of all of the former sampling locations with the exception the roll-off box location. The Permittee must also collect samples from the additional sample locations identified in the attached figure. All samples must be collected from the limits of the excavation not to exceed six inches in depth.
- c. All confirmation samples must be analyzed for DRO extended. In addition, samples collected from locations API-E-2 and BKT-E-7, BKT-S-8, and BKT-W-9 must also be analyzed for gasoline range organics.
- d. The confirmation samples must not exceed organics concentrations of 200 mg/kg, if such concentrations exceed 200 mg/kg then additional soil removal will be required until detected concentrations are less than 200 mg/kg.
- e. The Permittee must submit a report (letter format is acceptable) that describes the additional soil clean up activities, explains how additional contaminated soil was removed, describes how confirmation samples are collected and documents the disposal of the contaminated soils. The Permittee must also include all analytical data in table format, copies of the final laboratory reports, and include a figure that identifies the locations of all confirmation samples.

Mr. Ed Riege Gallup Refinery October 27, 2009 Page 3 of 3

The Permittee must submit the report to NMED on or before February 1, 2010. If you have questions please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,

John E. Kieling

Program Manager

Permits Management Program

Hazardous Waste Bureau

cc:

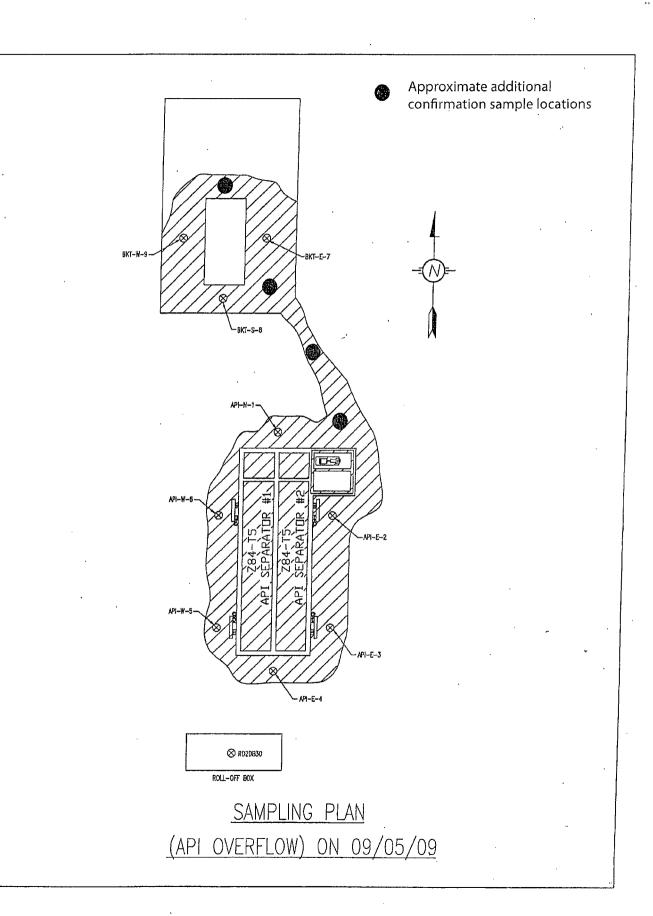
D. Cobrain, NMED HWB

H. Monzeglio, NMED HWB

C. Chavez, NMEMNRD OCD

File: Reading GRCC 2009

GRCC-MISC



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1301 W. Grand Avenue, Artesia, NM 88210
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State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

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

Santa Fe, NM 87505 And 23 cm 12 48
Release Notification and Corrective Action

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Address I-4	0 Exit 39,	Jamestown,	NM 8734	17	7	Telephone 1	No. 505-722-022	27					
Facility Nar	ne Gallup	Refinery			I	Facility Typ	e Oil refinery						
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public health	or the envir	ronment. The	acceptano	ce of a C-141 repo	rt by the	NMOCD m	arked as "Final Re	eport" c	loes not reli	ieve the oper	ator of	liabilit	у
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Signature:	/ Jal	13 U i	سب				OIL COIN	<u>SLIC V</u>	ATION	DIVISIO	11		
Printed Name	e: Mark B.	Turri			F	Approved by	District Superviso	or:					
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Title: Refine	ry Manager	– Gallup			· · · · · · · · · · · · ·	Approval Dat	e:		Expiration l	Date:			
E-mail Addre	ess: mturri@	 Dwnr.com				Conditions of	Annroval						
D man / dan	, <u>miuri (a</u>	· · · · · · · · · · · · · · · · · · ·					Approvai.		*	Attached.			
Date: 10-20-	2009			Phone: 505-722-	3833								. ,

Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From: Rajen, Gaurav [Gaurav.Rajen@wnr.com]
Sent: Thursday, October 22, 2009 1:18 PM

To: Monzeglio, Hope, NMENV

Cc: Riege, Ed; Turri, Mark; Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Kieling, John,

NMENV; Larsen, Thurman

Subject: RE: C-141 for possible release of hydrocarbons - October 20, 2009

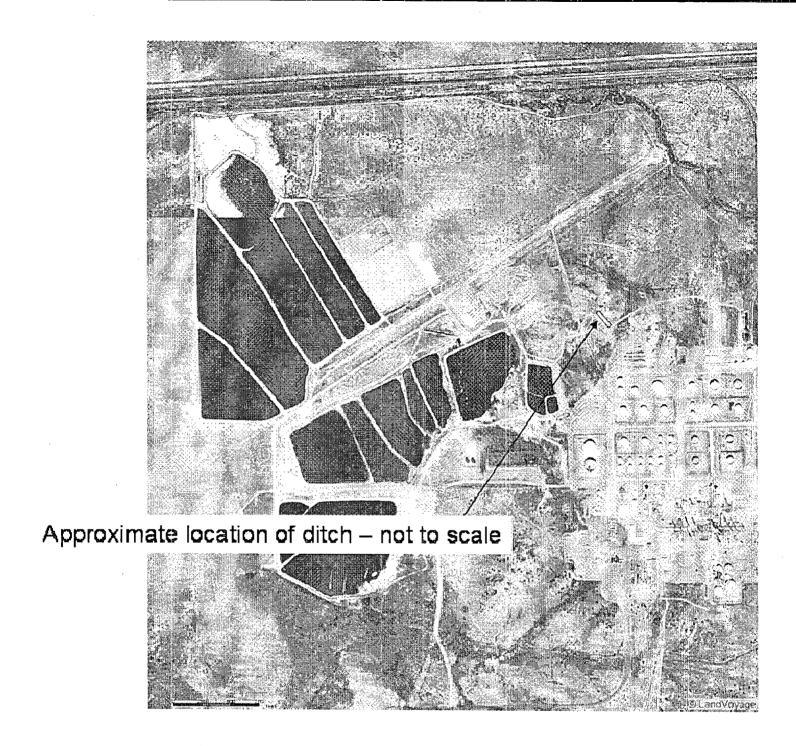
Dear Hope:

Many thanks for your recent e-mail. In response to your request for more information -

- 1) We have collected water and sludge samples from three locations in the ditch (that runs generally southeast-northwest) on Tuesday morning, October 20, 2009 a) at the southeast end, b) mid-way along the ditch, and c) at the northwest end. The samples are being analyzed for water: TPH, method 418.1; sludge: Semi-volatile Organic Compounds (SVOCs), method 8270C, metals (TCLP); and TPH (method 418.1). These are screening samples. Based on our test results, we will plan additional analyses as needed.
- 2) We collected grab samples using dedicated augers for each of the three sludge samples, and dedicated booms with cups and/or bottles for the water samples. There were no field investigation-derived wastes generated. The sample containers, preservatives, cooling requirements and holding times were as required by the test methods and the testing laboratory.
- 3) A figure showing the approximate location of the ditch is attached below. (For your reference, the ditch is somewhat west and south of OW-13. For ease of location on the larger map we have drawn it much bigger than it actually is the length must be about 40 feet or so, and a few feet wide and deep, with the water depth being a few inches and a foot or so wide.)

Best regards,

Raj



From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Wednesday, October 21, 2009 7:54 AM

To: Rajen, Gaurav

Cc: Riege, Ed; Turri, Mark; Chavez, Carl J, EMNRD; Cobrain, Dave, NMENV; Kieling, John, NMENV

Subject: RE: C-141 for possible release of hydrocarbons - October 20, 2009

Raj

NMED would like some additional information from review of the C-141 form: 1) what analytical methods will be run on the water and sludge samples; 2) provide me with a description of how Gallup will collect the water and sludge samples; 3) provide a figure showing the location of the ditch with the stagnant water. This information can be sent via email. Let me know if you have any questions.

From: Chavez, Carl J, EMNRD

Sent: Wednesday, October 21, 2009 7:00 AM **To:** Rajen, Gaurav; Monzeglio, Hope, NMENV

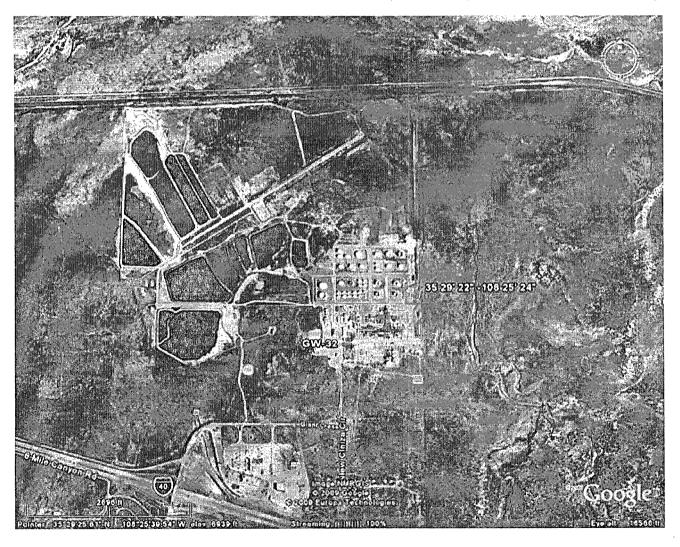
Cc: Riege, Ed; Turri, Mark

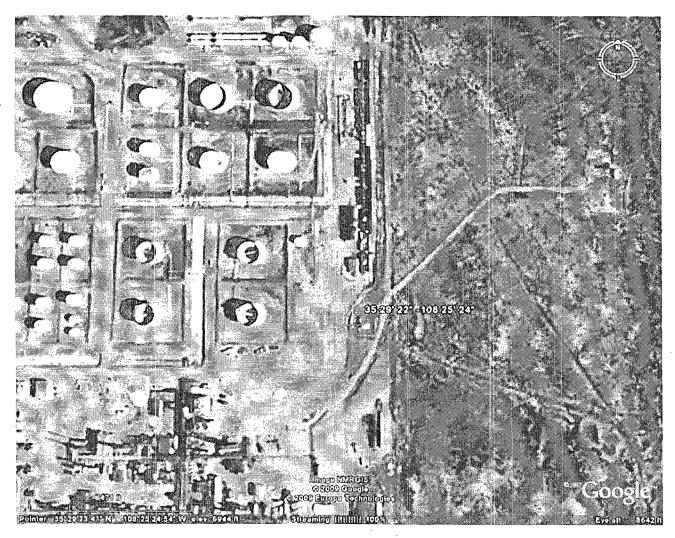
Subject: RE: C-141 for possible release of hydrocarbons - October 20, 2009

Raj:

I like your approach to addressing this discovery and corrective action measures to vacuum fluids and monitor the reoccurrence with sheen, testing when necessary. Please use a C-141 "Final" form to document the work and the analytical results. If you notice the potential seep reoccurring, OCD recommends some shallow boring work back toward a diesel source. Please keep OCD informed. If you have had recent rains, then your preliminary observation may be correct?

I looked at the location and see that it is near a small tank area (Tk 573 NIS?) and south of the Rail Road Lagoon Rack.





Thanks.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Tuesday, October 20, 2009 11:07 AM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc: Riege, Ed; Turri, Mark

Subject: C-141 for possible release of hydrocarbons - October 20, 2009

Dear Carl and Hope:

Please find attached our C-141 form for the release we discovered yesterday, and that I informed you of via a telephone message earlier today.

Best regards,

Raj

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Chavez, Carl J, EMNRD

From:

Rajen, Gaurav [Gaurav.Rajen@wnr.com]

Sent:

Tuesday, October 20, 2009 11:07 AM

To: Cc: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV Riege, Ed; Turri, Mark

Subject:

C-141 for possible release of hydrocarbons - October 20, 2009

Attachments:

20091020105734341.pdf

Dear Carl and Hope:

Please find attached our C-141 form for the release we discovered yesterday, and that I informed you of via a telephone message earlier today.

Best regards,

Raj

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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company Western Refining Southwest Inc. Contact Gaurav Rajen Address I-40 Exit 39, Jamestown, NM 87347 Telephone No. 505-722-0227 Facility Name Gallup Refinery Facility Type Oil refinery Mineral Owner Western Refining Surface Owner Western Refining Lease No. LOCATION OF RELEASE Unit Letter Section Township Feet from the North/South Line Feet from the East/West Line County Range 23&33 15N 15W McKinley Latitude <u>35°29'22"</u> Longitude 108°25'24" NATURE OF RELEASE Type of Release Suspected historical release of hydrocarbons recently Volume of Release 30 barrels Volume Recovered O barrels washed into a ditch by rainfall - based on smell of diesel, possible oil (1,200 gallons) estimated of oily water - the hydrocarbon content sheen on liquids is much lesser Source of Release It appears that a rain event may have picked up Date and Hour of Occurrence Date and Hour of Discovery 10/19/2009; hydrocarbons absorbed onto surface/ subsurface soils from historical Within past 10 - 15 days 1:30 pm spills and collected in a ditch running east to west at the north-west end (approximately) of the hill on which the refinery is located Was Immediate Notice Given? If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division; Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone) By Whom? Gaurav Rajen Date and Hour 10/20/2009 (approximately) 11:00 am Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. Not applicable ☐ Yes 🛛 No If a Watercourse was Impacted, Describe Fully.* Not applicable Describe Cause of Problem and Remedial Action Taken.* At approximately 1:30 pm on 10/19/2009, during a routine walk-through of arroyos and ditches in a field that lies immediately north of the hill on which the refinery is located, a ditch containing non-moving water was found to have some possible hydrocarbon staining - suspected from color of the water and smell of diesel. Describe Area Affected and Cleanup Action Taken.* The affected area has a surface area less than approximately 150 square feet with some vertical penetration of the (possible) hydrocarbons to an as yet unknown depth. We plan to collect water and sludge samples, then pick up the water using a truck with a vacuum pump. We will then wait to see if the water reappears and is a continuous seep, or an occurrence caused by a rain event. In further cleanup actions, contaminated soils will be excavated, confirmatory environmental samples will be collected and analyzed, and all contaminated materials will be disposed off in accordance with applicable regulations. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Printed Name: Mark B. Turri Approved by District Supervisor: Title: Refinery Manager - Gallup Approval Date: Expiration Date: Conditions of Approval: E-mail Address: mturri@wnr.com Attached

Phone: 505-722-3833

Date: 10-20-2009

Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Wednesday, October 21, 2009 7:00 AM

To:

'Rajen, Gaurav'; Monzeglio, Hope, NMENV

Cc:

Riege, Ed; Turri, Mark

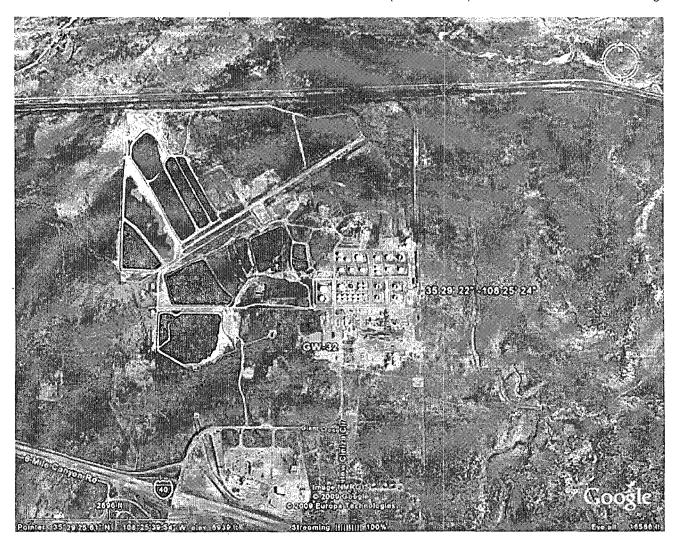
Subject:

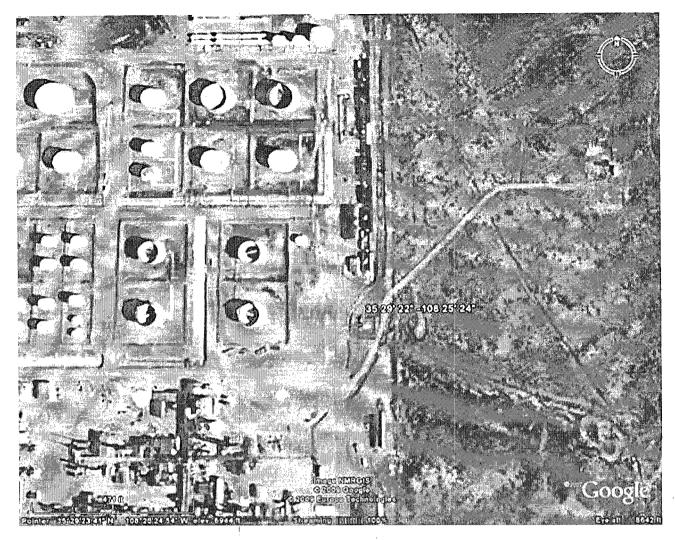
RE: C-141 for possible release of hydrocarbons - October 20, 2009

Raj:

I like your approach to addressing this discovery and corrective action measures to vacuum fluids and monitor the reoccurrence with sheen, testing when necessary. Please use a C-141 "Final" form to document the work and the analytical results. If you notice the potential seep reoccurring, OCD recommends some shallow boring work back toward a diesel source. Please keep OCD informed. If you have had recent rains, then your preliminary observation may be correct?

I looked at the location and see that it is near a small tank area (Tk 573 NIS?) and south of the Rail Road Lagoon Rack.





Thanks.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe', New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/ index.htm (Pollution Prevention Guidance is under "Publications")

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Tuesday, October 20, 2009 11:07 AM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc: Riege, Ed; Turri, Mark

Subject: C-141 for possible release of hydrocarbons - October 20, 2009

Dear Carl and Hope:

Please find attached our C-141 form for the release we discovered yesterday, and that I informed you of via a telephone message earlier today.

Best regards,

Raj

This inbound Email Security	email has been scanned	d for malicious so	ftware and transr	nitted safely to yo	u using Webroot

GALLUP REFINERY

CERTIFIED MAIL: 7008 2810 0000 4726 1673

October 16, 2009

RECEIVED 2009 OCT 19 PM 12 43

New Mexico Environmental Department (NMED)
Hazardous Waste Bureau (HWB)
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505
Attention: Ms Hope Monzeglio

New Mexico Energy Minerals and Natural Resources Department New Mexico Oil Conservation Division (NMOCD) 1220 South Saint Francis Drive Santa Fe, New Mexico 87505 Attn: Mr. Carl J. Chavez

Reference: API OVERFLOW on SEPTEMBER 5, 2009

Dear Ms Monzeglio and Mr. Chavez;

Please accept the following letter in response to a letter from Ms Hope Monzeglio of the New Mexico Environmental Department (NMED) (Hazardous Waste Bureau (HWB) (September 15, 2009) that references an API overflow which occurred on Saturday, September 5, 2009.

The following information shall address describing the nature of the event leading to and causes of the overflow event, remedial actions that were taken, and corrective action made to the API area in order to prevent future occurrence. Diagrams have been included in order to provide a visual reference of the API area, extent of contamination, and to aid in a better understanding of the event. (Refer to "API & Aeration Lagoon Diagram") Also enclosed are Release Notification Forms (C-141) (Initial and Final) Reports, NMED Correspondence (letters and e-mails), API Overflow Summary, API Sampling Plan with a Laboratory Data Summary and Hall Environmental Laboratory Analysis, and NMED Soil Screening Levels (Table A-1) for your reference and convenience.

I. THE INCIDENT- "DESCRIPTION AND CAUSES OF OVERFLOW EVENT": (Refer to "API & AERATION LAGOON DIAGRAM")

On Saturday, September 5, 2009 at 1215 hours, a heavy rain and thunderstorms passed over the facility. It began raining heavily for about 20 to 30 minutes. At 1245 hours, the API began to overflow into an above ground Baker Tank that is located near the new API and is used for overflow during upset or excessive rain conditions. The API Operator began pumping from the new API to T-105/T-107 in order to divert as much water as possible from the new API. The rain slacked off from a heavy to light intensity. At 1245 hours due to continued excessive rain, the new API (both East and West) Bays began overflowing from the top hatches of and from two overflow spouts (located on the north end of the API).

The Environmental Department/Qualified Individual (QI) was notified at 1320 hours. The QI arrived on site at 1410 hours during the storm event. At the time of QI arrival, response personnel were in the process of simultaneous containment and remedial activities in order to minimize any environmental impact.

At approximately 1600 hrs, a second rain event began due to another thunderstorm cell passing over the facility. At approximately 1830 to 1900 hrs the new API began to overflow in the same manner as described previously due to excessive stormwater. The overflow during this second thunderstorm also lasted for about an hour. The total rainfall during these incidents was about 1.6 inches based on the Process Area rain gauge. The total estimated time of the overflows of both events was approximately two (2) hours.

Under normal conditions, the API can handle a minor storm event. However, during this rain event, the API began to fill to an overflow condition because the rainfall intensity was greater than the design flow for the new API. As the rainfall intensity and flow volume increased during these two events, the process and stormwater quantity exceeded the design capacity of the new API Units causing water to be forced out of the top hatches and of the overflow spouts.

During this storm event, the API overflow was concentrated around the new API and Baker overflow tank containment area due to the increased height of the roadway construction as a result of prior modification activities. The berm that was created due to previous road maintenance separated any overflow coming from the API area from reaching Aeration Lagoon #1. Also, some API overflow went along the backside of the new API into the API overflow Baker frac tank containment area. The overflow was either isolated around the new API area or contained in the API overflow tank containment area. As a result of this storm event, oil or oily sheen was found around the API area and the API overflow tank containment area.

The total volume released to the environment was based on the best engineering methodology available and the information supplied by on-site personnel. The methodology utilized for this determination will be discussed below under a separate category.

II. THE VOLUME OF OVERFLOW and HOW IT WAS DETERMINED- "QUANTITY ESTIMATION AND BEST ENGINEERING METHODOLOGY" (Refer to "API OVERFLOW SUMMARY")

The quantification of the amount of API overflow was determined using various methodologies and Best Engineering Practices available during this event. These methodologies and Best Engineering Practices were used in order to make a reasonable quantification that included such items as conversations with facility personnel, vacuum truck logs, available diagrams or drawings, best approximations or assumptions at the time of the event, and any available data records collected during and after this event. A combination of these methods had to be used in order to make a reasonable determination or estimation of the volumes from the API overflow.

Various engineering principles that were used in order to make a reasonable quantification included material balance (flow in =flow out) in conjunction with basic hydrologic principles. First, an approximation or assumption of the amount of "oil" on the API at any given time was used. The quantity of oil can be exaggerated due to the inability of being able to open the API at any given time in order to ascertain an accurate measurement of its level. This level or quantity was assumed

to be released out of the API at the time of overflow. This assumption probably was an over estimation of the actual quantity of oil that was in the API at the time of overflow and that was actually released. It was assumed that the entire quantity of oil as determined above was actually released from the API. Next, a material balance was used to determine the required flow into and out of the API at the time of the overflow. One of the elements of the material balance requires rainfall and Process Unit run off data in order to ascertain flow input to the API based on hydrologic principles.

It was estimated that a total of 6.6 bbls of oil was discharged to the ground at the termination of the API overflow. Approximately 4.6 bbls of oil was recovered as a result of the vacuum truck remediation during this event. There was approximately 2 bbls that was not recovered or not accounted for in the calculations based on the information available. These values are approximated based on material balance and other engineering principles and are as accurate as the available known information.

Vacuum truck data was used in the determination of oil and oil/water mixture volumes at the time of the overflow. A vacuum truck log was used to determine the amount of oil/water mixture recovered. The amount of oil (percentage) in the API at the time of the overflow was applied to this mixture in order to quantify or estimate the quantity of oil recovered. It was determined that approximately 1320 bbls of the oily/water mixture was recovered from the vacuum truck operation based on the number of loads retrieved and from a known quantity per load. The amount of oil recovered from this operation was found to be approximately 4.6 bbls based on information supplied by the vacuum truck operators, API Area Operator, and best engineering methodology.

A summary of the incident using applicable methodologies for volume calculations are indicated below (Refer to "API Overflow Summary" Spreadsheet as enclosed):

Oty of Oil in API at time of Incident:	1.8 bbls
Oty of Oil from Process Unit at time of Incident:	1.3 bbls
Oty of Oil from Baker Tank Containment:	2.6 bbls
Qty of Oil Transferred to T-105/107:	0.9 bbls
- Qty of Oil Recovered (Vacuum Truck):	- 4.6 bbls
TOTAL (OIL DELEASED to the ENVIRONMENT)	6.6 bbls

TOTAL (OIL RELEASED to the ENVIRONMENT)	6.6 bbls
Qty Oil Recovered (Vacuum Truck)	4.6 bbls
Oil Discharged to the Environment (Oil Not Recovered)	2.0 bbls

The Oil discharged to the environment was based on the calculations from available information and could not be determined at a more accurate value. Operation personnel removed as much oil as possible during the cleanup operation. The remainder of the oil was removed in the clay as part of the remediation project.

III. CLEANUP ACTIVITIES- "REMEDIAL ACTIVITIES/ CLEANUP OPERATIONS": (Refer to "API & AERATION LAGOON DIAGRAM")

Cleanup operations were immediately initiated after the first rain cell passed over the facility in order to minimize the environmental impact. Western Refining recently purchased a vacuum truck for onsite use instead of utilizing outside contractor equipment and their personnel. After the first

rain cell passed over the facility, the vacuum truck was immediately deployed in order to begin vacuuming up any oil/water liquids from the affected areas as a part of initial cleanup efforts.

Maintenance also began soil remediation around the API, Baker Tank, and associated areas by removing approximately 1 to 2 inches of contaminated top soils, any contaminated vegetation, and rock with a back-hoe or shovels as required. Cleanup and remedial activities terminated on September 14, 2009. After completion of all remedial activities, the Refinery Environmental Department proceeded to collect ten (10) core samples of the material in the area of potential contamination.

IV. HAZARDOUS WASTE POTENTIALLY RELEASED TO THE ENVORNMENT- (Refer to "HALL ENVIRONMENT LABORATORY DATA SUMMARY", and "HALL ENVIRONMENTAL LABORATORY DATA REPORTS", and "NMED SOIL SCREENING LEVEL (Table A-1)" as Enclosure)-

Hall Environmental Laboratories analyzed the ten (10) core samples. After remediation of the overflow was completed, samples were collected on September 16, 2009. Final analysis was received on October 8, 2009. The data from these samples were put on an excel spreadsheet in order to provide a comparison of data points in order to compare against the New Mexico Environmental Department- Hazardous Waste Bureau (NMED-HWB) Industrial Soil Screening Levels for Cleanup Operations. The comparison between actual analytical and the Industrial Soil Cleaning Levels as established by the New Mexico Environmental Department- Hazardous Waste Bureau (NMED-HWB), clearly reflect that our soil cleanup was complete and that there was minimal environmental impact. However, as the regulations specify, this cleanup material will by definition, be classified as a Hazardous Waste (Specific and Non-Specific Sources) (K051, F037, F038) for disposal purposes.

V. DEMONSTRATION OF SUSESSFUL SPILL CLEANUP- LABORATORY DATA ANALYSIS (Refer to HALL ENVIRONMENT LABORATORY DATA SUMMARY, and HALL ENVIRONMENTAL LABORATORY DATA REPORTS, and NMED SOIL SCREENING LEVEL (Table A-1) as Enclosure)

A "Sampling Plan" was first devised as directed by the New Mexico Environmental Department-Hazardous Waste Bureau (NMED-HWB) in response to the letter of September 15, 2009. The Environmental Department proceeded to collect ten (10) core samples of the material in the area of potential contamination on September 17, 2009. These ten (10) soil samples were then submitted to Hall Environmental Laboratories to be analyzed for the following parameters: RCI, RCRA Eight (8) Metals, Total Petroleum Hydrocarbon (TPH) using Method 8015B to include Gasoline Range Organics (GRO) and Diesel Range Organics (DRO), Total Volatile Organic Compounds (Total VOC) using Method 8260.In addition, if the DRO was greater that 200 ppm, the lab was instructed to perform semi-volatile organic analysis using Method 8270 as directed by the Agency. Please note that Method 8270 for semi-volatiles was run for all ten (10) samples instead of just the ones with a DRO greater than 200 ppm.

Final data from Hall Environmental Laboratory (date of collection: 9/17/2009) was received on all ten (10) core sample points on October 9, 2009. A Hall Environmental Laboratory Data Summary is enclosed for the Agency's convenience and as matter of reference.

API Overflow Ltr090509.doc

Laboratory data was first put on an Excel Spreadsheet for a more convenient format and comparison. Also, the NMED Soil Screen Levels (Soil Cleanup Levels) for Industrial Facilities (2006) were included on the same spreadsheet. Next, a comparison was performed between the analytical data and the NMED Soil Screen Levels to determine if further remedial action would be required or necessary. Based on this comparison from Hall Laboratory Data and the NMED Soil Screening Cleanup Levels, it was determined that "no further action" or "cleanup efforts" would be necessary or required. After all remediation and sampling was completed, the API area was again covered with clean limestone.

VI. DISPOSAL ACTIVITIES

The soil cleanup material will be shipped off for disposal in a roll-off box as Hazardous Listed Waste (Specific and Non-Specific Sources) (K051, F037, F038). The quantity that was actually remediated during this cleanup was approximately 20 to 30 cubic yards. This material will then be shipped by Rinchem to an approved landfill for proper disposal in accordance with our Oil Conservation Division (OCD) Permit (# GW-032) and in accordance with all applicable Federal, and State regulations.

VII. STEPS TO IMPLEMENT TO ENSURE THAT OVERFLOWS TO API SEPARATOR DO NOT CONTINUE TO OCCUR

All modifications and upgrades to the API area were identified after the spill of June 10, 2009 and completed. Both bays to the API were in service and fully operational at the time of the API overflow on September 5, 2009.

The API under both current and past operations has been subject to various overflow condition during excessive rain events. Western Refining has continually improved the API and surrounding areas in order to minimize possible future occurrences.

The API performance has had overflow issues during the past that may be attributed to several key issues. Some of these performance issues are as follows:

Mechanical Issues:

- 1. Level Indicator Failure- controls the back-up pumps at the API outlet
- 2. Pump Issues- cavitations, loss of suction, or blocked lines on the discharge side of the pump

Forces of Nature: (Force Majeure)

Unannounced storm events that inundate the API System; i.e. storm surges (flow into the API System) exceeds the design capacity of the API

The first two (2) mechanical issues have been resolved. All overflows are routed to a Baker Tank to be pumped out via an on-site vacuum truck. The aqueous portion of this material is later sent back to the sewer system which eventually will be rerouted back through the API System. At the time of the September 5, 2009API overflow, all systems were operating at optimal capacity.

Force of Nature or a Force Majeure is problematic for our current API System due to the design flow characteristics. The API (both East and West Bays) have an accumulated rating of 500 gpm (design performance). During an excessive rain event or storm surge such as the one that occurred

API Overflow Ltr090509.doc

on September 5, 2009, the API was inundated with stormwater that exceeded its design capacity. Therefore, the API began overflowing.

Western Refining is in the design phase of a new "Stormwater Diversion Project" in order to provide relief from unexpected or inundated stormwater discharges to the API System. This project will be composed of two (2) Stormwater Diversion Tanks (T-27 and T-28). This new system will connect directly into the current stormwater system in order to divert stormwater away from the Old API into Tanks (T-27 and T-28). A new twenty-four inch (24") pipe will connect the old system to the Stormwater Diversion Tanks (T-27 and T-28) The stormwater will be pumped from the diversion tanks (T-27 and T-28) to the new API.

If you require additional information concerning this matter, please contact me at (505) 722-0258.

Sincerely,

Beck Larsen-CHMM, REM Environmental Engineer

Western Refining (Southwest) (Gallup Refinery)

Enc: API & Aeration Lagoon Area Diagram

OCD (Release Notification and Corrective Action, C-141 (Initial) & Final Reports

NMED Correspondence (letter of September 15, 2009), (e-mail of September 10, 2009)

API Overflow Summary for September 5, 2009

API Sampling Plan, Hall Environmental Laboratory Data Summary, Hall Environmental

Laboratory Data Reports (Sampled on September 16, 2009)

NMED Soil Screening Levels (Table A-1)

Cc: Mr. Mark Turri, Western Refining (Southwest), Refinery Manager

Mr. Ed Riege, Western Refining (Southwest), Environmental Manager)

File



Rec 109 NEW MEXICO A 1 6 ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

BILL RICHARDSON Governor

DIANE DENISH Lieutenant Governor 2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505-6303 Phone (505) 476-6000 Fax (505) 476-6030

www.nmenv.state.nm.us



RON CURRY Secretary

JON GOLDSTEIN Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 15, 2009

Mr. Ed Riege Environmental Superintendent Western Refining, Southwest Inc., Gallup Refinery Route 3 Box 7 Gallup, New Mexico 87301 Mr. Beck Larsen Environmental Engineer Western Refining, Southwest Inc., Gallup Refinery Route 3 Box 7 Gallup, New Mexico 87301

SUBJECT:

FORMAL REPORT SUBMITTAL TO THE

SEPTEMBER 5, 2009 API SEPARATOR OVERFLOW

WESTERN REFINING, SOUTHWEST INC., GALLUP REFINERY

EPA ID NO. NMD000333211

HWB-GRCC-MISC

Dear Messrs Riege and Larsen:

The New Mexico Environment Department (NMED) requires Western Refining Southwest Inc., Gallup Refinery (the Permittee) to submit a formal report summarizing the events and actions taken to address the API separator overflow which occurred on September 5, 2009. This spill released K051, F038, and potentially D018 hazardous wastes into the environment. As a reminder, the Permittee must comply with Section II.F.2 (Twenty-four Hour Reporting) of the Post-Closure Care Permit which can be found using the following link: http://www.nmenv.state.nm.us/hwb/giant/GRC-C%20PCC%20PERMIT.pdf.

The Permittee met the 24-hour oral reporting requirements by contacting Steve Connolly, the NMED Incident Response Coordinator. When reporting all future spills, the facility may continue to contact Steve Connolly; however, the Permittee must also contact the Project Leader for Gallup (Hope Monzeglio) of the Hazardous Waste Bureau.

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

State of New Mexico Energy Minerals and Natural Resources

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

Submit 2 Copies to appropriate

District Office in accordance with Rule 116 on back side of form

Form C-141

Revised October 10, 2003

Release Notification and Corrective Action **OPERATOR** Initial Report Final Report Name of Company Western Refining-Southwest Contact Beck Larsen Telephone No.(505) 722-0258 Address I-40/Exit 39, Jamestown, NM 87347 Facility Name Gallup Refinery Facility Type Refinery Mineral Owner Lease No. Surface Owner LOCATION OF RELEASE Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County 15W McKinley 28 15N **Latitude** 35° 29′030′′ **Longitude** 108° 24′040′′ NATURE OF RELEASE Type of Release Volume of Release Volume Recovered 6.6 bbls (oil) API Overflow 5.5 bbls (oil) (estimated) Source of Release API UNIT Date and Hour of Occurrence Date and Hour of Discovery 9/05/2009; 1215 hrs / 1830 hrs 9/05/2009; 1215 hrs / 1830 hrs Was Immediate Notice Given? If YES, To Whom? OCD & NMED By Whom? Beck Larsen Date and Hour 9/06/2009 / 1750 hrs Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* On Saturday, September 5, at about 1200 to 1230 hrs, a heavy rain and thunderstorms passed over the facility. It began raining heavily for about 20 to 30 minutes. At 1220 hrs the new API began to overflow into the Baker Frac Tank. The rain slacked off from a heavy to a moderate to light. At 1245 hrs the new API (East and West) Bays began to overflow due to the excessive rain. The API continued to overflow for about an hour. At 1800 hrs once again, a second rain event began due to a secondary thunderstorm cell passing over the facility. The new API began to overflow a second time for an hour due to excess stormwater. The total overflow for both events was approximately 2 hours. A total rainfall for both events was approximately 1.6 inches. Describe Area Affected and Cleanup Action Taken.* Cleanup efforts began immediately on September 5, 2009 during the rain event using a vacuum truck. Maintenance and Contract personnel began cleaning up the any aqueous/oily portion of overflow contamination and any contaminated soil and rock debris surrounding the API area. Personnel conduct cleanup of areas such as depressions or other conveyances adjacent to the API area that any contamination may or did spread. After immediate cleanup efforts were completed, all contaminated material were put into a roll-off box to be tested (analyzed by an outside lab), prior to shipment off site for disposal to an approved facility. Contract personnel delivered and spread new gravel and rock material around the API area. Final cleanup of this area was completed on or about September 11-14, 2009. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor:

Printed Name: Beck Larsen

Title: Environmental Engineer		Approval Date:	Expiration D	Pate:
E-mail Address: Thurman.larser	n@wnr.com	Conditions of Approval:		Attached
Date: 10/16/2009	Phone: (505) 722-0258			

* Attach Additional Sheets If Necessary

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

Facility Name Gallup Refinery

Surface Owner

State of New Mexico Energy Minerals and Natural Resources

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

Revised October 10, 2003 Submit 2 Copies to appropriate District Office in accordance

Form C-141

with Rule 116 on back side of form

Release Notification and Corrective Action OPERATOR Initial Report Final Report Name of Company Western Refining-Southwest Contact Beck Larsen Address I-40/Exit 39, Jamestown, NM 87347 Telephone No.(505) 722-0258 Facility Type Refinery Mineral Owner Lease No.

LOCATION OF RELEASE Feet from the North/South Line Feet from the East/West Line Unit Letter Section Township Range County 15W 28 15N McKinley

Latitude 35° 29′030′′ **Longitude** 108° 24′040′′

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
API Overflow	6.5 bbls (oil)	5.5 bbls (oil) (estimated)
Source of Release API UNIT	Date and Hour of Occurrence	Date and Hour of Discovery
	9/05/2009; 1215 hrs / 1830 hrs	9/05/2009; 1215 hrs / 1830 hrs
Was Immediate Notice Given?	If YES, To Whom?	
	OCD & NMED	
By Whom? Beck Larsen	Date and Hour 9/06/2009 / 1750 hr.	S
Was a Watercourse Reached?	If YES, Volume Impacting the Wat	ercourse.
☐ Yes ☒ No		
If a Watercourse was Impacted, Describe Fully.*		
•.		
Describe Cause of Problem and Remedial Action Taken.*	7 (4)	
	aita manganual basan bumassina 6	iltone and wain have in management on form
On Saturday, September 5 at approximately 1143 hrs, Off	-site personnel began bypassing r	mers and weir box in preparation for a

possible rain event. At about 1200 to 1230 hrs, Saturday, September, 5, 2009, a heavy rain and thunderstorms passed over the facility. It began raining heavily for about 20 to 30 minutes. At 1220 hrs the new API began to overflow into the Baker Frac Tank. The API Operators began pumping from the new API to T-105/T-107 in order to remove as much water as possible from the API. The rain slacked off from a heavy to a moderate to light. At 1245 hrs the new API (East and West) Bays began to overflow due to the excessive rain. The API continued to overflow for about an hour. At 1800 hrs a second rain event began due to a secondary thunderstorm cell passing over the facility. Once again, the new API began to overflow a second time for an hour due to excess stormwater. The total overflow for both events was approximately 2 hours. A total rainfall for both events was approximately 1.6 inches.

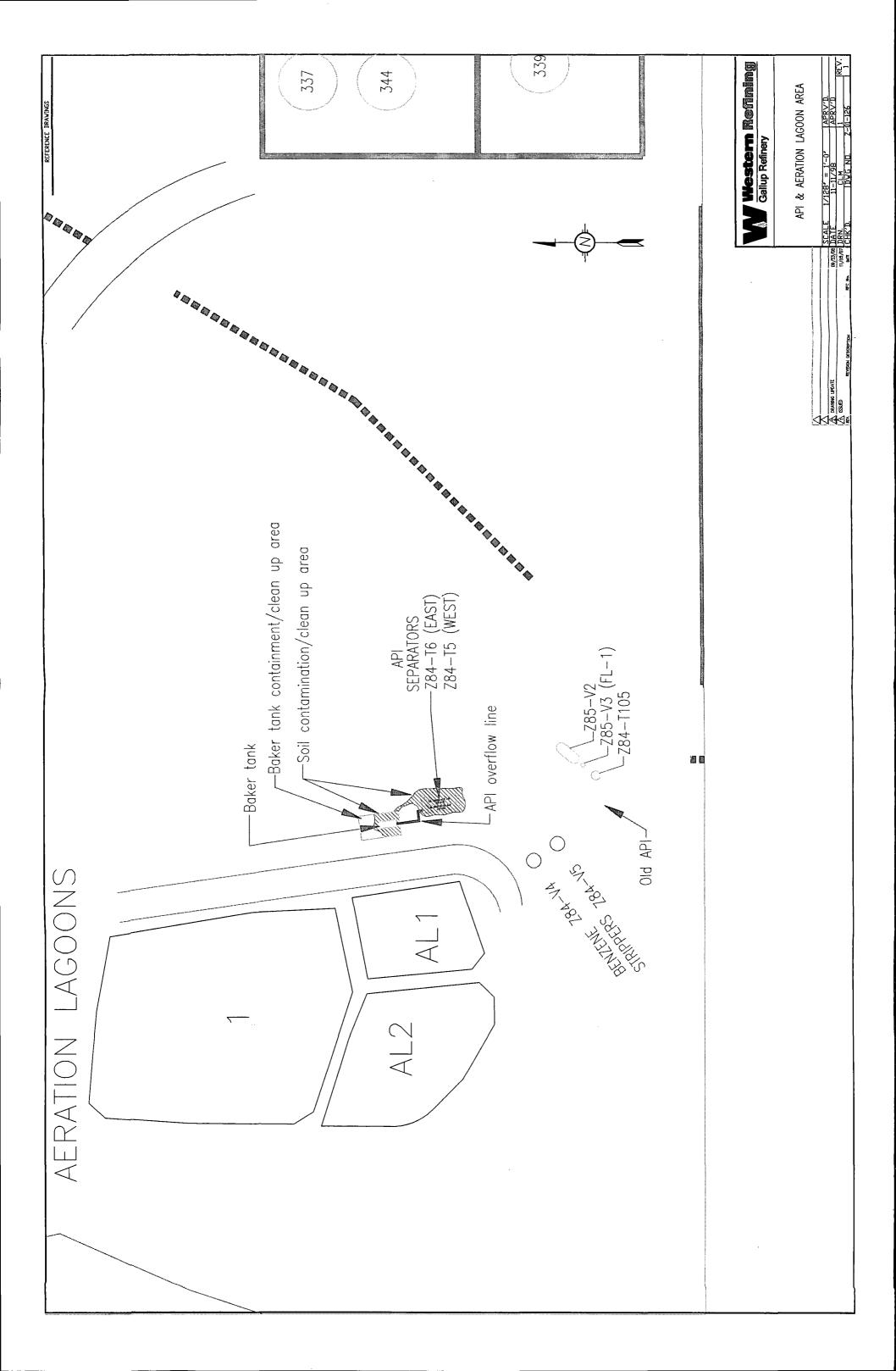
Describe Area Affected and Cleanup Action Taken.*

Cleanup efforts began immediately on September 5, 2009 during the rain event using a vacuum truck. Maintenance and Contract personnel began cleaning up the any aqueous/oily portion of overflow contamination and any contaminated soil and rock debris surrounding the API area. Personnel conduct cleanup of areas such as depressions or other conveyances adjacent to the API area that any contamination may or did spread. After immediate cleanup efforts were completed, all contaminated material were put into a roll-off box to be tested (analyzed by an outside lab), prior to shipment off site for disposal to an approved facility. Contract personnel delivered and spread new gravel and rock material around the API area. Final cleanup of this area was completed on or about September 10, 2009.

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

Signatura /		OIL CON	SERVATION	DIVISION
Printed Name: Beck Larsen	and the second	Approved by District Supervis	sor:	
Title: Environmental Engineer		Approval Date:	Expiration l	Date:
E-mail Address: Thurman.lars	en@wnr.com	Conditions of Approval:		Attached
Date: 7/21/2009	Phone: (505) 722-0258			

^{*} Attach Additional Sheets If Necessary



Larsen, Thurman

From: Monzeglio, Hope, NMENV [hope.monzeglio@state.nm.us]

Sent: Thursday, September 10, 2009 4:02 PM

To: Larsen, Thurman; Riege, Ed

Cc: Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD

Subject: 9_5_09 API Overflow

Beck

This e-mail is to address the September 5, 2009 API separator overflow. The hazardous wastes released during the API separator overflow include K051, F038, and potentially D018. In addition to the C-141 form, Gallup must also submit a formal report. The formal report must describe the incident (how it occurred), describe all clean up actions, discuss where contaminated soils were stockpiled, explain what actions were completed to demonstrate that cleanup is complete, identify where all waste was or will be disposed, discuss how Gallup determined the volume of the release, and include what actions Gallup will be implementing to ensure overflows to the API do not continue to occur. NMED will follow up this e-mail with a written letter. Gallup must comply with Section II.F.2 (Twenty-four Hour Reporting) of the Post-Closure Care Permit which can be found using the following link: http://www.nmenv.state.nm.us/hwb/giant/GRC-C%20PCC%20PERMIT.pdf

Please let me know if you have any questions.

Hope

Hope Monzeglio Environmental Specialist New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, BLDG 1 Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

New Mexico Environment Department Hazardous Waste Bureau

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Larsen, Thurman

From: Monzeglio, Hope, NMENV [hope.monzeglio@state.nm.us]

Sent: Tuesday, September 15, 2009 3:32 PM

To: Larsen, Thurman

Cc: Dorsey, Alvin; Cobrain, Dave, NMENV

Subject: RE: API Overflow on September 5, 2009 - Sampling & Analysis / CONFIRMATION SAMPLING

Beck

Item 1 Roll-off Containers - NMED has no changes.

Item 2 and Item 3 - NMED is assuming these are confirmation samples to show the contamination has been removed. Collect these samples from 0 to 6 inches below ground surface. The samples must be analyzed using EPA Method 8260 (totals, volatile organic compounds), gasoline range organics and diesel range organics (DRO) extended using EPA method 8015B, and RCRA 8 metals. If DRO is greater than 200 ppm, the sample must also be analyzed for EPA Method 8270 (semi-volatile organics).

Let me know if you have additional questions.

Hope

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Tuesday, September 15, 2009 1:07 PM

To: Monzeglio, Hope, NMENV

Cc: Dorsey, Alvin

Subject: API Overflow on September 5, 2009 - Sampling & Analysis / CONFIRMATION SAMPLING

Dear Hope,

As per our discussion this morning, we will be sampling the API overflow areas, API Overflow Tank Containment Area, and the roll-off box as described below:

Potential Sampling Areas

1. ROLL-OFF CONTAINERS-

We are planning to collect one (1) core sample in the roll-off box in the most contaminated area of the remediated material. The sample will be collected from about 1 foot depth. We are going to have it tested for the following: RCI, TCLP Voas (Method 1311/8260), and TPH (Method 8015B). (Total 1 core sample collected at 1 foot depth)

2. API AREA:

We are also planning to collect 2 core samples (approximately 1 foot in depth) each on the East and 2 core samples West sides of the API each approximately 12 to 15 feet apart. Also, we are planning to collect two (2) additional samples North and South of the API; one (1) on the North side (near center), one (1) on the South side (near center). Again, we sill be testing for RCI, TCLP Voas (Method 1311/8260), and TPH (Method 8015B). (Total 6 core samples)

3. API OVERFLOW (BAKER FRAC) TANK CONTAINMENT AREA:

We are also planning to collect three (3) additional samples around the Baker Frac Tank Containment Area: one (1) on the South side, one (1) on the East side, and one (1) on the West. Again, we will be testing for RCI, TCLP Voas (Method 1311/8260), and TPH (Method 8015B). (Total 3 core samples)

TOTAL SAMPLES COLLECTED: Total- 10 Core Samples

Please let me know if these analysis and sample points will be sufficient for NMED or if NMED required additional testing or sample point collection. Please let me know as soon as you can so that I can schedule the sample collection.

Sincerely,

Beck Larsen

Page 1 of 3

Larsen, Thurman

From:

Rajen, Gaurav

Sent:

Friday, October 16, 2009 6:40 AM

To:

Riege, Ed; Larsen, Thurman

Subject: FW: API separator overflows

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Thursday, October 15, 2009 4:08 PM

Fo: Rajen, Gaurav

Cc: Cobrain, Dave, NMENV

Subject: RE: API separator overflows

₹ai

Thanks for the information, I will let you know if I have any additional questions.

Hope

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Thursday, October 15, 2009 4:04 PM

To: Monzeglio, Hope, NMENV

Cc: Cobrain, Dave, NMENV; Riege, Ed; Larsen, Thurman

Subject: API separator overflows

Dear Hope:

Sorry for the delayed response but I have Wednesdays off and I had an environmental software engineer onsite today. Key reasons in the past were - 1) failure of level indicators within the API separator – these indicators controlled when a back-up pump at the API separator outlet also turned on; 2) cavitation, loss of suction, or line blockage on the pumps that empty the API separator and send liquids to the strippers. All problems with level controllers and the pumps have been resolved. In the present circumstances, all overflows are routed to a temporary Baker Tank that is later pumped out by a vacuum truck which releases the liquids back into the sewer system.

In 2009 there have been two storm surges that swamped the old API separator's capacity (this serves as a temporary storm water holding system) and stormwater sent to the new API separator caused it to overflow onto the ground from its sealed cover. One of these incidents occurred when one of the two bays was out of service for maintenance. I hope this helps.

Best regards,

Raj

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Tuesday, October 13, 2009 2:23 PM

To: Rajen, Gaurav

Cc: Cobrain, Dave, NMENV

Subject:

Raj

Can you tell me what events at the refinery trigger the API separator to overflow?

Thanks

10/16/2009

API OVERFLOW SUMMARY (September 5, 2009)

APIAREA			
API Overflow Volume (O/W) MIXTURE=	239.142554 bbls	(Full Capacity	(Full Capacity of API at time of Incident)
API Oil/Water Ratio for API=	0.00744048		
Qty of OIL In API at Time of Incident=	1.8 bbls	11	75.6 gallons
Qty of Water in API at Time of Incident=	237.3 bbls	ii	9966.6 gallons
FLOW FLOW VOLUME FROM PROCESS UNIT SLAB			
Qty of O/W FROM PROCESS UNIT SLAB=	16179.2637 bbls		
O/W Ratio for Process Unit Flow=	0.00348016		

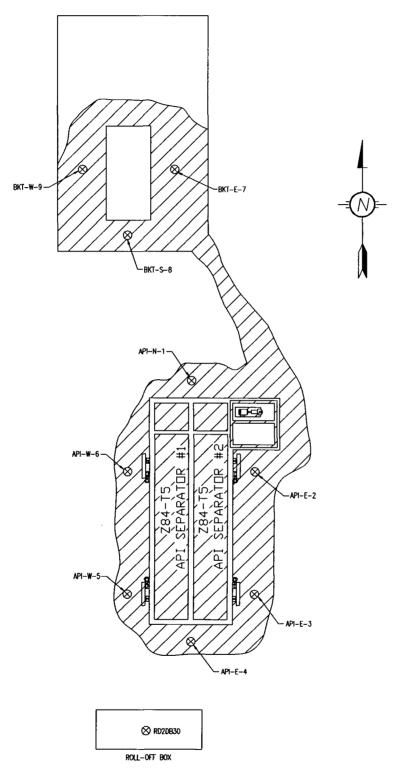
TEGAN FLOW VOLCIME TROCKESS CIVIL SEAD				
Qty of O/W FROM PROCESS UNIT SLAB=	16179.2637 bbls			
O/W Ratio for Process Unit Flow=	0.00348016			
QTY of OIL from PROCESS UNIT at Time of Incident=	1.3 bbls	11	54.6 gallons	
QTY of WATER from PROCESS UNIT at Time of Incident=	16178.0 bbls	II	679476.0 gallons	************
BAKER TANK CONTAINMENT AREA				
Qty of O/W Mixture Recovered	354.96801 bbls			
O/W Ratio for Baker Tank Containment Area=	0.00744048			
QTY of OIL from BAKER TANK CONTAINMENT AREA at Time of Incident=	2.6 bbls	H	109.2 gallons	

WILL OF WATER HOTEL BAREN LAW CONTAINMENT AND ALTHE OF HIGHERIT	352.4 DDIS	•	14000.0 gallotis
TRANSFER TANK (T-105/T-107)			
Qty of O/W Mixture Transferred to T-105 (Based on T-107 Gauge)	117.000 bbls		
O/W Ratio T-105	0.00744048		
QTY of Oil Transferred to T-105=	elde 6.0	11	37.8 gallons
QTY of Water Transferred to T-105=	116.1 bbls	IJ	4876.2 gallons

VACUOIM IRUCK RECOVERY			
	1320 bbis	п	55440 gallons
	0.00348016	н	
	4.6 bbls	Н	193.2 gallons
	1315.4 bbls	11	55246.8 gallons

TOTAL VOLUMES	iO (sldd) liO	l (gal)	Water (bbls)	
API AREA		75.6	237.3	
FLOW FLOW VOLUME FROM PROCESS UNIT SLAB	1.3	54.6	16178.0	
BAKER TANK CONTAINMENT AREA	2.6	109.2	352.4	
TRANSFER TANK (T-105/T-107)		37.8	116.1	
VACUUM TRUCK RECOVERY (-)	4.6	193.2	1315.4	55246.8
Total	6.6	277.200	16883.8	709119.6
Recovered	4.6	193.200	1315.4	55246.8
Qty Discharged (Not Recovered or Not Accounted)		84.000	15568.4	653872.8
Water Balance to Process Drain		٠	15568.4	653872.8

NOTE: The following calculations are based on the Best Engineering Practices using Material Balance Techniques, Manning Calculations in order to determine Volumes, flows, etc. The values are over extimated based on all known available information.



SAMPLING PLAN

(API OVERFLOW) ON 09/05/09

HALL ENVIRONMENTAL LABORATORY DATA SUMMARY

(API Spill on 09/05/09)

Sample ID:

⊒ S																-				-		:	1 1	; ;		í	1	 .			· -	
CLEANUP	0 (0 0	0 7.	0.K.	0 0 K K		0.K.	0.K.	0 .X	0	Y.	O (0	O.K		O.K.				designation of the contract of		O.K.	į	-	0.K		2			5	0.K.	
NMED SOIL SCREENING LEVELS (mg/Kg)	₹X	Y Y	N/A	N/A	Y Z		17.7	100000	564	100000	800	100000	268	268		252	269	69.2	300			62.1	:	9.09	82			26500	20900	0000	300	
MAXIMUM CONTAMINATION FOUND	11000	370	0	8.58	00	ı	0	299	0	51	9	0	0	0		0.68	10	3.9	13	20	34	1.6	0.64	0.51	13	•		3.2	7 7	r E	16.	
	960		>200	7.59				364		=======================================																						
BKT-S-8 BKT-W-9 RO 20B30	180	33 Y	>200	8.55				462		O						0.68	0.67								1.1							
BKT-S-8	1000	370	>200	8.17				483		12	9						7.2	3.3							13			,		10	2	
BKT-E-7	150	79	>200	7.61				313		7							1.3	9.0							2.2							
	370	160	>200	8.02				389		7																						
API-W-5	029		>200	8.02				410		4																						
	0089	0/9	>200	8.58				459	i	51							0.68	0.62			1.6							Č	1.7	<u>,</u>		
API-E-3	470		>200					366		Q										3.2	4.6											
API-N-1 API-E-2 API-E-3 API-E-4	11000	360	>200					599		20					-		10	3.9	13	20	34	1.6	0.64	0.51			•	3.2	2 7	7 2	19	
API-N-1	300		>200	7.59				524	,	39																						
Units	mg/Kg	mg/Kg mg/Ka	deg F	s.u.	mg/Kg mg/Kg		mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg		mg/Kg				mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg		7	mg/Kg	mg/kg mg/kg	ma/Ka	mg/Kg))
ANALYTES	DRO	GRO	Ignibility	Corrosivity	Reactivity (CN) Reactivity (S)	METALS		Ва	S.	ڗڹ	ъ Б	f G	. Se	Ag	VOLATILES	Toluene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Naphthlene	1-Methylnaphthalene	2-Methylnaphthalene	n-butylbenzene	n-propylbenzene	sec-butylbenzene	Xylene, Total		SEMIVOLATILES	Fluorene	Prienanimene Dyrana	2-Methylnaphthalene	Naphthlene	

NOTE: BLANKS indicate a Non-detect (ND).

"Light Blue" color area highlights (DRO" REQUIRED); IF DRO> 200 ppm, 8270 method was to be run. However, Method 8270 (Semi-volatiles was run on ALL sample points).

"Yellow" color area highlights the maximum contaminant for a particular sample ID above

"Green" highlights the NMED Soil Screen Levels (mg/Kg) for Industrial Facilities for a particular contaminant

"Green" (CLEANUP STATUS) indicates that cleanup was sufficient based on NMED Soil Screening Levels for Industrial Facilities.



COVER LETTER

Thursday, October 08, 2009

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: API Overflow Sample Points

Dear Thurman B. Larsen:

Order No.: 0909356

Hall Environmental Analysis Laboratory, Inc. received 10 sample(s) on 9/17/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

For Andy Freeman, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Lab Order:

0909356

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable or had high recovery due to sample dilution or matrix interferences.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

0909356

Client Sample ID: API-N-1

Lab Order: API Overflow Sample Points Collection Date: 9/16/2009 9:15:00 AM Date Received: 9/17/2009

Project: Lab ID:

0909356-01

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	300 /	100		mg/Kg	10	9/23/2009 11:30:27 AM
Motor Oil Range Organics (MRO)	ИN	500		mg/Kg	10	9/23/2009 11:30:27 AM
Surr: DNOP	0	61.7-135	s	%REC	10	9/23/2009 11:30:27 AM
EPA METHOD 8015B: GASOLINE R	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	9/24/2009 4:30:37 AM
Surr: BFB	85.2	65.9-118		%REC	5	9/24/2009 4:30:37 AM
EPA METHOD 8270C: SEMIVOLATII	ES					Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Aniline	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Anthracene	ND	1.0		mg/Kg	, 1	10/6/2009 5:41:44 PM
Azobenzene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1	10/6/2009 5:41:44 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 5:41:44 PM
Benzyl alcohol	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Bis(2-chloroethoxy)methane	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Bis(2-chloroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 5:41:44 PM
4-Bromophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Butyl benzyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Carbazole	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
4-Chloro-3-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 5:41:44 PM
4-Chloroaniline	ND	2.5		mg/Kg	1	10/6/2009 5:41:44 PM
2-Chloronaphthalene	ND	1.3		mg/Kg	1	10/6/2009 5:41:44 PM
2-Chlorophenol	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Chrysene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Di-n-butyl phthalate	ND	2.5		mg/Kg	1	10/6/2009 5:41:44 PM
Di-n-octyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Dibenz(a,h)anthracene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
Dibenzofuran	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
1,2-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
1,3-Dichlorobenzene	ND	1.0		mg/Kg	1.	10/6/2009 5:41:44 PM
1,4-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 5:41:44 PM
3,3'-Dichlorobenzidine	ND	1.3		mg/Kg	1	10/6/2009 5:41:44 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Page 1 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-01

Client Sample ID: API-N-1

Collection Date: 9/16/2009 9:15:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLAT	TILES				Analyst: JD0
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Dimethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	10/6/2009 5:41:44 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 5:41:44 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 5:41:44 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
Fluoranthene	ND	1.3	mg/Kg	1	10/6/2009 5:41:44 PM
Fluorene	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Hexachlorobutadiene	. ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 5:41:44 PM
Isophorone	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
2-Methylnaphthalene	ND	1.3	mg/Kg	1	10/6/2009 5:41:44 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
3+4-Methylphenol	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
4-Nitroaniline	ND	1.3	mg/Kg	1	10/6/2009 5:41:44 PM
Nitrobenzene	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
2-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
4-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Pentachlorophenol	ND	2.0	mg/Kg	1	10/6/2009 5:41:44 PM
Phenanthrene	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Phenol	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Pyrene	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 5:41:44 PM
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 5:41:44 PM
Surr: 2,4,6-Tribromophenol	50.2	35.5-141	%REC	1	10/6/2009 5:41:44 PM
Surr: 2-Fluorobiphenyl	42.9	30.4-128	%REC	1	10/6/2009 5:41:44 PM
Surr: 2-Fluorophenol	32.8	28.1-129	%REC	1 .	10/6/2009 5:41:44 PM
Surr: 4-Terphenyl-d14	37.3	34.6-151	%REC	1	10/6/2009 5:41:44 PM
Surr: Nitrobenzene-d5	43.2	26.5-122	%REC	1	10/6/2009 5:41:44 PM
Surr: Phenol-d5	34.2	37.6-118	S %REC	1	10/6/2009 5:41:44 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Client Sample ID: API-N-1

Collection Date: 9/16/2009 9:15:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Matrix: SOIL

0909356-01 Lab ID: Analyses Result PQL Qual Units DF Date Analyzed **EPA METHOD 8270C: SEMIVOLATILES** Analyst: JDC

EPA METHOD 8270C: SEMIVOLATILES	5				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Toluene	NĐ	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Ethylbenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
1,2,4-Trimethylbenzene	ND	0.50	m g/K g	10	9/18/2009 11:10:28 PM
1,3,5-Trimethylbenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/16/2009 11:10:28 PM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Naphthalene	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
1-Methylnaphthalene	ND	2.0	mg/Kg	10	9/18/2009 11:10:28 PM
2-Methylnaphthalene	ND	2.0	mg/Kg	10	9/18/2009 11:10:28 PM
Acetone	ND	7.5	mg/Kg	10	9/18/2009 11:10:28 PM
Bromobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Bromoform	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Bromomethane	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
2-Butanone	ND	5.0	mg/Kg	10	9/18/2009 11:10:28 PM
Carbon disulfide	ND	5.0	mg/Kg	10	9/18/2009 11:10:28 PM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
Chlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Chloroethane	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
Chloroform	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Chloromethane	ND	0:50	mg/Kg	10	9/18/2009 11:10:28 PM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
4-Chlorotoluene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	- 9/18/2009 11:10:28 PM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Dibromomethane	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
Dichlorodifluoromethane	ND	0.50	m g/K g	10	9/18/2009 11:10:28 PM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/18/2009 11:10:28 PM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/18/2009 11:10:28 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-01

Client Sample ID: API-N-1

Collection Date: 9/16/2009 9:15:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DAM
Hexachlorobutadiene	ND	1.0		mg/Kg	10	9/18/2009 11:10:28 PM
2-Hexanone	ND	5.0		mg/Kg	10	9/18/2009 11:10:28 PM
Isopropylbenzene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
4-isopropyltoluene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
4-Methyl-2-pentanone	ND	5.0		mg/Kg	10	9/18/2009 11:10:28 PM
Methylene chloride	ND	1.5		mg/Kg	10	9/18/2009 11:10:28 PM
n-Butylbenzene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
n-Propylbenzene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
sec-Butylbenzene	ND	0.50		-mg/Kg	10	9/18/2009 11:10:28 PM
Styrene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
tert-Butylbenzene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
1,1,1,2-Tetrachloroethane	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
1,1,2,2-Tetrachloroethane	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
Tetrachloroethene (PCE)	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
trans-1,2-DCE	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
trans-1,3-Dichloropropene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
1,2,3-Trichlorobenzene	ND	1.0		mg/Kg	10	9/18/2009 11:10:28 PM
1,2,4-Trichlorobenzene	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
1,1,1-Trichloroethane	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
1,1,2-Trichloroethane	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
Trichloroethene (TCE)	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
Trichlorofluoromethane	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
1,2,3-Trichloropropane	ND	1.0		mg/Kg	10	9/18/2009 11:10:28 PM
Vinyl chloride	ND	0.50		mg/Kg	10	9/18/2009 11:10:28 PM
Xylenes, Total	ND	1.0		mg/Kg	10	9/18/2009 11:10:28 PM
Surr: 1,2-Dichloroethane-d4	95.1	84-111		%REC	10	9/18/2009 11:10:28 PM
Surr: 4-Bromofluorobenzene	98.6	89.5-108		%REC	10	9/18/2009 11:10:28 PM
Surr: Dibromofluoromethane	89.4	90.6-123	s	%REC	10	9/18/2009 11:10:28 PM
Surr: Toluene-d8	102	76.6-106		%REC	10	9/18/2009 11:10:28 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-001

Client Sample ID: 0909356-01B; C, API-N-1

Report Date: 09/24/09

Collection Date: 09/16/09 09:15

DateReceived: 09/21/09

Matrix: Soil

Analyses	Result	Units	Quelifiers	ĦĻ	OCT MOT	Method	Analysis Date / By
IGNITABILITY Flash Point (Ignitability)	>200°	• F		30		Motorwa	09/22/09 11:007 pwc
CORROSIVITY pH of Soll and Waste	7.:59	∵ś₁u.		0.10		SW9045D	09/24/09 10:007 cir
REACTIVITY Cyanide, Reactive Sulfide, Reactive	ND ND	mg/kg mg/kg		0,05 20	250 500	SW846 Ch 7 SW846 Ch 7	09/23/09 10:13 / kjp 09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846 Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silver	ND 524 ND 39 ND ND ND	mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg mg/kg		5, 5, 1, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5, 5,		SW6010B SW6010B SW6010B SW6010B SW6010B SW7471A SW6020 SW6020	09/23/09 15:52/1a0 09/23/09 15:52/1a0 09/22/09.22:32/1a0 09/22/09:22:32/1ao 09/22/09:22:32/1ao 09/22/09:13:15/1age 09/23/09:18:53/1aje

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-02

Client Sample ID: API-E-2

Collection Date: 9/16/2009 9:25:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	11000	500		mg/Kg	50	9/23/2009 4:51:28 PM
Motor Oil Range Organics (MRO)	ND	2500		mg/Kg	50	9/23/2009 4:51:28 PM
Surr: DNOP	. 0	61.7-135	S	%REC	50	9/23/2009 4:51:28 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	360	. 100		mg/Kg	20	9/22/2009 11:26:11 PM
Surr: BFB	173	65.9-118	S	%REC	20	9/22/2009 11:26:11 PM
EPA METHOD 8270C: SEMIVOLATIL	.ES					Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Aniline	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Anthracene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Azobenzene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
Benzyl alcohol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Bis(2-chloroethoxy)methane	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Bis(2-chloroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
4-Bromophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Butyl benzyl phthalate	ND	1.0		mg/Kg	1 .	10/6/2009 6:11:17 PM
Carbazole	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
4-Chloro-3-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
4-Chloroaniline	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
2-Chloronaphthalene	ND	1.3		mg/Kg	1	10/6/2009 6:11:17 PM
2-Chlorophenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Chrysene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Di-n-butyl phthalate	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
Di-n-octyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Dibenz(a,h)anthracene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Dibenzofuran	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
1,2-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
1,3-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
1,4-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
3,3'-Dichlorobenzidine	ND	1.3		mg/Kg	1	10/6/2009 6:11:17 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Project:

API Overflow Sample Points

Lab ID:

0909356-02

Client Sample ID: API-E-2

Collection Date: 9/16/2009 9:25:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Quai	Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLATI	LES		**************************************			Analyst: JD0
Diethyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Dimethyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
2,4-Dichlorophenol	ND	2.0		mg/Kg	1	10/6/2009 6:11:17 PM
2,4-Dimethylphenol	ND	1.5		mg/Kg	1	10/6/2009 6:11:17 PM
4,6-Dinitro-2-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
2,4-Dinitrophenol	ND	2.0		mg/Kg	1	10/6/2009 6:11:17 PM
2,4-Dinitrotoluene	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
2,6-Dinitrotoluene	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
Fluoranthene	ND	1.3		mg/Kg	1	10/6/2009 6:11:17 PM
Fluorenė	3.2	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
Hexachlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Hexachlorobutadiene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Hexachlorocyclopentadiene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Hexachloroethane	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Indeno(1,2,3-cd)pyrene	ND	1.3		mg/Kg	1	10/6/2009 6:11:17 PM
Isophorone	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
2-Methylnaphthalene	73	13		mg/Kg	10	10/7/2009 1:26:48 PM
2-Methylphenol	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
3+4-Methylphenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
N-Nitrosodi-n-propylamine	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
N-Nitrosodiphenylamine	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Naphthalene	16	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
2-Nitroaniline	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
3-Nitroaniline	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
4-Nitroaniline	ND	1.3		mg/Kg	. 1	10/6/2009 6:11:17 PM
Nitrobenzene	ND	2.5		m g /Kg	1 .	10/6/2009 6:11:17 PM
2-Nitrophenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
4-Nitrophenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Pentachlorophenol	. ND	2.0		mg/Kg	1	10/6/2009 6:11:17 PM
Phenanthrene	20	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Phenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Pyrene	4.1	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Pyridine	ND	2.5		mg/Kg	1	10/6/2009 6:11:17 PM
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
2,4,5-Trichtorophenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
2,4,6-Trichlarophenol	ND	1.0		mg/Kg	1	10/6/2009 6:11:17 PM
Surr: 2,4,6-Tribromophenol	0	35.5-141	S	%REC	1	10/6/2009 6:11:17 PM
Surr: 2-Fluorobiphenyl	72.8	30.4-128		%REC	1	10/6/2009 6:11:17 PM
Surr: 2-Fluorophenol	· 39.1	28.1-129		%REC	1	10/6/2009 6:11:17 PM
Surr: 4-Terphenyl-d14	77.4	34.6-151		%REC	1	10/6/2009 6:11:17 PM
Surr: Nitrobenzene-d5	106	26.5-122		%REC	1	10/6/2009 6:11:17 PM
Surr: Phenol-d5	51.4	37.6-118		%REC	1	10/6/2009 6:11:17 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Collec

Client Sample ID: API-E-2

Project:

API Overflow Sample Points

Collection Date: 9/16/2009 9:25:00 AM Date Received: 9/17/2009

Lab ID:

0909356-02

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Toluene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Ethylbenzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,2,4-Trimethylbenzene	10	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,3,5-Trimethylbenzene	3.9	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Naphthalene	13	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
1-Methylnaphthalene	20	2.0	mg/Kg	10	9/18/2009 11:38:36 PM
2-Methylnaphthalene	34	2.0	mg/Kg	10	9/18/2009 11:38:36 PM
Acetone	ND	7.5	mg/Kg	10	9/18/2009 11:38:36 PM
Bromobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Bromoform	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Bromomethane	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
2-Butanone	ND	5.0	mg/Kg	10	9/18/2009 11:38:36 PM
Carbon disulfide	ND	5.0	mg/Kg	10	9/18/2009 11:38:36 PM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
Chlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Chloroethane	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
Chloroform	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Chloromethane	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
4-Chlorotoluene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Dibromomethane	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
1,2-Dichforobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
Dichlorodifluoromethane	ND	0.50	mg/Kg	10	9/18/2009 11.38:36 PM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/18/2009 11:38:36 PM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/18/2009 11:38:36 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

Page 7 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-02

Client Sample ID: API-E-2

Collection Date: 9/16/2009 9:25:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual U	Inits	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES			- 1,60 Marie			Analyst: DAN
Hexachlorobutadiene	ND	1.0	n	ig/Kg	10	9/18/2009 11:38:36 PM
2-Hexanone	ND	5.0	m	ng/Kg	10	9/18/2009 11:38:36 PM
Isopropylbenzene	ND:	0.50	m	ng/Kg	10	9/18/2009 11:38:36 PM
4-isopropyltoluene	ND	0.50	n	ng/Kg	10	9/18/2009 11:38:36 PM
4-Methyl-2-pentanone	ND	5.0	m	ng/Kg	10	9/18/2009 11:38:36 PM
Methylene chloride	ND	1.5	m	ıg/Kg	10	9/18/2009 11:38:36 PM
n-Butylbenzene	1.6	0.50	m	ıg/Kg	10	9/18/2009 11:38:36 PM
n-Propylbenzene	0.64	0.50	. m	ıg/Kg	10	9/18/2009 11:38:36 PM
sec-Butylbenzene	0.51	. 0.50	. m	g/Kg	10	9/18/2009 11:38:36 PM
Styrene	ND	0.50	m	ıg/Kg	10	9/18/2009 11:38:36 PM
tert-Butylbenzene	ND	0.50	m	ıg/Kg	10	9/18/2009 11:38:36 PM
1,1,1,2-Tetrachloroethane	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
1,1,2,2-Tetrachloroethane	ND	0.50	m	ıg/Kg	10	9/18/2009 11:38:36 PM
Tetrachloroethene (PCE)	ND	0.50	m	ıg/Kg	10	9/18/2009 11:38:36 PM
trans-1,2-DCE	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
trans-1,3-Dichloropropene	ND	0.50	m	ıg/Kg	10	9/18/2009 11:38:36 PM
1,2,3-Trichlorobenzene	ND	1.0	m	g/Kg	10	9/18/2009 11:38:36 PM
1,2,4-Trichlorobenzene	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
1,1,1-Trichloroethane	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
1,1,2-Trichlorgethane	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
Trichloroethene (TCE)	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
Trichlorofluoromethane	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
1,2,3-Trichloropropane	ND	1.0	m	g/Kg	10	9/18/2009 11:38:36 PM
Vinyl chloride	ND	0.50	m	g/Kg	10	9/18/2009 11:38:36 PM
Xylenes, Total	ND	1.0	m	g/Kg	. 10	9/18/2009 11:38:36 PM
Surr: 1,2-Dichloroethane-d4	105	84-111	%	REC	10	9/18/2009 11:38:36 PM
Surr: 4-Bromofluorobenzene	103	89.5-108	%	REC	10	9/18/2009 11:38:36 PM
Surr: Dibromofluoromethane	91.5	90.6-123	%	REC	10	9/18/2009 11:38:36 PM
Surr: Toluene-d8	95.9	76.6-106	%	REC	10	9/18/2009 11:38:36 PM

Oua	lifi	ers

Value exceeds Maximum Contaminant Level

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E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project: Lab ID: 0909356

080935

B09091942-002

Client Sample ID: 0909356-02B, C, API-E-2

Report Date: 09/24/09

Collection Date: 09/16/09 09:25

DateReceived: 09/21/09

Matrix: Soil

Analyses	Result	Units	Qualifiers	ЯĻ	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY		101,0 1, 01 1, 01 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
Flash Point (Ignilability)	>200	ΨF.		30		SW1010M	09/22/09 11:00 / pwc
CORROSIVITY							
pH of Soll and Waste	8.41	is.u.		0.10		SW9045D	09/24/09 10:00 / clr
REACTIVITY			•				
Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:14 / kjp
Súlfide, Reactive	ИD	mg/kg		20	500	SW846 Ch.7	09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846							
Arsenic	ŅØ	mg/kg		5		SW6020	09/23/09 19:21 / aje:
Barton	599	mg/kg		5		SW6010B	09/23/09 16:04 / tao
Oadmium	ЙÒ	mg/kg		1		SW60108	09/22/09 22:36 / tao
Ghromium:	20	mg/kg		5		8W6010B	09/22/09 22:36 / tao
lead	ND	mg/kg		-5		SW6010B	09/22/09 22:36 / tao
Mercury	ND	mg/kg		1		SW7471A	09/22/09 13:17 / age
Selenium	ND	mg/kg		5		SW6020	09/23/09 19:21 / aje
Silyer	ND	mg/kg		:5		SW6020	09/23/09 19:21 / aje

Report

RL - Analyte reporting limit.

Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

Client Sample ID: API-E-3

0909356

Collection Date: 9/16/2009 9:35:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-03

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	470	10	mg/Kg	1	9/22/2009 4:12:47 PM
Motor Oil Range Organics (MRO)	110	50	mg/Kg	1	9/22/2009 4:12:47 PM
Surr: DNOP	91.1	61.7-135	%REC	1	9/22/2009 4:12:47 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	50	mg/Kg	10	9/22/2009 11:56:39 PM
Surr: BFB	96.1	65.9-118	%REC	10	9/22/2009 11:56:39 PM
EPA METHOD 8270C: SEMIVOLATIL	ES				Analyst: JDC
Acenaphthene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Acenaphthylene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Aniline	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Anthracene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Azobenzene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Benz(a)anthracene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Benzo(a)pyrene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Benzo(b)fluoranthene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Benzo(g,h,i)perylene	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
Benzo(k)fluoranthene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Benzoic acid	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
Benzyl alcohol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Bis(2-chloroethoxy)methane	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Bis(2-chloroethyl)ether	ND	1.0	m g/Kg	1	10/6/2009 6:41:00 PM
Bis(2-chloroisopropyl)ether	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Bis(2-ethylhexyl)phthalate	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
4-Bromophenyl phenyl ether	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Butyl benzyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Carbazole	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
4-Chloro-3-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
4-Chloroaniline	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
2-Chloronaphthalene	ND	1.3	mg/Kg	1	10/6/2009 6:41:00 PM
2-Chlorophenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
4-Chlorophenyl phenyl ether	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Chrysene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Di-n-butyl phthalate	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
Di-n-octyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Dibenz(a,h)anthracene	. ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Dibenzofuran	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
1,2-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
1,3-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
1,4-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
3,3'-Dichlorobenzidine	ND	1.3	mg/Kg	1	10/6/2009 6:41:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-03

Client Sample ID: API-E-3

Collection Date: 9/16/2009 9:35:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES				Analyst: JD0
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Dimethyl phthalate	ND	1.0	m g /Kg	1	10/6/2009 6:41:00 PM
2,4-Dichlorophenol	ND	2.0	m g/Kg	1	10/6/2009 6:41:00 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 6:41:00 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 6:41:00 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
Fluoranthene	ND	1.3	mg/Kg	1	10/6/2009 6:41:00 PM
Fluorene	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Hexachlorobutadiene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Hexachtorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 6:41:00 PM
Isophorone	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
2-Methylnaphthalene	ND	1.3	mg/Kg	1	10/6/2009 6:41:00 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
3+4-Methylphenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
4-Nitroaniline	ND	1.3	mg/Kg	1 ·	10/6/2009 6:41:00 PM
Nitrobenzene	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
2-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
4-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Pentachlorophenol	ND	2.0	mg/Kg	1	10/6/2009 6:41:00 PM
Phenanthrene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Phenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Pyrene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 6:41:00 PM
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 6:41:00 PM
Surr: 2,4,6-Tribromophenol	86.8	35.5-141	%REC	. 1	10/6/2009 6:41:00 PM
Surr. 2-Fluorobiphenyl	81.6	30.4-128	%REC	1	10/6/2009 6:41:00 PM
Surr: 2-Fluorophenol	62.6	28.1-129	%REC	1	10/6/2009 6:41:00 PM
Surr: 4-Terphenyl-d14	81.5	34.6-151	%REC	1	10/6/2009 6:41:00 PM
Surr: Nitrobenzene-d5	73.9	26.5-122	%REC	1	10/6/2009 6:41:00 PM
Surr: Phenol-d5	67.8	37.6-118	%REC	1	10/6/2009 6:41:00 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 10 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-03

Client Sample ID: API-E-3

Collection Date: 9/16/2009 9:35:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL 0	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Toluene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2,4-Trimethylbenzene	МD	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,3,5-Trimethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Naphthalene	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
1-Methylnaphthalene	3.2	2.0	mg/Kg	10	9/19/2009 12:06:45 AM
2-Methylnaphthalene	4.6	2.0	mg/Kg	10	9/19/2009 12:06:45 AM
Acetone	ND	7.5	mg/Kg	10	9/19/2009 12:06:45 AM
Bromobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Bromoform	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Bromomethane	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
2-Butanone	ND	5.0	mg/Kg	10	9/19/2009 12:06:45 AM
Carbon disulfide	ND	5.0	mg/Kg	10	9/19/2009 12:06:45 AM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
Chlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Chloroethane	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
Chloroform	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Chloromethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
4-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2-Dibromo-3-chloropropane	ND	1.0	m g/Kg	10	9/19/2009 12:06:45 AM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Dibromomethane	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Dichlorodifluoromethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-03

Client Sample ID: API-E-3

Collection Date: 9/16/2009 9:35:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
PA METHOD 8260B: VOLATILES					Analyst: DAM
Hexachlorobutadiene	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
2-Hexanone	ND	5.0	mg/Kg	10	9/19/2009 12:06:45 AM
Isopropylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
4-Isopropyltoluene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
4-Methyl-2-pentanone	ND	5.0	mg/Kg	10	9/19/2009 12:06:45 AM
Methylene chloride	ND	1.5	mg/Kg	10	9/19/2009 12:06:45 AM
n-Butylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
n-Propylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
sec-Butylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Styrene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
tert-Butylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,1,1,2-Tetrachioroethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,1,2,2-Tetrachloroethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Tetrachloroethene (PCE)	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
trans-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
trans-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2,3-Trichlorobenzene	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
1,2,4-Trichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,1,1-Trichloroethane	· ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,1,2-Trichloroethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Trichloroethene (TCE)	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Trichlorofluoromethane	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
1,2,3-Trichloropropane	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
Vinyl chloride	ND	0.50	mg/Kg	10	9/19/2009 12:06:45 AM
Xylenes, Total	ND	1.0	mg/Kg	10	9/19/2009 12:06:45 AM
Surr: 1,2-Dichloroethane-d4	96.7	84-111	%REC	10	9/19/2009 12:06:45 AM
Surr: 4-Bromofluorobenzene	99.4	89.5-108	%REC	10	9/19/2009 12:06:45 AM
Surr: Dibromofluoromethane	94.9	90.6-123	%REC	10	9/19/2009 12:06:45 AM
Surr: Toluene-d8	99.1	76.6-106	%REC	10	9/19/2009 12:06:45 AM

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v	u	11	113	٤I	.3

Value exceeds Maximum Contaminant Level

Page 12 of 40

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-003

Client Sample ID: 0909356-03B, C, API-E-3

Report Date: 09/24/09

Collection Date: 09/16/09 09:35

DateReceived: 09/21/09

Matrix: Soil

Arialysas	Result	Units	Qualifiers	R į.	MCL/ MCL/	Method	Analysis Date / By
IGNITABILITY Flash Point (Ignitability)	>200	eE.		30		SW1010M	09/22/09 11:00 / pwc
CORROSIVITY pH:of Solf and Waste:	8.55	-S. u.		0.10		SW9045D.	09/24/09 10:00 / clr
REACTIVITY		•				for the second second	ecologico unua Illia
Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:16:/ kjp
Sulfide, Reactive.	ND	mg/kg		.20	500	SW846 Ch 7	09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846						nady of the participation	na mbihin kalinini sti
Argenic	ŊQ	mg/kg		5		SW6020	09/23/09 19:25 / aje
Banum	366	mg/kg		.6		SW6010B	09/23/09 16:08 / tao
Cadmium	ND	mg/kg		1		SW6010B	09/22/09 22:40 / 1ao
Chromium	ND	mg/kg		5		SW6010B	09/22/09 22:40 / tao
Lead	NÐ	mg/kg		5		SW6010B	09/22/09 22:40 / tao
Marcury	ÑĎ	mg/kg		-1		SW7471A	09/22/09 13:19 / age
Selenium	ND	mg/kg		5		SW6020	09/23/09 19:25 / aje
Silver	ND	mg/kg		5		SW6020	09/23/09 19:25 / aje

Report Definitions:

RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT: Lab Order: Western Refining Southwest, Gallup

0909356

Client Sample ID: API-E-4

Collection Date: 9/16/2009 9:42:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Matrix: SOIL

0909356-04 Lab ID:

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS	 				Analyst: SCC
Diesel Range Organics (DRO)	6800	100		mg/Kg	10	9/22/2009 4:49:15 PM
Motor Oil Range Organics (MRO)	670	500		mg/Kg	10	9/22/2009 4:49:15 PM
Surr: DNOP	0	61.7-135	s	%REC	10	9/22/2009 4:49:15 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	250		mg/Kg	50	9/23/2009 12:27:10 AM
Surr: BFB	92.9	65,9-118		%REC	50	9/23/2009 12:27:10 AM
EPA METHOD 8270C: SEMIVOLATIL	.ES					Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Aniline	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Anthracene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Azobenzene	ND	. 1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1 .	10/6/2009 7:10:52 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
Benzyl alcohol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Bis(2-chloroethoxy)methane	ND	1.0	1	mg/Kg	1	10/6/2009 7:10:52 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Bis(2-chloroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
4-Bromophenyl phenyl ether	NĐ	1.0	1	mg/Kg	1	10/6/2009 7:10:52 PM
Butyl benzyl phthalate	ND	1.0	1	mg/Kg	1	10/6/2009 7:10:52 PM
Carbazole	ND	1.0	1	mg/Kg	1	10/6/2009 7:10:52 PM
4-Chloro-3-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
4-Chloroaniline	ND	2.5	ł	mg/Kg	1	10/6/2009 7:10:52 PM
2-Chloronaphthalene	ND	1.3	ı	mg/Kg	1	10/6/2009 7:10:52 PM
2-Chlorophenol	ND	1.0	ı	ng/Kg	1	10/6/2009 7:10:52 PM
4-Chlorophenyl phenyl ether	ND	1.0	1	ng/Kg	1	10/6/2009 7:10:52 PM
Chrysene	ND	1.0	r	ng/Kg	1	10/6/2009 7:10:52 PM
Di-n-butyl phthalate	ND	2.5	ſ	ng/Kg	1	10/6/2009 7:10:52 PM
Di-n-octyl phthalate	ND	1.0	ſ	ng/Kg	1	10/6/2009 7:10:52 PM
Dibenz(a,h)anthracene	ИD	1.0	r	ng/Kg	1	10/6/2009 7:10:52 PM
Dibenzofuran	ND	1.0	r	ng/Kg	1	10/6/2009 7:10:52 PM
1,2-Dichlorobenzene	ND	1.0	r	ng/Kg	1	10/6/2009 7:10:52 PM
1,3-Dichlorobenzene	ND	1.0	r	ng/Kg	1	10/6/2009 7:10:52 PM
1,4-Dichlorobenzene	ND	1.0		ng/Kg	1	10/6/2009 7:10:52 PM
3,3'-Dichlorobenzidine	ND	1.3		ng/Kg	1	10/6/2009 7:10:52 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

0909330

API Overflow Sample Points

Project: Lab ID:

0909356-04

Client Sample ID: API-E-4

Collection Date: 9/16/2009 9:42:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
PA METHOD 8270C: SEMIVOLAT	ILES		****			Analyst: JD0
Diethyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Dimethyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
2,4-Dichlorophenol	ND	2.0		mg/Kg	1	10/6/2009 7:10:52 PM
2,4-Dimethylphenol	ND	1.5		mg/Kg	1	10/6/2009 7:10:52 PM
4,6-Dinitro-2-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
2,4-Dinitrophenol	ND	2.0		mg/Kg	1	10/6/2009 7:10:52 PM
2,4-Dinitrotoluene	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
2,6-Dinitrotoluene	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
Fluoranthene	ND	1.3		mg/Kg	1	10/6/2009 7:10:52 PM
Fluorene	. ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
Hexachlorobenzene	. ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Hexachlorobutadiene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Hexachlorocyclopentadiene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Hexachloroethane	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Indeno(1,2,3-cd)pyrene	ND	1.3		mg/Kg [.]	1	10/6/2009 7:10:52 PM
Isophorone	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
2-Methylnaphthalene	1.6	1.3		mg/Kg	1	10/6/2009 7:10:52 PM
2-Methylphenol	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
3+4-Methylphenol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
N-Nitrosodi-n-propylamine	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
N-Nitrosodiphenylamine	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Naphthalene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
2-Nitroaniline	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
3-Nitroaniline	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
4-Nitroanitine	ND	1.3		mg/Kg	1	10/6/2009 7:10:52 PM
Nitrobenzene	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
2-Nitrophenol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
4-Nitrophenol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Pentachlorophenol	ND	2.0		mg/Kg	1	10/6/2009 7:10:52 PM
Phenanthrene	2.1	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Phenol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Pyrene	1.2	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Pyridine	ND	2.5		mg/Kg	1	10/6/2009 7:10:52 PM
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
2,4,5-Trichlorophenol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
2,4,6-Trichlorophenol	ND	1.0		mg/Kg	1	10/6/2009 7:10:52 PM
Surr: 2,4,6-Tribromophenol	0	35.5-141	S	%REC	1	10/6/2009 7:10:52 PM
Surr: 2-Fluorobiphenyl	98.4	30.4-128		%REC	1	10/6/2009 7:10:52 PM
Surr: 2-Fluorophenol	54.6	28.1-129		%REC	1	10/6/2009 7:10:52 PM
Surr: 4-Terphenyl-d14	92.9	34.6-151		%REC	1	10/6/2009 7:10:52 PM
Surr: Nitrobenzene-d5	102	26.5-122		%REC	1	10/6/2009 7:10:52 PM
Surr: Phenol-d5	69.8	37.6-118		%REC	1	10/6/2009 7:10:52 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-04

Client Sample ID: API-E-4

Collection Date: 9/16/2009 9:42:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES					Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	· 10	9/19/2009 12:34:53 AM
Toluene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,2,4-Trimethylbenzene	0.68	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,3,5-Trimethylbenzene	0.62	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Naphthalene	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
1-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 12:34:53 AM
2-Methylnaphthalene	ND	2.0	mg/Kg	- 10	9/19/2009 12:34:53 AM
Acetone	ND	7.5	mg/Kg	10	9/19/2009 12:34:53 AM
Bromobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Bromoform	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Bromomethane	ND	1.0	mg/Kg	· 10	9/19/2009 12:34:53 AM
2-Butanone	ND	5.0	mg/Kg	10	9/19/2009 12:34:53 AM
Carbon disulfide	ND	5.0	mg/Kg	10	9/19/2009 12:34:53 AM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
Chlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Chloroethane	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
Chloroform	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Chloromethane	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
4-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Dibromomethane	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
Dichlorodifluoromethane	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 12:34:53 AM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/19/2009 12:34:53 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-04

Client Sample ID: API-E-4

Collection Date: 9/16/2009 9:42:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Un	its	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES				·		Analyst: DAM
Hexachlorobutadiene	ND	. 1.0	mg/	Kg	10	9/19/2009 12:34:53 AM
2-Hexanone	ND	5.0	mg/	Kg	10	9/19/2009 12:34:53 AM
Isopropylbenzene	ND	0.50	mg/	Kg	10 .	9/19/2009 12:34:53 AM
4-Isopropyltoluene	ND	0:50	mg/	Kg	10	9/19/2009 12:34:53 AM
4-Methyl-2-pentanone	ND	5.0	mg/	'Kg	10	9/19/2009 12:34:53 AM
Methylene chloride	ND	1.5	mg/	Kg	10	9/19/2009 12:34:53 AM
n-Butylbenzene	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
n-Propylbenzene	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
sec-Butylbenzene	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
Styrene	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
tert-Butylbenzene	ND -	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
1,1,1,2-Tetrachloroethane	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
1,1,2,2-Tetrachloroethane	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
Tetrachloroethene (PCE)	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
trans-1,2-DCE	ND	0.50	mg/	Kg	10	9/19/2009 12:34:53 AM
trans-1,3-Dichloropropene	ND	0.50	mg/	Kg ·	10	9/19/2009 12:34:53 AM
1,2,3-Trichlorobenzene	ND	1.0	mg/	Kg ·	10	9/19/2009 12:34:53 AM
1,2,4-Trichlorobenzene	ND	0.50	mg/	Kg ·	10	9/19/2009 12:34:53 AM
1,1,1-Trichloroethane	ND	0.50	mg/	Kg ·	10	9/19/2009 12:34:53 AM
1,1,2-Trichloroethane	ND	0.50	mg/	Kg ·	10	9/19/2009 12:34:53 AM
Trichloroethene (TCE)	. ND	0.50	mg/	Kg '	10	9/19/2009 12:34:53 AM
Trichlorofluoromethane	ND	0.50	mg/	Kg '	10	9/19/2009 12:34:53 AM
1,2,3-Trichloropropane	ND	1.0	mg/	Kg ·	10	9/19/2009 12:34:53 AM
Vinyl chloride	ND	0.50	mg/	Kg '	0	9/19/2009 12:34:53 AM
Xylenes, Total	ND	1.0	mg/l	Kg '	10	9/19/2009 12:34:53 AM
Surr: 1,2-Dichloroethane-d4	88.8	84-111	%RI	≣C ′	0	9/19/2009 12:34:53 AM
Surr: 4-Bromofluorobenzene	102	89.5-108	%RI	EC '	0	9/19/2009 12:34:53 AM
Surr: Dibromofluoromethane	90.8	90.6-123	%RI	≣C ′	0	9/19/2009 12:34:53 AM
Surr: Toluene-d8	97.5	76.6-106	%Rŧ	EC '	0	9/19/2009 12:34:53 AM

Qualifiers:

Page 16 of 40

Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-004

Client Sample ID: 0909356-04B, G, API-E-4

Report Date: 09/24/09

Collection Date: 09/16/09 09:42

DateReceived: 09/21/09

Matrix: Soil

Analyses	Result	Units	Qualifiers	PL:	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY	-						
Flash Point (Ignilability)	×200	.#F	•	30		SW1010M	09/22/09 11:00 / pwc
CORROSIVITY							· .
pH of Soll and Waste	8.58	s.u.		0.10		SW9045D	09/24/09 10;00 / dir
REACTIVITY						,	
Cyanide, Reactive	ND:	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:18 / kjp
Sulfide, Fleactive	ND	mg/kg		50	500	5W846 Ch 7	09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846					•		
Arsenic	ND	mg/kg		5		SW6020	09/23/09 19:307 aje
Banum -	459	mg/kg		5		SW6010B	09/23/09 16:12 / tao
Cadmium	ND	mg/kg		1		SW6010B	09/22/09 22:48 / tao
Shromlum	51	mg/kg		5		SW6010B	09/22/09 22:48 / tao
Lead	ND	mg/kg		5		SW6010B	09/22/09.22:48 / tao
Mercury	ŊĎ.	mg/kg		1		SW7471A	09/22/09 13:22 / age
Selenium	ND	mg/kg		-5		SW6020	09/23/09 19:30 / aje:
Sliver	ND	mg/kg		5		SW6020	09/23/09 19:30 / aje

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

API Overflow Sample Points

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-W-5

Lab Order:

0909356

Project:

Collection Date: 9/16/2009 9:48:00 AM Date Received: 9/17/2009

Lab ID:

0909356-05

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	670	100		mg/Kg	10	9/22/2009 5:25:27 PM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	9/22/2009 5:25:27 PM
Surr: DNOP	0	61.7-135	S	%REC	10	9/22/2009 5:25:27 PM
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	9/23/2009 12:57;27 AM
Surr: BFB	95.4	65.9-118		%REC.	10	9/23/2009 12:57:27 AM
EPA METHOD 8270C: SEMIVOLATIL	.ES			٠		Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Aniline	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Anthracene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Azobenzene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1	10/6/2009 7:40:46 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 7:40:46 PM
Benzyl alcohol	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Bis(2-chloroethoxy)methane	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Bis(2-chloroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 7:40:46 PM
4-Bromophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Butyl benzyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Carbazole	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
4-Chloro-3-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 7:40:46 PM
4-Chloroaniline	ND	2.5		mg/Kg	1	10/6/2009 7:40:46 PM
2-Chloronaphthalene	ND	1.3		mg/Kg	1	10/6/2009 7:40:46 PM
2-Chlorophenol	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Chrysene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Di-n-butyl phthalate	ND	2.5		mg/Kg	1	10/6/2009 7:40:46 PM
Di-n-octyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Dibenz(a,h)anthracene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
Dibenzofuran	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
1,2-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
1,3-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
1,4-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 7:40:46 PM
3,3'-Dichlorobenzidine	ND	1.3		mg/Kg	1	10/6/2009 7:40:46 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value E
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-05

Client Sample ID: API-W-5

Collection Date: 9/16/2009 9:48:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES					Analyst: JDC
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Dimethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	10/6/2009 7:40:46 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 7:40:46 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 7:40:46 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
Fluoranthene	ND	1.3	mg/Kg	. 1	10/6/2009 7:40:46 PM
Fluorene	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Hexachlorobutadiene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 7:40:46 PM
Isophorone	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
2-Methylnaphthalene	ND	1.3	mg/Kg	1	10/6/2009 7:40:46 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
3+4-Methylphenol	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
4-Nitroaniline	ND	1.3	mg/Kg	1	10/6/2009 7:40:46 PM
Nitrobenzene	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
2-Nitrophenol	ND	. 1.0	mg/Kg	1	10/6/2009 7:40:46 PM
4-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Pentachlorophenol	ND	2.0	mg/Kg	1	10/6/2009 7:40:46 PM
Phenanthrene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Phenoi	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Pyrene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 7:40:46 PM
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 7:40:46 PM
Surr: 2,4,6-Tribromophenol	76.2	35.5-141	%REC	1	10/6/2009 7:40:46 PM
Surr: 2-Fluorobiphenyl	89.9	30.4-128	%REC	1	10/6/2009 7:40:46 PM
Surr: 2-Fluorophenol	61.9	28.1-129	%REC	1	10/6/2009 7:40:46 PM
Surr: 4-Terphenyl-d14	78.7	34.6-151	%REC	1	10/6/2009 7:40:46 PM
Surr: Nitrobenzene-d5	76.6	26.5-122	%REC	1	10/6/2009 7:40:46 PM
Surr: Phenol-d5	66.1	37.6-118	%REC	1	10/6/2009 7:40:46 PM

Qualifiers:

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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 08-Oct-09

CLIENT: Lab Order: Western Refining Southwest, Gallup

0909356

Client Sample ID: API-W-5

Collection Date: 9/16/2009 9:48:00 AM

Project: Lab ID:

API Overflow Sample Points 0909356-05

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S		10.00		Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Toluene	NĐ	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,2,4-Trimethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,3,5-Trimethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Naphthalene	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
1-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 1:02:57 AM
2-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 1:02:57 AM
Acetone	ND	7.5	mg/Kg	10	9/19/2009 1:02:57 AM
Bromobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Bromoform	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Bromomethane	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
2-Butanone	ND	5.0	mg/Kg	10	9/19/2009 1:02:57 AM
Carbon disulfide	ND	5.0	mg/Kg	10	9/19/2009 1:02:57 AM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
Chlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Chloroethane	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
Chloroform	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Chloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
4-Chlorotoluene	NĐ	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
cis-1,2-DCE	ИD	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Dibromomethane	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
Dichlorodifluoromethane	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 1:02:57 AM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/19/2009 1:02:57 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Estimated value E
- Analyte detected below quantitation limits J
- Not Detected at the Reporting Limit ND
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Client Sample ID: API-W-5

Collection Date: 9/16/2009 9:48:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-05

Matrix: SOIL

Analyses	Result	PQL	Qual Uni	its DF	Date Analyzed
EPA METHOD 8260B: VOLATILES		<u> </u>		A A A A A A A A A A A A A A A A A A A	Analyst: DAM
Hexachlorobutadiene	NĎ	1.0	mg/l	Kg 10	9/19/2009 1:02:57 AM
2-Hexanone	ND	5.0	mg/l	Kg 10	9/19/2009 1:02:57 AM
Isopropylbenzene	ND	0.50	mg/l	K g 10	9/19/2009 1:02:57 AM
4-Isopropyltoluene	ND	0.50	mg/l	Kg 10	9/19/2009 1:02:57 AM
4-Methyl-2-pentanone	ND	5.0	mg/i	Kg 10	9/19/2009 1:02:57 AM
Methylene chloride	ND	1.5	mg/l	Kg 10	9/19/2009 1:02:57 AM
n-Butylbenzene	ND	0.50	mg/l	Kg 10	9/19/2009 1:02:57 AM
n-Propylbenzene	ND	0.50	mg/l	Kg 10	9/19/2009 1:02:57 AM
sec-Butylbenzene	ND	0.50	mg/i	Kg 10	9/19/2009 1:02:57 AM
Styrene	ND	0.50	mg/l	Kg 10	9/19/2009 1:02:57 AM
tert-Butylbenzene	ND	0.50	mg/l	Kg 10	9/19/2009 1:02:57 AM
1,1,1,2-Tetrachloroethane	ND	0.50	mg/ł	Kg 10	9/19/2009 1:02:57 AM
1,1,2,2-Tetrachloroethane	ND	0.50	mg/i	≺ g 10	9/19/2009 1:02:57 AM
Tetrachloroethene (PCE)	ND	0.50	mg/l	K g 10	9/19/2009 1:02:57 AM
trans-1,2-DCE	ND	0.50	mg/l	Kg 10	9/19/2009 1:02:57 AM
trans-1,3-Dichloropropene	ŅD	0.50	mg/i	(g 10	9/19/2009 1:02:57 AM
1,2,3-Trichlorobenzene	ND	1.0	mg/i	(g 10	9/19/2009 1:02:57 AM
1,2,4-Trichlorobenzene	ND	0.50	mg/l	(g 10	9/19/2009 1:02:57 AM
1,1,1-Trichloroethane	ND	0.50	mg/l	(g 10	9/19/2009 1:02:57 AM
1,1,2-Trichloroethane	ND	0.50	mg/k	(g 10	9/19/2009 1:02:57 AM
Trichloroethene (TCE)	ND	0.50	mg/H	(g 10	9/19/2009 1:02:57 AM
Trichlorofluoromethane	ND	0.50	mg/h	(g 10	9/19/2009 1:02:57 AM
1,2,3-Trichloropropane	ND	1.0	mg/k	(g 10	9/19/2009 1:02:57 AM
Vinyl chloride	ND	0.50	mg/k	(g 10	9/19/2009 1:02:57 AM
Xylenes, Total	ND	1.0	mg/k	(g 10	9/19/2009 1:02:57 AM
Surr: 1,2-Dichloroethane-d4	99.4	84-111	%RE	EC 10	9/19/2009 1:02;57 AM
Surr: 4-Bromofluorobenzene	101	89.5-108	%RE	C 10	9/19/2009 1:02:57 AM
Surr: Dibromofluoromethane	95.7	90.6-123	%RE	C 10	9/19/2009 1:02:57 AM
Surr: Toluene-d8	102	76.6-106	%RE	C 10	9/19/2009 1:02:57 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Reporting Limit

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LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-005

Client Sample ID: 0909356-05B, C, API-W-5

Report Date: 09/24/09

Collection Date: 09/16/09 09:48

DateRaceived: 09/21/09

Matrix: Soil

Analyses	Result	Units	Qualifiers	BL	MCI./	Method	Analysis Date / By
IGNITABILITY			*	,			·.
Flash Point (Ignitability)	>200	°F;		30		SWIDION	09/22/09 11:00 / pwc
CORROSIVITY							
pH of Soil and Waste	8.02	s.u.		0.10		SW9045D	09/24/09 10:00 / clr
REACTIVITY		•				. •	•
Gyanide, Reactive	ND	mg/kg		0.05	250	SW848 Ch 7	09/23/09 10:20 / kjp
Sulfide, Reactive:	NĎ	mg/kg		20	500	SW846 Ch.7	:09/22/09 08:00:/ pwc
METALS, TOTAL - EPA SW846							•
Arsenic	ND	mg/kg		5		SW6020	09/23/09 19:34 / aje
Barium	410	mg/kg		-6		SW6010B	09/23/09 16:16 / tao
Gadmium:	NO	mg/kg		7		SW6010B	09/22/09 22:52 / tao
Chromium	14	mg/kg		5		SW6010B	09/22/09 22:52 / tao
Lead	ND	mg/kg		:5		SW6010B	09/22/09 22:52 / tao
Mercury	ND	mg/kg		1		SW7471A	09/22/09 13:24 / age
Selenjum	ЙD	mg/kg		5		SW6020	09/23/09 19:34 / aje
Silver	ND	mg/kg		5		SW6020	09/23/09 19:34 / aje

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

0909356

Lab Order: Project:

API Overflow Sample Points

Lab ID:

0909356-06

Client Sample ID: API-W-6

Collection Date: 9/16/2009 9:58:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS				Analyst: SC
Diesel Range Organics (DRO)	370	10	mg/Kg	. 1	9/23/2009 7:19:55 AM
Motor Oil Range Organics (MRO)	160	50	mg/Kg	1	9/23/2009 7:19:55 AM
Surr: DNOP	108	61.7-135	%REC	1	9/23/2009 7:19:55 AM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSE
Gasoline Range Organics (GRO)	ND	25	mg/Kg	5	9/23/2009 1:27:48 AM
Surr: BFB	90.4	65.9-118	%REC	5	9/23/2009 1:27:48 AM
PA METHOD 8270C: SEMIVOLATIL	ES				Analyst: JDC
Acenaphthene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Acenaphthylene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Aniline	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Anthracene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Azobenzene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Benz(a)anthracene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Benzo(a)pyrene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Benzo(b)fluoranthene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Benzo(g,h,i)perylene	ND	2.5	mg/Kg	1	10/6/2009 8:10:34 PM
Benzo(k)fluoranthene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Benzoic acid	ND	2.5	mg/Kg	1	10/6/2009 8:10:34 PM
Benzyl alcohol	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Bis(2-chloroethoxy)methane	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Bis(2-chloroethyl)ether	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Bis(2-chloroisopropyl)ether	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Bis(2-ethylhexyl)phthalate	ND	2.5	mg/Kg	1	10/6/2009 8:10:34 PM
4-Bromophenyl phenyl ether	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Butyl benzyl phthalate	ND	1.0	mg/Kg	· 1	10/6/2009 8:10:34 PM
Carbazote	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
4-Chloro-3-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 8:10:34 PM
4-Chloroaniline	ND	2.5	mg/Kg	1	10/6/2009 8:10:34 PM
2-Chloronaphthalene	ND	1.3	mg/Kg	1	10/6/2009 8:10:34 PM
2-Chlorophenol	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
4-Chlorophenyl phenyl ether	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Chrysene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Di-n-butyl phthalate	ND	2.5	mg/Kg	1	10/6/2009 8:10:34 PM
Di-n-octyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Dibenz(a,h)anthracene	ŅD	. 1.0	mg/Kg	1	10/6/2009 8:10:34 PM
Dibenzofuran	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
1,2-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
1,3-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
1,4-Dichlorobenzene	.ND	1.0	mg/Kg	1	10/6/2009 8:10:34 PM
3,3'-Dichlorobenzidine	ND	1.3	mg/Kg	1	10/6/2009 8:10:34 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-06

Client Sample ID: API-W-6

Collection Date: 9/16/2009 9:58:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLA	TILES					Analyst: JD0
Diethyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Dimethyl phthalate	ND	1.0	,	mg/Kg	1	10/6/2009 8:10:34 PM
2,4-Dichlorophenol	ND	2.0		.mg/Kg	1	10/6/2009 8:10:34 PM
2,4-Dimethylphenol	ND	1.5		mg/Kg	1	10/6/2009 8:10:34 PM
4,6-Dinitro-2-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
2,4-Dinitrophenol	ND	2.0		mg/Kg	1	10/6/2009 8:10:34 PM
2,4-Dinitrotoluene	ND	2.5	*	mg/Kg	1	10/6/2009 8:10:34 PM
2,6-Dinitrotoluene	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
Fluoranthene	ND	1.3		mg/Kg	1	10/6/2009 8:10:34 PM
Fluorene	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
Hexachlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Hexachlorobutadiene	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Hexachlorocyclopentadiene	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Hexachloroethane	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Indeno(1,2,3-cd)pyrene	ND	1.3		mg/Kg	. 1	10/6/2009 8:10:34 PM
Isophorone	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
2-Methylnaphthalene	ND	1.3		mg/Kg	1	10/6/2009 8:10:34 PM
2-Methylphenol	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
3+4-Methylphenol	ND	1.0		mg/Kg	1 '	10/6/2009 8:10:34 PM
N-Nitrosodi-n-propylamine	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
N-Nitrosodiphenylamine	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Naphthalene	ND	1.0		m g /Kg	1	10/6/2009 8:10:34 PM
2-Nitroaniline	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
3-Nitroaniline	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
4-Nitroaniline	ND	1.3		mg/Kg	1	10/6/2009 8:10:34 PM
Nitrobenzene	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
2-Nitrophenol	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
4-Nitrophenol	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Pentachlorophenol	ND	2.0	÷	mg/Kg	1	10/6/2009 8:10:34 PM
Phenanthrene	ND	1.0		mg/Kg	1 .	10/6/2009 8:10:34 PM
Phenol	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Pyrene	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Pyridine	ND	2.5		mg/Kg	1	10/6/2009 8:10:34 PM
1,2,4-Trichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
2,4,5-Trichlorophenol	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
2,4,6-Trichlorophenol	ND	1.0		mg/Kg	1	10/6/2009 8:10:34 PM
Surr: 2,4,6-Tribromophenol	73.0	35.5-141		%REC	1	10/6/2009 8:10:34 PM
Surr: 2-Fluorobiphenyl	52.9	30.4-128		%REC	1	10/6/2009 8:10:34 PM
Surr: 2-Fluorophenol	31.9	28.1-129		%REC	1	10/6/2009 8:10:34 PM
Surr: 4-Terphenyl-d14	76.5	34.6-151		%REC	1	10/6/2009 8:10:34 PM
Surr: Nitrobenzene-d5	40.9	26.5-122		%REC	1	10/6/2009 8:10:34 PM
Surr: Phenol-d5	31.5	37.6-118	S	%REC	1	10/6/2009 8:10:34 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: API-W-6

Lab Order:

0909356

Collection Date: 9/16/2009 9:58:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-06

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Toluene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Ethylbenzene	ND.	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,2,4-Trimethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,3,5-Trimethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Naphthalene	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
1-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 1:31:03 AM
2-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 1:31:03 AM
Acetone	ND	7.5	mg/Kg	10	9/19/2009 1:31:03 AM
Bromobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Bromoform	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Bromomethane	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
2-Butanone	ND	5.0	mg/Kg	10	9/19/2009 1:31:03 AM
Carbon disulfide	ND	5.0	mg/Kg	10	9/19/2009 1:31:03 AM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
Chlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Chloroethane	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
Chloroform	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Chloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
4-Chiorotoluene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
cis-1,3-Dichloropropene	ND .	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Dibromomethane	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
Dichlorodifluoromethane	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 1:31:03 AM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/19/2009 1:31:03 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Project:

API Overflow Sample Points

Lab ID:

0909356-06

Client Sample 1D: API-W-6

Collection Date: 9/16/2009 9:58:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B; VOLATILES		<u> </u>		and the second s	· · · · · · · · · · · · · · · · · · ·	Analyst: DAN
Hexachlorobutadiene	ND	1.0	1	mg/Kg	10	9/19/2009 1:31:03 AM
2-Hexanone	ND	5.0	1	mg/Kg	10	9/19/2009 1:31:03 AM
!sopropylbenzene	ND	0.50	1	mg/Kg	10	9/19/2009 1:31:03 AM
4-Isopropyitoluene	ND	0.50	1	mg/Kg	10	9/19/2009 1:31:03 AM
4-Methyl-2-pentanone	ND	5.0	1	mg/Kg	10	9/19/2009 1:31:03 AM
Methylene chloride	ND	1.5	4	mg/Kg	10	9/19/2009 1:31:03 AM
n-Butylbenzene	ND	0.50	1	mg/Kg	10	9/19/2009 1:31:03 AM
n-Propylbenzene	ND	0.50	ı	mg/Kg	10	9/19/2009 1:31:03 AM
sec-Butylbenzene	ND	0.50		mg/Kg	10	9/19/2009 1:31:03 AM
Styrene	.ND	0.50		mg/Kg	10	9/19/2009 1:31:03 AM
tert-Butylbenzene	ND	0.50		mg/Kg	10	9/19/2009 1:31:03 AM
1,1,1,2-Tetrachloroethane	ND	0.50	1	mg/Kg	10	9/19/2009 1:31:03 AM
1,1,2,2-Tetrachloroethane	ND	0.50	1	mg/Kg	10	9/19/2009 1:31:03 AM
Tetrachloroethene (PCE)	ND	0.50	ı	mg/Kg	10	9/19/2009 1:31:03 AM
trans-1,2-DCE	ND	0.50	r	mg/Kg	10	9/19/2009 1:31:03 AM
trans-1,3-Dichloropropene	ND	0.50	r	mg/Kg	10	9/19/2009 1:31:03 AM
1,2,3-Trichlorobenzene	ND	1.0	3	ng/Kg	10	9/19/2009 1:31:03 AM
1,2,4-Trichlorobenzene	ND	0.50	r	ng/Kg	10	9/19/2009 1:31:03 AM
1,1,1-Trichloroethane	ND	0.50	r	ng/Kg	10	9/19/2009 1:31:03 AM
1,1,2-Trichloroethane	ND	0.50	r	ng/Kg	10	9/19/2009 1:31:03 AM
Trichloroethene (TCE)	ND	0.50	r	ng/Kg	10	9/19/2009 1:31:03 AM
Trichlorofluoromethane	ND	0.50	г	ng/Kg	10	9/19/2009 1:31:03 AM
1,2,3-Trichloropropane	ND	1.0	r	ng/Kg	10	9/19/2009 1:31:03 AM
Vinyl chloride	ND	0.50	r	ng/Kg	10	9/19/2009 1:31:03 AM
Xylenes, Total	ND	1.0	r	ng/Kg	10	9/19/2009 1:31:03 AM
Surr: 1,2-Dichloroethane-d4	97.1	84-111	9	%REC	10	9/19/2009 1:31:03 AM
Surr: 4-Bromofluorobenzene	99.2	89.5-108	9	%REC	10	9/19/2009 1:31:03 AM
Surr: Dibromofluoromethane	94.6	90.6-123	9	%REC	10	9/19/2009 1:31:03 AM
Surr: Toluene-d8	99.6	76.6-106	9	%REC	10	9/19/2009 1:31:03 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-006

Client Sample ID: 0909356-06B, C; API-W-6

Report Date: 09/24/09

Collection Date: 09/16/09 09:58

DateReceived: 09/21/09

Matrix: Soll

Analyses	Result	Units	Quelifiers	Br-	MCL/ MCL/	Method	Analysis Date / By
IGNITABILITY				-		****	
Flash Point (Ignitability)	>200	b		30		SW1010M	09/22/09 11:00 / pwg
CORROSIVITY		•					
pH of Soil and Waste	8,02	s.u.		0.10		SW9045D	09/24/09 10:00 / cir
REACTIVITY							
Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:22 / kjp
Suilide, Reactive	, ND	:mg/kg		20	500	SW846 Ch 7	09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846				,			
Arsenic	ND	rrig/kģ		15		SW6020	09/23/09 19:39 / aje
Barium:	389	mg/kg		5		SW6010B	09/23/09 16:20 / tao
Cadmium	ND	mg/kg		1		8W6010B	09/22/09:22:56 / tao
Chromlum	11	mg/kg		5		SW6010B	09/22/09 22:56 / tao
Lead	ND	mg/kg		:5		SW6010B	09/22/09 22:56 / tao
Mercury	ND	mg/kg		1		SW7471A	09/22/09 18:26 / age
Selenium	ND	mg/kg		.5		SW6020	09/23/09 19:39 / aje
Silver	ND	mg/kg		-6		SW6020	09/23/09 19:39 / aje

Report **Definitions:** Rt. - Analyte reporting limit. QCL - Quality control limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: BKT-E-7

Lab Order:

0909356

Collection Date: 9/16/2009 10:10:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-07

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				 	Analyst: SCC
Diesel Range Organics (DRO)	150	10		mg/Kg	1	9/23/2009 7:55:20 AM
Motor Oil Range Organics (MRO)	79	50		mg/Kg	1	9/23/2009 7:55:20 AM
Surr: DNOP	99.7	61.7-135		%REC	1	9/23/2009 7:55:20 AM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSB
Gasoline Range Organics (GRO)	63	25		mg/Kg	5	9/23/2009 1:58:04 AM
Surr: BFB	145	65.9-118	S	%REC	5	9/23/2009 1:58:04 AM
EPA METHOD 8270C: SEMIVOLATILI	ES					Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1 .	10/6/2009 8:40:25 PM
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Aniline	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Anthracene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Azobenzene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Benzo(a)pyrene	. ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1	10/6/2009 8:40:25 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 8:40:25 PM
Benzyl alcohol	ND	1.0		mg/Kg	. 1	10/6/2009 8:40:25 PM
Bis(2-chloroethoxy)methane	ND	1.0		mg/Kg	1 .	10/6/2009 8:40:25 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Bis(2-chloroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 8:40:25 PM
4-Bromophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Butyl benzyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Carbazole	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
4-Chloro-3-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 8:40:25 PM
4-Chloroaniline	ND	2.5		mg/Kg	1	10/6/2009 8:40:25 PM
2-Chloronaphthalene	ND	1.3		mg/Kg	1	10/6/2009 8:40:25 PM
2-Chlorophenol	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Chrysene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Di-n-butyl phthalate	ND	2.5		mg/Kg	1	10/6/2009 8:40:25 PM
Di-n-octyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Dibenz(a,h)anthracene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
Dibenzofuran	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
1,2-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
1,3-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
1,4-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 8:40:25 PM
3,3'-Dichlorobenzidine	ND	1.3		mg/Kg	1	10/6/2009 8:40:25 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-07

Client Sample ID: BKT-E-7

Collection Date: 9/16/2009 10:10:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	ILES				Analyst: JD 0
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Dimethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	10/6/2009 8:40:25 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 8:40:25 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 8:40:25 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
Fluoranthene	ND	1.3	mg/Kg	1	10/6/2009 8:40:25 PM
Fluorene	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Hexachlorobutadiene .	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 8:40:25 PM
Isophorone	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
2-Methylnaphthalene	ND	1.3	mg/Kg	1	10/6/2009 8:40:25 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
3+4-Methylphenol	ND ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
4-Nitroanifine	ND	1.3	mg/Kg	1	10/6/2009 8:40:25 PM
Nitrobenzene	ND	2.5	mg/Kg	1 '	10/6/2009 8:40:25 PM
2-Nitrophenol	ND	1.0	m g/K g	1	10/6/2009 8:40:25 PM
4-Nitrophenol	ND	1.0	mg/Kg	· 1	10/6/2009 8:40:25 PM
Pentachlorophenol	ND	2.0	mg/Kg	1	10/6/2009 8:40:25 PM
Phenanthrene	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Phenol	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Pyrene	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 8:40:25 PM
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	- 1	10/6/2009 8:40:25 PM
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 8:40:25 PM
Surr: 2,4,6-Tribromophenol	94.3	35.5-141	%REC	1	10/6/2009 8:40:25 PM
Surr: 2-Fluorobiphenyl	99.1	30.4-128	%REC	1	10/6/2009 8:40:25 PM
Surr: 2-Fluorophenol	91.4	28.1-129	%REC	1	10/6/2009 8:40:25 PM
Surr: 4-Terphenyl-d14	88.2	34.6-151	%REC	1	10/6/2009 8:40:25 PM
Surr: Nitrobenzene-d5	104	26.5-122	%REC	1	10/6/2009 8:40:25 PM
Surr: Phenol-d5	91.8	37.6-118	%REC	1	10/6/2009 8:40:25 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order: Project:

0909356

API Overflow Sample Points

Lab ID:

0909356-07

Client Sample ID: BKT-E-7

Collection Date: 9/16/2009 10:10:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES	3				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Toluene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Methyl tert-butyl ether (MTBE)	ND	0.50	m g/Kg	10	9/19/2009 1;59:09 AM
1,2,4-Trimethylbenzene	1.3	0.50	mg/Kg	10	9/19/2009 1:59;09 AM
1,3,5-Trimethylbenzene	0.60	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,2-Dibromoethana (EDB)	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Naphthalene	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
1-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 1:59:09 AM
2-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 1:59:09 AM
Acetone	ND	7.5	mg/Kg	10	9/19/2009 1:59:09 AM
Bromobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Bromoform	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Bromomethane	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
2-Butanone	ND	5.0	mg/Kg	10	9/19/2009 1:59:09 AM
Carbon disulfide	ND	5.0	mg/Kg	10	9/19/2009 1:59:09 AM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
Chlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Chloroethane	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
Chloroform	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Chloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
4-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Dibromomethane	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Dichlorodifluoromethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,1-Dichloroethane	ND	1.0	mg/Kg	10∙	9/19/2009 1:59:09 AM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 1;59:09 AM
1,3-Dichloropropane	ND.	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
1,1-Dichloropropene	ND	1.0	mg/Kg	. 10	9/19/2009 1:59:09 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank В
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

.

Lab Order: Project:

0909356

API Overflow Sample Points

Lab ID:

0909356-07

Client Sample ID: BKT-E-7

delic Sample 115. BRI 5 /

Collection Date: 9/16/2009 10:10:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES			AA _ AN HARIT		Analyst: DAM
Hexachlorobutadiene	ND	- 1.0	mg/Kg	10	9/19/2009 1:59:09 AM
2-Hexanone	ND	5.0	mg/Kg	10	9/19/2009 1:59:09 AM
Isopropylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
4-Isopropyltoluene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
4-Methyl-2-pentanone	ND	5.0	mg/Kg	10	9/19/2009 1:59:09 AM
Methylene chloride	ND	1.5	mg/Kg	10	9/19/2009 1:59:09 AM
n-Butylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
n-Propylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
sec-Butylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Styrene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
tert-Butylbenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,1,1,2-Tetrachloroethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,1,2,2-Tetrachloroethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Tetrachloroethene (PCE)	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
trans-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
trans-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,2,3-Trichlorobenzene	· ND	1.0	mg/Kg	10	.9/19/2009 1:59:09 AM
1,2,4-Trichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,1,1-Trichlorcethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,1,2-Trichioroethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Trichloroethene (TCE)	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Trichlorofluoromethane	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
1,2,3-Trichloropropane	ND	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
Vinyl chloride	ND	0.50	mg/Kg	10	9/19/2009 1:59:09 AM
Xylenes, Total	2.2	1.0	mg/Kg	10	9/19/2009 1:59:09 AM
Surr: 1,2-Dichloroethane-d4	98.5	84-111	%REC	10	9/19/2009 1:59:09 AM
Surr: 4-Bromofluorobenzene	105	89.5-108	%REC	10	9/19/2009 1:59:09 AM
Surr: Dibromofluoromethane	93.6	90.6-123	%REC	10	9/19/2009 1:59:09 AM
Surr: Toluene-d8	100	76.6-106	%REC	10	9/19/2009 1:59:09 AM

Qualifiers:	
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Value exceeds Maximum Contaminant Level

E Estimated value

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-007

Client Sample ID: 0909356-07B, C, BKT-E-7

Report Date: 09/24/09

Collection Date: 09/16/09 10:10

DateReceived: 09/21/09

Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	Ø¢r M¢⊓	Method	Analysis Date / By
IGNITABILITY Flash Point (Ignitability)	> 500 ∂	o <u>t</u> ž.		30.		SW1010M	09/22/09 11:00 / pwc
CORROSIVITY pH of Soil and Waste	Z.61	ş.y.	ē.	0510°		SW9045D	09/24/09 10:00 / clr
REACTIVITY Cyanide, Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:24 / kjp
Sulfide, Reactive.	ND	mg/kg		20	500	SW846 Ch 7	09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		5		SW6020	09/23/09 19:43 / aje
Barlum	313	mg/kg		5.		9W6010B	09/22/09 23:00 / tao
Cadmium	ND	mg/kg		1		SW6010B	09/22/09 23:00:/ tao
Chromium	7	mg/kg		5		SW6010B	09/22/09 23:00 / tao
Lead	ИD	mg/kg		5		SW6010B	09/22/09 23:00 / tao
Mercury	ND	mg/kg		1		SW7471A	09/22/09 13:29 / age:
Sejenium	ND	mg/kg		5		SW6020	09/23/09 19:43 / aje
Silver	NO	mg/kg		5		SW6020	09/23/09 19:43 / aje

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT: Lab Order: Western Refining Southwest, Gallup

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-08

Client Sample ID: BKT-S-8

Collection Date: 9/16/2009 10:20:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS					Analyst: SC 0
Diesel Range Organics (DRO)	1000	100		mg/Kg	. 10	9/23/2009 8:31:02 AM
Motor Oil Range Organics (MRO)	ND	500		mg/Kg	10	9/23/2009 8:31:02 AM
Surr: DNOP	0	61.7-135	S	%REC	10	9/23/2009 8:31:02 AM
EPA METHOD 8015B: GASOLINE RA	NGE					Analyst: NSE
Gasoline Range Organics (GRO)	370	100		mg/Kg	20	9/23/2009 2:28:19 AM
Surr: BFB	138	65.9-118	S	%REC	20	9/23/2009 2:28:19 AM
EPA METHOD 8270C: SEMIVOLATIL	.ES					Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Anitine	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Anthracene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Azobenzene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1	10/6/2009 9:10:08 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 9:10:08 PM
Benzyl alcohol	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Bis(2-chloroethoxy)methane	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Bis(2-chloroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 9:10:08 PM
4-Bromophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Butyl benzyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Carbazole	ND	1.0		mg/Kg	1 1	10/6/2009 9:10:08 PM
4-Chloro-3-methylphenol	ND	2.5		mg/Kg	1	10/6/2009 9:10:08 PM
4-Chloroaniline	ND	2.5		mg/Kg	1	10/6/2009 9:10:08 PM
2-Chloronaphthalene	ND	1.3		mg/Kg	1	10/6/2009 9:10:08 PM
2-Chlorophenol	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Chrysene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Di-n-butyl phthalate	ND	2.5		mg/Kg	1	10/6/2009 9:10:08 PM
Di-n-octyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Dibenz(a,h)anthracene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
Dibenzofuran	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
1,2-Dichlorobenzene	ND	1.0		m g/Kg	1	10/6/2009 9:10:08 PM
1,3-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
1,4-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 9:10:08 PM
3,3'-Dichlorobenzidine	ND	1.3		mg/Kg	1	10/6/2009 9:10:08 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- Е Estimated value
- Analyte detected below quantitation limits J
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-08

Client Sample ID: BKT-S-8

Collection Date: 9/16/2009 10:20:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATI	LES	-			Analyst: JD0
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Dimethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	10/6/2009 9:10:08 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 9:10:08 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 9:10:08 PM
2,4-Dinitrotoluene	ND	. 2.5	mg/Kg	1	10/6/2009 9:10:08 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
Fluoranthene	ND	1.3	mg/Kg	1	10/6/2009 9:10:08 PM
Fluorena	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Hexachlorobutadiene	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 9:10:08 PM
Isophorone	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
2-Methylnaphthalene	1.9	1.3	mg/Kg	1	10/6/2009 9:10:08 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
3+4-Methylphenol	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
4-Nitroaniline	ND	1.3	mg/Kg	1	10/6/2009 9:10:08 PM
Nitrobenzene	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
2-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
4-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Pentachlorophenol	√ND	2.0	mg/Kg	1	10/6/2009 9:10:08 PM
Phenanthrene	1.4	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Phenol	NĎ	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Pyrene	ND	- 1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 9:10:08 PM
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	- 10/6/2009 9:10:08 PM
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 9:10:08 PM
Surr: 2,4,6-Tribromophenol	79.6	35.5-141	%REC	1	10/6/2009 9:10:08 PM
Surr: 2-Fluorobiphenyl	86.3	30.4-128	%REC	1	10/6/2009 9:10:08 PM
Surr: 2-Fluorophenol	79.1	28.1-129	%REC	1	10/6/2009 9:10:08 PM
Surr: 4-Terphenyl-d14	85.9	34.6-151	%REC	1	10/6/2009 9:10:08 PM
Surr: Nitrobenzene-d5	114	26.5-122	%REC	1	10/6/2009 9:10:08 PM
Surr: Phenol-d5	83.7	37.6-118	%REC	1	10/6/2009 9:10:08 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 30 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: BKT-S-8

Lab Order:

0909356

Collection Date: 9/16/2009 10:20:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-08

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAN
Benzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Toluene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Ethylbenzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Methyl tert-butyl ether (MTBE)	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,2,4-Trimethylbenzene	7.2	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,3,5-Trimethylbenzene	3.3	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,2-Dichloroethane (EDC)	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,2-Dibromoethane (EDB)	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Naphthalene	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
1-Methylnaphthalene	ND	10	mg/Kg	50	9/19/2009 2:26:09 AM
2-Methylnaphthalene	ND	10	mg/Kg	50	9/19/2009 2:26:09 AM
Acetone	ND	38	mg/Kg	50	9/19/2009 2:26:09 AM
Bromobenzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Bromodichloromethane	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Bromoform	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Bromomethane	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
2-Butanone	ND	25	mg/Kg	50	9/19/2009 2:26:09 AM
Carbon disulfide	ND	25	mg/Kg	50	9/19/2009 2:26:09 AM
Carbon tetrachloride	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
Chlorobenzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Chloroethane	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
Chloroform	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Chloromethane	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
2-Chlorotoluene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
4-Chlorotoluene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
cis-1,2-DCE	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
cis-1,3-Dichloropropene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,2-Dibromo-3-chloropropane	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
Dibromochloromethane	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Dibromomethane	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
1,2-Dichlorobenzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,3-Dichlorobenzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,4-Dichlorobenzene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
Dichlorodifluoromethane	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,1-Dichloroethane	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
1,1-Dichloroethene	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,2-Dichloropropane	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
1,3-Dichloropropane	ND	2.5	mg/Kg	50	9/19/2009 2:26:09 AM
2,2-Dichloropropane	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM
1,1-Dichloropropene	ND	5.0	mg/Kg	50	9/19/2009 2:26:09 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

Page 31 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-08

Client Sample ID: BKT-S-8

Collection Date: 9/16/2009 10:20:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: DAN
Hexachlorobutadiene	ND	5.0	. 1	mg/Kg	50	9/19/2009 2:26:09 AM
2-Hexanone	ND	25	ſ	mg/Kg	50	9/19/2009 2:26:09 AM
Isopropylbenzene	ND	2.5	·	ng/Kg	50	9/19/2009 2:26:09 AM
4-Isopropyltoluene	ND	2.5	r	ng/Kg	50	9/19/2009 2:26:09 AM
4-Methyl-2-pentanone	ND	25	r	ng/Kg	50	9/19/2009 2:26:09 AM
Methylene chloride	ND	7.5	r	ng/Kg	50	9/19/2009 2:26:09 AM
n-Butylbenzene	ND	2.5	r	ng/Kg	50	9/19/2009 2:26:09 AM
n-Propylbenzene	ND	2.5	r	ng/Kg	50	9/19/2009 2:26:09 AM
sec-Butylbenzene	ND	2.5	r	ng/Kg	50	9/19/2009 2:26:09 AM
Styrene	ND	2.5	r	ng/Kg	50	9/19/2009 2:26:09 AM
tert-Butylbenzene	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
1,1,1,2-Tetrachloroethane	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
1,1,2,2-Tetrachloroethane	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
Tetrachloroethene (PCE)	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
trans-1,2-DCE	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
trans-1,3-Dichloropropene	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
1,2,3-Trichlorobenzene	ND	5.0	n	ng/Kg	50	9/19/2009 2:26:09 AM
1,2,4-Trichlorobenzene	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
1,1,1-Trichloroethane	ND	2.5	· n	ng/Kg	50	9/19/2009 2:26:09 AM
1,1,2-Trichloroethane	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
Trichloroethene (TCE)	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
Trichlorofluoromethane	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
1,2,3-Trichloropropane	ND	5.0	n	ng/Kg	50	9/19/2009 2:26:09 AM
Vinyl chloride	ND	2.5	n	ng/Kg	50	9/19/2009 2:26:09 AM
Xylenes, Total	13	5.0	п	ng/Kg	50	9/19/2009 2:26:09 AM
Surr: 1,2-Dichloroethane-d4	103	84-111	9	6REC	50	9/19/2009 2:26:09 AM
Surr: 4-Bromofluorobenzene	98.2	89.5-108	9	6REC	50	9/19/2009 2:26:09 AM
Surr: Dibromofluoromethane	96.4	90.6-123	%	6REC	50	9/19/2009 2:26:09 AM
Surr: Toluene-d8	99.5	76.6-106	9/	6REC	50	9/19/2009 2:26:09 AM

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Value exceeds Maximum Contaminant Level

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Estimated value E

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

Holding times for preparation or analysis exceeded Η

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab ID:

B09091942-008

Client Sample ID: 0909356-08B, C, BKT-S-8

Report Date: 09/24/09

Collection Date: 09/16/09 10:20

DateReceived: 09/21/09

Matrix: Soil

Analyses	Result	Units	Qualifiers	нĭ.	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY			W		•	As the province of the	Standards for your concerns and a second
Flash Point (Ighilability)	>200	F		30		SW1010M	09/22/09 11:00 / pwc
CORROSIVITY							
pH of Soll and Waste	8.17	∛ 8. Ü:		0.10		SW9045D	09/24/09 10:00 / olr
REACTIVITY							
Cyanide Reactive	ND	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:257 kJp
Sulfide, Reactive	ND	mg/kg		20	500	SW846 Ch 7	09/22/09 08:00 / pwc
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		5		SW6020	09/23/09 19:48 / aje
Banum	.483.	mg/kg		.5		SW6010B	09/23/09 16:28 / tao
Cadmium	ND	mg/kg		1		SW6010B	09/22/09 23:04 / tao
Chromium	12	mg/kg		5		SW6010B	09/22/09:23:04 / tao
Lead	6	mg/kg		5		SW6010B	09/22/09 23:04 / tao
Mercury	ND	mg/kg		4		SW7471A	09/22/09 13:36 / age
Selenium	ЙD	mg/kg		5		SW6020	09/23/09 19:48 / aje
Silver	ND	mg/kg		5		SW6020	09/23/09 19:48 / aje

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit:

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Client Sample ID: BKT-W-9

Collection Date: 9/16/2009 10:40:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-09

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	180	10	mg/Kg	1	9/23/2009 9:06:42 AM
Motor Oil Range Organics (MRO)	54	50	mg/Kg	1	9/23/2009 9:06:42 AM
Surr: DNOP	88.9	61.7-135	%REC	1	9/23/2009 9:06:42 AM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	33	25	mg/Kg	5	9/24/2009 4:00:18 AM
Surr: BFB	112	65.9-118	%REC	5	9/24/2009 4:00:18 AM
EPA METHOD 8270C: SEMIVOLATIL	.ES				Analyst: JDC
Acenaphthene	ND	1.0	mg/Kg	1 .	10/6/2009 9:39:49 PM
Acenaphthylene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Aniline	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Anthracene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Azobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Benz(a)anthracene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Benzo(a)pyrene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Benzo(b)fluoranthene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Benzo(g,h,i)perylene	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
Benzo(k)fluoranthene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Benzoic acid	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
Benzyl alcohol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Bis(2-chloroethoxy)methane	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Bis(2-chloroethyl)ether	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Bis(2-chloroisopropyl)ether	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Bis(2-ethylhexyl)phthalate	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
4-Bromophenyl phenyl ether	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Butyl benzyl phthatate	ND	1.0	m g/K g	1	10/6/2009 9:39:49 PM
Carbazole	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
4-Chloro-3-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
4-Chloroaniline	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
2-Chloronaphthalene	ND	1.3	mg/Kg	1	10/6/2009 9:39:49 PM
2-Chlorophenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
4-Chlorophenyl phenyl ether	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Chrysene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Di-n-butyl phthalate	ND .	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
Di-n-octyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Dibenz(a,h)anthracene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Dibenzofuran	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
1,2-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
1,3-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
1,4-Dichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
3,3'-Dichlorobenzidine	ND	1.3	mg/Kg	1	10/6/2009 9:39:49 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- j Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-09

Client Sample ID: BKT-W-9

Collection Date: 9/16/2009 10:40:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLAT	TILES			**************************************	Analyst: JD
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Dimethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	10/6/2009 9:39:49 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 9:39:49 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 9:39:49 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 9;39:49 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
Fluoranthene	ND	1.3	mg/Kg	1	10/6/2009 9:39:49 PM
Fluorene	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Hexachlorobutadiene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
.Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 9:39:49 PM
Isophorone	ND	. 2.5	mg/Kg	1	10/6/2009 9:39:49 PM
2-Methylnaphthalene	ND	1.3	mg/Kg	1	10/6/2009 9:39:49 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
3+4-Methylphenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
4-Nitroaniline	ND	1.3	mg/Kg	1	10/6/2009 9:39:49 PM
Nitrobenzene	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
2-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
4-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Pentachlorophenol	ND	2.0	mg/Kg	1	10/6/2009 9:39:49 PM
Phenanthrene	. ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Phenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Pyrene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 9:39:49 PM
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 9:39:49 PM
Surr: 2,4,6-Tribromophenol	81.0	35.5-141	%REC	1	10/6/2009 9:39:49 PM
Surr: 2-Fluorobiphenyl	83.8	30.4-128	%REC	1	10/6/2009 9:39:49 PM
Surr: 2-Fluorophenol	81.2	28.1-129	%REC	1	10/6/2009 9:39:49 PM
Surr: 4-Terphenyl-d14	65.5	34,6-151	%REC	1	10/6/2009 9:39:49 PM
Surr: Nitrobenzene-d5	95.0	26.5-122	%REC	1	10/6/2009 9:39:49 PM
Surr: Phenol-d5	85.8	37.6-118	%REC	1	10/6/2009 9:39:49 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Page 34 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: BKT-W-9

Lab Order:

0909356

Collection Date: 9/16/2009 10:40:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-09

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILE	S				Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DAM
Benzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Toluene	0.68	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Ethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Methyl tert-butyl ether (MTBE)	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,2,4-Trimethylbenzene	0.67	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,3,5-Trimethylbenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,2-Dichloroethane (EDC)	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,2-Dibromoethane (EDB)	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Naphthalene	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
1-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 2:54:12 AM
2-Methylnaphthalene	ND	2.0	mg/Kg	10	9/19/2009 2:54:12 AM
Acetone	ND	7.5	mg/Kg	10	9/19/2009 2:54:12 AM
Bromobenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Bromodichloromethane	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Bramoform	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Bromomethane	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
2-Butanone	ND	5.0	mg/Kg	10	9/19/2009 2:54:12 AM
Carbon disulfide	ND	5.0	mg/Kg	10	9/19/2009 2:54:12 AM
Carbon tetrachloride	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
Chlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Chloroethane	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
Chloroform	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Chloromethane	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
2-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
4-Chlorotoluene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
cis-1,2-DCE	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
cis-1,3-Dichloropropene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,2-Dibromo-3-chloropropane	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
Dibromochloromethane	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Dibromomethane	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
1,2-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,3-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,4-Dichlorobenzene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
Dichlorodifluoromethane	ND	0.50	·mg/Kg	10	9/19/2009 2:54:12 AM
1,1-Dichloroethane	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
1,1-Dichloroethene	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,2-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
1,3-Dichloropropane	ND	0.50	mg/Kg	10	9/19/2009 2:54:12 AM
2,2-Dichloropropane	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM
1,1-Dichloropropene	ND	1.0	mg/Kg	10	9/19/2009 2:54:12 AM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded Н
- MCL Maximum Contaminant Level
 - Reporting Limit

Page 35 of 40

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

API Overflow Sample Points

Project: Lab ID:

0909356-09

Client Sample ID: BKT-W-9

Collection Date: 9/16/2009 10:40:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual U	Jnits	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES		,				Analyst: DAN
Hexachlorobutadiene	ND	1.0	n	ng/Kg	10	9/19/2009 2:54:12 AM
2-Hexanone	ND	5.0	n	ng/Kg	10	9/19/2009 2:54:12 AM
Isopropylbenzene	ND	0.50	n	ng/Kg	10	9/19/2009 2:54:12 AM
4-Isopropyltoluene	ND	0.50	n	ng/Kg	10	9/19/2009 2:54:12 AM
4-Methyl-2-pentanone	ND	5.0	m	ng/Kg	10	9/19/2009 2:54:12 AM
Methylene chloride	ND	1.5	m	ng/Kg	10	9/19/2009 2:54:12 AM
n-Butylbenzene	ND	0.50	. m	ng/Kg	10	9/19/2009 2:54:12 AM
n-Propylbenzene	ND	0.50	m	ng/Kg	10	9/19/2009 2:54:12 AM
sec-Butylbenzene	ND	0.50	m	ng/Kg	10	9/19/2009 2:54:12 AM
Styrene	ND	0.50	m	ig/Kg	10	9/19/2009 2:54:12 AM
tert-Butylbenzene	ND	0.50	m	ng/Kg	10	9/19/2009 2:54:12 AM
1,1,1,2-Tetrachioroethane	ND	0.50	m	ng/Kg	10	9/19/2009 2:54:12 AM
1,1,2,2-Tetrachloroethane	ND	0.50	m	ng/Kg	10	9/19/2009 2:54:12 AM
Tetrachloroethene (PCE)	ND	0.50	· m	ng/Kg	10	9/19/2009 2:54:12 AM
trans-1,2-DCE	ND	0.50	m	ng/Kg	10	9/19/2009 2:54:12 AM
trans-1,3-Dichloropropene	ND	0.50	m	ng/Kg	. 10	9/19/2009 2:54:12 AM
1,2,3-Trichlorobenzene	ND	1.0	m	ng/Kg	10	9/19/2009 2:54:12 AM
1,2,4-Trichlorobenzene	ND	0.50	m	ıg/Kg	10	9/19/2009 2:54:12 AM
1,1,1-Trichloroethane	ND	0.50	m	ig/Kg	10	9/19/2009 2:54:12 AM
1,1,2-Trichloroethane	ND	0.50	m	ıg/Kg	10	9/19/2009 2:54:12 AM
Trichloroethene (TCE)	ND	0.50	· m	g/Kg	10	9/19/2009 2:54:12 AM
Trichlorofluoromethane	ND	0.50	· m	ıg/Kg	10	9/19/2009 2:54:12 AM
1,2,3-Trichloropropane	ND	1.0	m	ıg/Kg	10	9/19/2009 2:54:12 AM
Vinyl chloride	ND	0.50	m	g/Kg	10	9/19/2009 2:54:12 AM
Xylenes, Total	1.1	1.0	m	g/Kg	10	9/19/2009 2:54:12 AM
Surr: 1,2-Dichloroethane-d4	103	84-111	%	REC	10	9/19/2009 2:54:12 AM
Surr: 4-Bromofluorobenzene	102	89.5-108	%	REC	10	9/19/2009 2:54:12 AM
Surr: Dibromofluoromethane	98.1	90.6-123	%	REC	10	9/19/2009 2:54:12 AM
Surr: Toluene-d8	98.0	76.6-106	%	REC	10	9/19/2009 2:54:12 AM

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Oı	เลโ	ifi	ers

Value exceeds Maximum Contaminant Level

Spike recovery outside accepted recovery limits

RL Reporting Limit

Page 36 of 40

Estimated value Ε

J Analyte detected below quantitation limits

Not Detected at the Reporting Limit ND

Analyte detected in the associated Method Blank В

Н Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project:

0909356

Lab.ID:

B09091942-009

Client Sample ID: 0909356-09B; C; BKT-W9

Report Date: 09/24/09

Collection Date: 09/16/09 10:40

DateReceived: 09/21/09 Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ GCL	Method	Arialysis Date / By
IGNITABILITY							
Flash Point (Ignitability)	>200	9 F	,	30		8W1010M	.09/22/09 11:00 / pwc
CORPOSIVITY					٠.		
pH of Soil and Waste	8,55	\$:Ü.		0.10		SW9045D	09/24/09 10:00 / clr
REACTIVITY		:					
Cyanide, Reactive	ND	mg/kg.		0.05	250	SW846 Ch 7	09/28/09 10:27 / kjp
Sulfide, Reactive	ND	mg/kg		20	600	SW846 Ch 7	09/82/09 08:00 / pwe
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		.5		SW6010B	09/22/09 23:36 / 1ao
Barium:	462	mg/kg		5		SWedioB	09/22/09 23:36 / tao
Cadmium	ND	mg/kg		1		SW6010B	09/22/09 23:36 / tao
Chromium	9	mg/kg		5		SW6010B	09/22/09 23:36 / tao
Lead	ЙĎ	mg/kg		· 5 .		SW8010B	09/22/09 23:36 / tao
Metcury	ND	mg/kg		1		SW7471A	09/22/09 13:38 / age
Selenium	ЙĎ	mg/kg		5		SW6010B	09/22/09 23:36 / tao
Silver	ND	mg/kg		.5		SW6010B	09/22/09 23:36 / tao

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level.

ND - Not detected at the reporting limit.

Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: Rolloff Box 20B30

Lab Order:

ler: 0909356

Collection Date: 9/16/2009 11:15:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-10

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	GE ORGANICS	*******			······································	Analyst: SC0
Diesel Range Organics (DRO)	960	200		mg/Kg	20	9/23/2009 12:06:09 PM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	9/23/2009 12:06:09 PN
Surr: DNOP	0	61.7-135	S	%REC	20	9/23/2009 12:06:09 PN
EPA METHOD 8015B: GASOLINE RA	ANGE					Analyst: NSE
Gasoline Range Organics (GRO)	ND	25		mg/Kg	5	9/23/2009 3:28:54 AM
Surr: BFB	99.5	65.9-1 18		%REC	. 5	9/23/2009 3:28:54 AM
EPA METHOD 8270C: SEMIVOLATII	_ES			٠		Analyst: JDC
Acenaphthene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PN
Acenaphthylene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Aniline	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Anthracene	ND	1.0		mg/Kg	1 .	10/6/2009 10:09:33 PM
Azobenzene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Benz(a)anthracene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Benzo(a)pyrene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Benzo(b)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Benzo(g,h,i)perylene	ND	2.5		mg/Kg	1	10/6/2009 10:09:33 PM
Benzo(k)fluoranthene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Benzoic acid	ND	2.5		mg/Kg	1	10/6/2009 10:09:33 PM
Benzyl alcohol	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Bis(2-chloroethoxy)methane	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Bis(2-chloroethyl)ether	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Bis(2-chtoroisopropyl)ether	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Bis(2-ethylhexyl)phthalate	ND	2.5		mg/Kg	1	10/6/2009 10:09:33 PM
4-Bromophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Butyl benzyl phthalate	ND	1.0		m g /Kg	1	10/6/2009 10:09:33 PM
Carbazole	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
4-Chloro-3-methylphenoi	ND	2.5		mg/Kg	1	10/6/2009 10:09:33 PM
4-Chloroaniline	ND	2.5		mg/Kg	1	10/6/2009 10:09:33 PM
2-Chloronaphthalene	ND	1.3		mg/Kg	1	10/6/2009 10:09:33 PM
2-Chlorophenol	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
4-Chlorophenyl phenyl ether	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Chrysene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Di-n-butyl phthalate	ND	2.5		mg/Kg	1	10/6/2009 10:09:33 PM
Di-n-octyl phthalate	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Dibenz(a,h)anthracene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
Dibenzofuran	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
1,2-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
1,3-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
1,4-Dichlorobenzene	ND	1.0		mg/Kg	1	10/6/2009 10:09:33 PM
3,3'-Dichlorobenzidine	ND	1.3		mg/Kg	1	10/6/2009 10:09:33 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0909356

Project: API Overflow Sample Points

Lab ID:

0909356-10

Client Sample ID: Rolloff Box 20B30

Collection Date: 9/16/2009 11:15:00 AM

Date Received: 9/17/2009

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLA	TILES				Analyst: JD0
Diethyl phthalate	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
Dimethyl phthalate	ND .	1.0	m g /Kg	1	10/6/2009 10:09:33 PM
2,4-Dichlorophenol	ND	2.0	mg/Kg	1	10/6/2009 10:09:33 PM
2,4-Dimethylphenol	ND	1.5	mg/Kg	1	10/6/2009 10:09:33 PM
4,6-Dinitro-2-methylphenol	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PM
2,4-Dinitrophenol	ND	2.0	mg/Kg	1	10/6/2009 10:09:33 PM
2,4-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PM
2,6-Dinitrotoluene	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PM
Fluoranthene	ND	1.3	mg/Kg	1	10/6/2009 10:09:33 PM
Fluorene	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PM
Hexachlorobenzene	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
Hexachlorobutadiene	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
Hexachlorocyclopentadiene	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
Hexachloroethane	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
Indeno(1,2,3-cd)pyrene	ND	1.3	mg/Kg	1	10/6/2009 10:09:33 PM
Isophorone	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PN
2-Methylnaphthalene	ND	1.3	mg/Kg	1	10/6/2009 10:09:33 PM
2-Methylphenol	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PM
3+4-Methylphenol	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
N-Nitrosodi-n-propylamine	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
N-Nitrosodiphenylamine	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
Naphthalene	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
2-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
3-Nitroaniline	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
4-Nitroaniline	ND	1.3	mg/Kg	1	10/6/2009 10:09:33 PN
Nitrobenzene	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PN
2-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
4-Nitrophenol	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
Pentachlorophenol	ND	2.0	mg/Kg	1	10/6/2009 10:09:33 PN
Phenanthrene	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
Phenol	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PM
Pyrene	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
Pyridine	ND	2.5	mg/Kg	1	10/6/2009 10:09:33 PN
1,2,4-Trichlorobenzene	ND	1.0	mg/Kg	. 1	10/6/2009 10:09:33 PN
2,4,5-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
2,4,6-Trichlorophenol	ND	1.0	mg/Kg	1	10/6/2009 10:09:33 PN
Surr: 2,4,6-Tribromophenol	72.8	35.5-141	%REC	1	10/6/2009 10:09:33 PM
Surr: 2-Fluorobiphenyl	73.2	30.4-128	%REC	1	10/6/2009 10:09:33 PN
Surr: 2-Fluorophenol	56.5	28.1-129	%REC	1	10/6/2009 10:09:33 PM
Surr: 4-Terphenyl-d14	67.5	34.6-151	%REC	. 1	10/6/2009 10:09:33 PN
Surr: Nitrobenzene-d5	68.6	26.5-122	%REC	1	10/6/2009 10:09:33 PM
Surr: Phenol-d5	59.1	37.6-118	%REC	1	10/6/2009 10:09:33 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: Rolloff Box 20B30

Lab Order:

0909356

Collection Date: 9/16/2009 11:15:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-10

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8270C: SEMIVOLATILES					Analyst: JDC
EPA METHOD 8260B: VOLATILES					Analyst: DA M
Benzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Toluene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Ethylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Methyl tert-butyl ether (MTBE)	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2,4-Trimethylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,3,5-Trimethylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2-Dichloroethane (EDC)	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2-Dibromoethane (EDB)	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Naphthalene	ND	0.030	mg/Kg	1	9/19/2009 3:22:15 AM
•	ND	0.20	mg/Kg	1	9/19/2009 3:22:15 AM
1-Methylnaphthalone	ND	0.20	mg/Kg	1	9/19/2009 3:22:15 AM
2-Methylnaphthalene	ND	0.75		1	9/19/2009 3:22:15 AM
Acetone Bromobenzene			mg/Kg	1	9/19/2009 3:22:15 AM
	ND	0.050	mg/Kg		
Bromodichloromethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Bromoform	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Bromomethane	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
2-Butanone	ND	0.50	mg/Kg	1	9/19/2009 3:22:15 AM
Carbon disulfide	ND	0.50	mg/Kg	1	9/19/2009 3:22:15 AM
Carbon tetrachloride	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
Chlorobenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Chloroethane	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
Chloroform	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Chloromethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
2-Chlorotoluene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
4-Chlorotoluene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
cis-1,2-DCE	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
cis-1,3-Dichloropropene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2-Dibromo-3-chloropropane	ND .	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
Dibromochloromethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Dibromomethane	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
1,2-Dichlorobenzene	ND	0.050	mg/Kg	1,	9/19/2009 3:22:15 AM
1,3-Dichlorobenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,4-Dichlorobenzene	ND	0.050	mg/Kg	. 1	9/19/2009 3:22:15 AM
Dichlorodifluoromethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,1-Dichloroethane	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
1,1-Dichloroethene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2-Dichloropropane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,3-Dichloropropane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
2,2-Dichloropropane	ND	0.10	m g /Kg	1	9/19/2009 3:22:15 AM
1,1-Dichloropropene	·ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

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Date: 08-Oct-09

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: Rolloff Box 20B30

Lab Order:

0909356

Collection Date: 9/16/2009 11:15:00 AM

Project:

API Overflow Sample Points

Date Received: 9/17/2009

Lab ID:

0909356-10

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES				(1	Analyst: DAN
Hexachlorobutadiene	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
2-Hexanone	ND	0.50	mg/Kg	1	9/19/2009 3:22:15 AM
Isopropylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
4-Isopropyltoluene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
4-Methyl-2-pentanone	ND	0.50	mg/Kg	1	9/19/2009 3:22:15 AM
Methylene chloride	ND	0.15	mg/Kg	1	9/19/2009 3:22:15 AM
n-Butylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
n-Propylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
sec-Butylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Styrene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
tert-Butylbenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,1,1,2-Tetrachloroethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,1,2,2-Tetrachloroethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Tetrachloroethene (PCE)	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
trans-1,2-DCE	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
trans-1,3-Dichloropropene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2,3-Trichlorobenzene	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
1,2,4-Trichlorobenzene	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,1,1-Trichloroethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,1,2-Trichloroethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Trichloroethene (TCE)	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Trichlorofluoromethane	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
1,2,3-Trichloropropane	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
Vinyl chloride	ND	0.050	mg/Kg	1	9/19/2009 3:22:15 AM
Xylenes, Total	ND	0.10	mg/Kg	1	9/19/2009 3:22:15 AM
Surr: 1,2-Dichloroethane-d4	92.8	84-111	%REC	1	9/19/2009 3:22:15 AM
Surr: 4-Bromofluorobenzene	96.0	89.5-108	%REC	1	9/19/2009 3:22:15 AM
Surr: Dibromofluoromethane	94.9	90.6-123	%REC	1	9/19/2009 3:22:15 AM
Surr: Toluene-d8	99.4	76.6-108	%REC	1	9/19/2009 3:22:15 AM

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Value exceeds Maximum Contaminant Level

Page 40 of 40

Ε Estimated value

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

Analyte detected in the associated Method Blank В

Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

LABORATORY ANALYTICAL REPORT

Client:

Hall Environmental

Project: Lab JD:

0909356

Report Date: 09/24/09

Collection Date: 09/16/09 11:16

B09091942-010

DateReceived: 09/21/09 Matrix: Soil

Client Sample ID: 0909356-10B, C, Holloff Box 20B30

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
IGNITABILITY						· · ·	·
Flash Point (Ignitability)	>200	۰Ł		30		MOTOTW8	09/22/09 11:00 / pwc
CORROSIVITY	٠						
pH of Soil and Waste	7.59	šų.	•	0/10		SW9045D	.09/24/09 10:00:/ clir
REACTIVITY							
Cyanide, Reactive	ŅD	mg/kg		0.05	250	SW846 Ch 7	09/23/09 10:36 / kjp
Sulfide, Reactive	МD	mg/kg		20	500	SW846 Ch 7	09/35/09 08:00 / pwc
METALS, TOTAL - EPA SW846							
Arsenic	ND	mg/kg		5		SW6010B	09/22/09 23:40 / tao
Barium	364	mg/kg		5		SW6010B	09/22/09 23:40 / tao
Cadmium	ND	mg/kg		1		SW6010B	09/22/09 23:40 / tao
Chroinlum	11	mg/kg		5		SW6010B	09/22/09 23:40:/ tao
Lead	ND	mg/kg		5		SW6010B	09/22/09 23:40 / 180
Mercury.	ND	mg/kg		1		SW7471A	09/22/09 13:41 / age
Selenium	ND	mg/kg		5		SW6010B	09/22/09 28:40 / tao
Silver	ŅĐ	mg/kg		5		SW6010B	09/22/09 23:40 / tao

Report Definitions: RL - Analyte reporting limit.

QCL - Quality control limit.

MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

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Chain-of-Custody Record	₹ F	Ğ	Addi	Gallup	#	rFax	Packa	Standard	<u>*</u>	EDD (Type)		Time	9:15	9:25	Ġ	ŏ	94.48	9.5	<u>ö</u>			11:15	#		Time:	ijile;		If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly negated in the property of the property of the clear of the clearly negated in the property of the clear of the
O	Client:		Mailing Address:	(g)	Phone #:	email or Fax#:	QA/QC Package	Stan	□ Other			Date	9-16-69	6-16-69	9-16-69	2h:6001.45	5091-6	85.6 69-98	कारुळ	4-16-69	46.09	4-16-69	9915	,	Date: Time: 4-17.00 100 0	ie (=
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QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

0909356

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8015B: D Sample ID: MB-20143	Diesel Range	Organics MBLK				Batch ID:	20143	Analysi	s Date:	9/22/2009 8	3:59:19 AM
Diesel Range Organics (DRO) Motor Oli Range Organics (MRO)	ND ND	mg/Kg mg/Kg	10 50								
Sample ID: LCS-20143		LCS				Batch ID:	20143	Analysis	s Date:	9/22/2009 9	9:35:00 AM
Diesel Range Organics (DRO) Sample ID: LCSD-20143	39.58	mg/Kg LCSD	10	50	0	79.2 Batch ID:	64.6 20143	116 Analysis	B Date:	9/22/2009 10):10:57 AM
Diesel Range Organics (DRO)	44.69	mg/Kg	10	50	0	89.4	64.6	116	12.1	17.4	
Method: EPA Method 8015B: G	asoline Rar	nge									
Sample ID: 0909356-01A MSD		MSD				Batch ID:	20138	Analysis	s Date:	9/24/2009 5	:31:16 AM
Gasoline Range Organics (GRO) Sample ID: MB-20138	29.65	mg/Kg <i>MBLK</i>	25	25	6.4	93.0 Batch ID:	69.5 2013 8	120 Analysis	15.4 5 Date:	11.6 9/22/2009 6	R :53:29 PM
Gasoline Range Organics (GRO) Sample ID: LCS-20138	ND	mg/Kg LCS	5.0			Batch ID:	20138	Analysis	s Date:	9/22/2009 7	':23:52 PM
Gasoline Range Organics (GRO) Sample ID: 0909356-01A MS	2 5.13	mg/Kg <i>MS</i>	5.0	25	2.98	88.6 Batch ID:	64.4 2013 8	133 Analysis	s Date:	9/24/2009 5	:00:55 AM
Gasoline Range Organics (GRO)	25.40	mg/Kg	25	25	6.4	76.0	69.5	120			

Qualifiers:

- E Estimated value
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

0909356

Project: API Ov	erflow Sample F								77 0126	Order:	0909356
Analyte	Result	Units	PQL	ŞPK Va S	PK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 826	0B: VOLATILES						· -				
Sample ID: 0909356-10a ms	sď	MSD				Batch ID:	20138	Analys	is Date:	9/18/2009 1	0:14:06 PN
Benzene	1.215	mg/Kg	0.050	1	0	122	82.3	107	6.29	20	s
Toluene	1.018	mg/Kg	0.050	1	0	102	79.8	104	3.16	20	
Chlorobenzene	1.050	mg/Kg	0.050	1	0	105	84.8	103	6.04	20	s
1,1-Dichloroethene	1.352	mg/Kg	0.050	1	0	135	55.9	129	9.14	20	s
Trichloroethene (TCE)	1.196	mg/Kg	0.050	1	0	120	77.5	102	6.32	20	S
Sample ID: mb-20138		MBLK				Batch ID:	20138	Analys	is Date:	9/18/2009	B:49:41 PN
Benzene	ND	mg/Kg	0.050								
Toluene	ND	mg/Kg	0.050								
Ethylbenzene	ND	mg/Kg	0.050								
Methyl tert-butyl ether (MTBE)		mg/Kg	0.050								
1,2,4-Trimethylbenzene	ND	mg/Kg	0.050								
1,3,5-Trimethylbenzene	ND	mg/Kg	0.050								
1,2-Dichloroethane (EDC)	ND	mg/Kg	0.050								
1,2-Dibromoethane (EDB)	ND	mg/Kg	0.050								
Naphthalene	ND	mg/Kg	0.10								
1-Methylnaphthalene	ND	mg/Kg	0.20								
2-Methylnaphthalene	ND	mg/Kg	0.20					•			
Acetone	ND	mg/Kg	0.75								
Bromobenzene	ND	mg/Kg	0.050								
Bromodichloromethane	ND	mg/Kg	0.050								
Bromoform	ND	mg/Kg	0.050								
Bromomethane	ND	mg/Kg	0.10								
2-Butanone	ND	mg/Kg	0.50								
Carbon disulfide	ND	mg/Kg	0.50								
Carbon tetrachloride	ND	mg/Kg	0.10								
Chlorobenzene	ND	mg/Kg	0.050								•
Chloroethane	ND	mg/Kg	0.10								
Chloroform	ND	mg/Kg	0.050								
Chloromethane	ND	mg/Kg	0.050								
2-Chlorotoluene	ND	mg/Kg	0.050				•				
4-Chlorotoluene	ND	mg/Kg	0.050								
cis-1,2-DCE	ND	mg/Kg	0.050								
cis-1,3-Dichloropropene	ND	mg/Kg	0.050								
1,2-Dibromo-3-chloropropane	ND	mg/Kg	0.10								
Dibromochloromethane	ND	mg/Kg	0.050								
Dibromomethane	ND	mg/Kg	0.10								
1.2-Dichlorobenzene	ND	mg/Kg	0.050								
1,3-Dichlorobenzene	ND	mg/Kg	0.050								
1,4-Dichlorobenzene	ND	mg/Kg	0.050								
Dichlorodifluoromethane	ND	mg/Kg	0.050								
1,1-Dichloroethane	ND	mg/Kg	0.10								
1,1-Dichloroethene	ND	mg/Kg	0.050								
1,2-Dichloropropane	ND	mg/Kg	0.050								
1,3-Dichloropropane	ND	mg/Kg	0.050								•

Qualifiers:

Page 2 .

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

0909356

Analyte	Result	Units	PQL	SPK Va SPK re	f %Rec	LowLimit Hi	ghLimit	%RPD	RPDLimit	Qual
Method: EPA Method 8260B:	VOLATILES									
Sample ID: mb-20138	•	MBLK			Batch ID:	20138	Analys	is Date:	9/18/2009	8:49:41 PN
2,2-Dichloropropane	ND	mg/Kg	0.10							
1,1-Dichloropropene	ND	mg/Kg	0.10							
Hexachlorobutadiene	ND	mg/Kg	0.10							
2-Hexanone	ND	mg/Kg	0.50							
Isopropylbenzene	ND	mg/Kg	0.050							
4-Isopropyltoluene	ND	mg/Kg	0.050							
4-Methyl-2-pentanone	ND	mg/Kg	0.50							
Methylene chloride	ND	mg/Kg	0.15							
n-Butylbenzane	NĎ	mg/Kg	0.050							
n-Propylbenzene	, ND	mg/Kg	0.050							
sec-Butylbenzene	ND	mg/Kg	0.050						•	
Styrene	· ND	mg/Kg	0.050							
tert-Butylbenzene	ND	mg/Kg	0.050							
1,1,1,2-Tetrachloroethane	ND	mg/Kg	0.050							
1,1,2,2-Tetrachloroethane	ND	mg/Kg	0.050							
Tetrachloroethene (PCE)	ND	mg/Kg	0.050							
trans-1,2-DCE	ND	mg/Kg	0.050							
trans-1,3-Dichloropropene	ND	mg/Kg	0.050							
1,2,3-Trichlorobenzene	NĐ	mg/Kg	0.10		,					
1,2,4-Trichlorobenzene	ND	mg/Kg	0.050							
1,1,1-Trichloroethane	ND	mg/Kg	0.050							
1,1,2-Trichloroethane	ND	mg/Kg	0.050							
Trichloroethene (TCE)	ND	mg/Kg	0.050							•
Trichlorofluoromethane	ND	mg/Kg	0.050							
1,2,3-Trichloropropane	ND	mg/Kg	0.10							
Vinyl chloride	ND	mg/Kg	0.050							
Xylenes, Total	ND	mg/Kg	0.10	• •						
Sample ID: lcs-20138		LCS			Batch ID:	20138	Analysi	s Date:	9/18/2009 9	:17:48 PM
Benzene	1.090	mg/Kg	0.050	1 0	109	84.5	114			
Toluene	0.9452	mg/Kg	0.050	1 0	94.5	85.4	109			
Chlorobenzene	0.9475	mg/Kg	0.050	1 0	94.7	86.8	110			
1,1-Dichloroethene	1.182	mg/Kg	0.050	1 0	118	74.4	129			
Trichloroethene (TCE)	1.041	mg/Kg	0.050	1 0	104	77.8	114			
Sample ID: 0909356-10a ms		MS			Batch ID:	20138	Analysi	s Date:	9/18/2009 9	:45:55 PM
Benzene	1.141	mg/Kg	0.050	1 0	114	82.3	107			s
Toluene	0.9867	mg/Kg	0.050	1 0	98.7	79.8	104			
Chlorobenzene	0.9882	mg/Kg	0.050	1 0	98.8	84.8	103			
1,1-Dichloroethene	1.234	mg/Kg	0.050	1 0	123	55.9	129			
Trichloroethene (TCE)	1.122	mg/Kg	0.050	1 0	112	77.5	102			S

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E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

0909356

Analyte	Result	Units	PQL	SPK Va SPK ref	%Rec Lo	wLimit Hig	hLimit	%RPD	RPDLimit	Qual
Method: EPA Method 82700	: Semivolatile:									
Sample ID: mb-20212		MBLK			Batch ID:	20212	Analys	is Date:	10/6/2009	3:43:13 PN
Acenaphthene	ND	mg/Kg	0.20							
Acenaphthylene	ND	mg/Kg	0.20				•			
Aniline	ND	mg/Kg	0.20							
Anthracene	ND	mg/Kg	0.20							
Azobenzene	ND	mg/Kg	0.20							
Benz(a)anthracene	ND	mg/Kg	0.20							
Benzo(a)pyrene	ND	mg/Kg	0.20							
Benzo(b)fluoranthene	ND	mg/Kg	0.20							
Benzo(g,h,i)perylene	ND	mg/Kg	0.50							
Benzo(k)fluoranthene	ND	mg/Kg	0.20							
Benzoic acid	ND	mg/Kg	0.50							
Benzyl alcohol	ND	mg/Kg	0.20							
Bis(2-chloroethoxy)methane	ND	mg/Kg	0.20							
Bis(2-chloroethyl)ether	ND	mg/Kg	0.20							
Bis(2-chloroisopropyl)ether	ND	mg/Kg	0.20							
Bis(2-ethylhexyl)phthalate	ND	mg/Kg	0.50							
4-Bromophenyl phenyl ether	ND	mg/Kg	0.20		1					
Butyl benzyl phthalate	ND	mg/Kg	0.20							
Carbazole	ND	mg/Kg	0.20							
4-Chloro-3-methylphenol	ND	mg/Kg	0.50							
4-Chloroaniline	ND	mg/Kg	0.50							
2-Chloronaphthalene	ND	mg/Kg	0.25							
2-Chlorophenol	ND	mg/Kg	0.20							
4-Chlorophenyl phenyl ether	ND	mg/Kg	0.20							
Chrysene	ND	mg/Kg	0.20							
Di-n-butyl phthalate	ND	mg/Kg	0.50							
Di-n-octyl phthalate	ND	mg/Kg	0.20							
Dibenz(a,h)anthracene	ND	mg/Kg	0.20							
Dibenzofuran	ND	mg/Kg	0.20							
1,2-Dichlorobenzene	ND	mg/Kg	0.20							
1,3-Dichlorobenzene	ND	mg/Kg	0.20							
1,4-Dichlorobenzene	ND	mg/Kg	0.20							
3,3'-Dichlorobenzidine	ND	mg/Kg	0.25							
Diethyl phthalate	ND	mg/Kg	0.20							
Dimethyl phthalate	ND	mg/Kg	0.20							
2,4-Dichlorophenol	ND	mg/Kg	0.40							
2,4-Dimethylphenol	ND	mg/Kg	0.30							
I,6-Dinitro-2-methylphenol	ND	mg/Kg	0.50							
2,4-Dinitrophenol	ND	mg/Kg	0.40					•		
2,4-Dinitrotoluene	ND	mg/Kg	0.50							
2,6-Dinitrotoluene	ND	mg/Kg	0.50							
Fluoranthene	ND	mg/Kg	0.25							
Tuorene	ND	mg/Kg	0.50							
lexachlorobenzene	ND	mg/Kg	0.20							

Qualifiers:

- E Estimated value
- J Analyte detected below quantitation limits
- R RPD outside accepted recovery limits

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QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

0909356

Analyte	Result	Units	PQL	SPK Va	SPK ref	%Rec I	LowLimit H	lighLimit	%RPD	RPDLimit	Qual
Method: EPA Method 82700	: Semivolatile										
Sample ID: mb-20212		MBLK				Batch ID:	20212	Analys	is Date:	10/6/2009	3:43:13 Pi
Hexachlorobutadiene	ND	mg/Kg	0.20								
Hexachlorocyclopentadiene	ND	mg/Kg	0.20								
Hexachloroethane	ND	mg/Kg	0.20								
Indeno(1,2,3-cd)pyrene	ND	mg/Kg	0.25						•		
Isophorone	ND	mg/Kg	0.50				•				
2-Methylnaphthalene	ND	mg/Kg	0.25								
2-Methylphenol	ND	mg/Kg	0.50								
3+4-Methylphenol	ND	mg/Kg	0.20								
N-Nitrosodi-n-propylamine	ND	mg/Kg	0.20								
N-Nitrosodiphenylamine	ND	mg/Kg	0.20								
Naphthalene	ND	mg/Kg	0.20								
2-Nitroaniline	ND	mg/Kg	0.20								
3-Nitroaniline	ND	mg/Kg	0.20								
4-Nitroaniline	ND	mg/Kg	0.25								
Nitrobenzene	ND	mg/Kg	0.50								
2-Nitrophenol	ND	mg/Kg	0.20								
4-Nitrophenol	ND	mg/Kg	0.20								
Pentachtorophenol	ND	mg/Kg	0.40								
Phenanthrene	ND	mg/Kg	0.20								
Phenol	ND	mg/Kg	0.20								
Pyrene	ND	mg/Kg	0.20								
Pyridine	ND	mg/Kg	0.50								
1,2,4-Trichlorobenzene	ND	mg/Kg	0.20								
2,4,5-Trichlorophenol	ND	mg/Kg	0.20								
2,4,6-Trichlorophenol	ND	mg/Kg	0.20								
Sample ID: Ics-20212		LCS				Batch ID:	20212	Analysi	is Date:	10/6/2009 4	:12:47 PM
Acenaphthene	1.146	mg/Kg	0.20	1.67	0	68.6	42.5	90			
1-Chloro-3-methylphenol	2.197	mg/Kg	0.50	3.33	0	66.0	39.6	101			
2-Chlorophenot	2.132	mg/Kg	0.20	3.33	0	64.0	40.1	96.7			
1,4-Dichlorobenzene	1.131	mg/Kg	0.20	1.67	0	67.7	34.6	95.3			
2,4-Dinitrotoluene	1.128	mg/Kg	0.50	1.67	0	67.5	37.1	101			
N-Nitrosodi-n-propylamine	1.207	mg/Kg	0.20	1.67	0	72.3	33.3	103			
I-Nitrophenol	2.260	mg/Kg	0.20	3.33	0	67.9	32.7	125			
Pentachlorophenol	2.353	mg/Kg	0.40	3.33	0	70.7	35.5	99.3			
Phenol	2.209	mg/Kg	0.20	3.33	0	66.3	35.5	104			
Pyrene	1.204	mg/Kg	0.20	1.67	0	72.1	34.4	90.6			
,2,4-Trichlorobenzene	1.205	mg/Kg	0.20	1.67	0	72.2	38.5	95			
iample ID: lcsd-20212		LCSD				Batch ID:	20212	Analysis	s Date:	10/6/2009 4	:42:28 PM
cenaphthene	1.149	mg/Kg	0.20	1.67	0	68.8	42.5	90	0.261	25	
-Chloro-3-methylphenol	2.300	mg/Kg	0.50	3.33	ō	69.1	39.6	101	4.57	25	
-Chlorophenol	2.218	mg/Kg	0.20	3.33	ō	66.6	40.1	96.7	3.97	25	
,4-Dichlorobenzene	1.141	mg/Kg	0.20	1.67	ō	68.3	34.6	95.3	0.881	25 25	
	1.242	mg/Kg	0.50	1.67	0	74.4	37.1	101	9.62	25 25	
,4-Dinitrotoluene											

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sample Points

Work Order:

0909356

Analyte	Result	Units	PQL	SPK Va S	SPK ref	%Rec L	owLimit Hi	ghLimit	%RPD	RPDLimit (Qual
Method: EPA Method 8270	C: Semivolatiles				,						
Sample ID: lcsd-20212		LCSD				Batch ID:	20212	Analys	is Date:	10/6/2009 4:4	2:28 PM
4-Nitrophenol	2.268	mg/Kg	0.20	3.33	0	68.1	32.7	125	0.339	25	
Pentachlorophenol	2.260	mg/Kg	0.40	3.33	0	67.9	35.5	99.3	4.02	25	
Phenol	2.198	mg/Kg	0.20	3.33	0	66.0	35.5	104	0.499	25	
Pyrene	1.225	mg/Kg	0.20	1.67	0	73.4	34,4	90.6	1.73	25	
1,2,4-Trichlorobenzene	1.169	mg/Kg	0.20	1.67	0	70.0	38.5	95	3.03	25	

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits



ENERGY LABORATORIES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916 Toll Free 800.735.4489 * 406.252.6325 * FAX 406.252.6069 * ell@energylab.com

QAQC Summary Report

Client: Hall Environmental

Project: 0909356.

Report Date: 09/24/09

Work Order: B09091942

Analyte	Result Units	AL %F	EC	Low Limit	Hìgh Limit	RPD	RPDLimit	Qual
Method: SW1010M							Batch	·R136387
Sample ID: LCS-136387	Laboratory Control Sample			Run; MISC-H	IZW_090922C		09/22	2/09 11:00
Flash Point (Ignitability)	.88.3 °F	30	99	98	102			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Client: Hall Environmental

Project: 0909356

Report Date: 09/24/09 Work Order: 809091942

Analyte		Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	SW6010B	<u> </u>			 	<u> </u>	and and defending the authorisate		Be	lch: 41536
Sample ID:	MB-41636	Method Blank	<u>.</u>			Run: JOP20	090922A		09/2	2/09 21:23
Arsenic		ND	/mg/kg	0.9			•			* •
Barium:		ND:	mg/kg	0,07						
Cadmlum		ND.	mg/kg	0.05						
Chromium		NO	rng/kg	0.1						
Lead		ND	mg/kg	0.5						
Selenium		ND	mg/kg	2.						
Silver		ND	mg/kg	0.2	*					
Sample ID:	LC\$3-41536	Laboratory Co	ntrol Sample			Run: ICP20	2-B_090922A		09/22	/09 21:39
Arsenic		150	mg/kg	5.0	87	70	130			
Barium		322	mg/kg	5:0	91	70	130			
Cadmium		49.5	mg/kg	-1.0	90	70	130			
Chromium		105	mg/kg	5.0	93	70	130			
Lead		112	mg/kg	8.0	91	70	130			
Selenium		95.7	mg/kg	5.0	84	70	130			
Silver		59.7	mg/kg	5.0	91	70	130			
Sample ID:	B09091884-001AMS3	Sample Matrix	Spike			Run: ICP20	2-B_090922A		09/22	/09/22:15
Arsenic	·	46.9	mg/kg	5.0	80	75	125			
Barium	•	66.4	mg/kg	5,0	81	75	125			
Cadmium		21.9	mg/kg	1.0	86	<i>7</i> 5	125			•
Chromlum		52,8	mg/kg	5.0	85	75	125			
Lead		114	mg/kg	5,0	101	75	125			
Selenium		33.6	mg/kg	5.0	67	75	125			S
gilvet		18,8	mg/kg	5.0	76	75	125	•		
Sample ID:	B09091884-001AMSD3	Sample Matrix	Spike Duplicate)		Run: ICP20	2-B_090922A		09/22	09 22:28
Arsenic		44.7	mg/kg	5.0	76	. 75	125	4,9	20	
Barium		64.5	mg/kg	5.0	78	76	125	2.8	20	
Sadmium		21.0	mg/kg	1:0	82	75	125	4	20	
Chromium		51.6	mg/kg	5.0	83	75	125	2.2	20	
ead		120	mg/kg	5.0	113	75	125	5.2	20	
Selenium		32.1	mg/kg	5.0	64	75	125	4.6	20	·S
Silver		17,6	mg/kg	5:0	71	7,5	125	6.7	20	,S
,	B09091942-003ADIL	Serial Dilution				Run: ICP20	2-B_090922A			09 22:44
Arsenic		ND	mg/kg	5,0		0	Ď		10	
Bariom		344	mg/kg	5.0		0	Q.	1.1	10	
Cadmium	* .	ND	mg/kg	1.0		Ō	0		10	
Chromium		4.45	mg/kg	5.0		Ó	0		10	N
ead		ND	mg/kg	8.9		0	Ò		10	
Selenium		ND	mg/kg	8.7		0	0		10	
Silver		МÐ	mg/kg	5.0		0	0		10	

Qualifiers:

RL - Analyte reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



Client: Hall Environmental

Project: 0909356

Report Date: 09/24/09 Work Order: 809091942

Analyte		Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	SW6010B			· .		-		********	Bat	ch: 41536
Sample ID:	MB-41536	Method Blan	k:			Run: ICP20	02-B_090923A		09/23	/09 15 44
Arsenic		ND	mg/kg	0.9		•				
Barium		ND	mg/kg	0.07						
Cadmium		ND	mg/kg	0.05					•	
Chromlum		ND:	mg/kg	0.1						
Lead		ND:	mg/kg	0.5						
Selenium		ND:	mg/kg	2						
Silver		ŅĎ	mg/kg	0.2						
Method:	SW6010B				,,_, ,. b. o ,i		Analy	ical Rur	: ICP202-B_	090922A
Sample ID:	QCS	Initial Calibra	tion Varification	Standard					09/22	09 11:06
Arsenic		0.840	mg/L	0.10	105	90	110			
Barium		0.782	mg/L	0:10	98	90	110			
Cadmium		0.408	mg/L	0.010	102	90	110			
Ghromlum		0.834	mg/L	0:050	104	90	110			
Lead	•	0.822	mg/L	0.050	103	90	110			
Selenium		0.844	mg/L	0.10	105	90	110			
Silver		0.411	mg/L	0.010	103	90	110			
Sample ID:	ICSA	Interference C	Check Sample	A.					09/22	09 11:22
Arsenic		-0.00255	mg/L	0.10		-0,1	0,1			
Barlum		0,000570	mg/L	0.10		-0.005	0.0005			
Cadmium		0.00451	mg/L	0.010		-0.001	0.001			
Chromium		0.00162	mg/L	0.050		-0.01	0/01			
Lead		-0.0527	mg/L	0.050		0.01	0.01			
Selenium		+0.0377	mg/L	0.10		-0.1	.0.11			
Silver		0.00266	mg/L	0.010		-0.005	0.005			
Sample ID:	ICSAB	Interference C	heck Sample A	ÁΒ					09/22/	09 11:26
Arsenic		1.06	mg/L	0.10	106	8.0	120.			
Barium		0.507	mg/L	0.10	101	.80	120			
Cadmium		1.00	mg/L	0.010	100	80	120			
Chromium		0.523	mg/L	0:050	105	80	120			
_ead		1.01	mg/L	0.050	101	80	120			
Selenium		0.932	mg/L	0.10	93	80	120			
			541	4:44		1	14 - 14 ·			

0.010

101

Qualiflers:

Silver

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

80

120

1.10

mg/L



Client: Hall Environmental

Project: 0909356

Report Date: 09/24/09 Work Order: B09091942

Analyle	oren en Result	Units	RL	•		High Limit		RPDLIMIL	Qual	
Method:	9W6010B	 			<u> </u>		Analyl	Ical Run	JCP202-B	090923A
Sample ID:	QCS	Initial Calibra	llon Verificatio	n Standard					09/23	/09 10:46
Arsenic		0.777	mg/L	0.10	97	90	110			
Barium		0.814	mg/Ľ	0.10	102	90	110			
Sample ID:	ĪCSĀ	Interference (Theck Sample	Á					09/23	/09 11:02
Arsenic		0.00387	mg/L	0:10		-0.1	0.1			
Barium	•	0.000310	mg/L	0.10		-0.005	0.0005			
Sample ID:	ICSAB	Interference C	heck Sample	АВ					09/23	/09:11:06
Arsenic	**	0.988	mg/L	0.10	99	80	120			
Barium		0.522	mg/L	0.10	104	80	120			
Method:	SW6020	· · · · · · · · · · · · · · · · · · ·	<u> موشیعت بیان مایست پیشر به ده م</u>	لطليعته المصدوق ويروي بما المحادث والمهاري			· · · · · · · · · · · · · · · · · · ·		Bate	h) 41536
Sample ID:	MB-41536	Method Blank				Run; ICPM	S203-B_090923A	r [‡]	09/23	/09 18:34
Arsenio		ND	mg/kg	0.02						
Selenium		ND	mg/kg	0.05						
Silver		0.010	mg/kg	0.005						
Sample ID:	LCS3-41536	Laboratory Co	ntrol Sample			Run: ICPM:	\$203-B_090923A	;	09/23	09 18:39
Arsenic		162	mg/kg	5:0	94	70.	130			
Selenium		112	mg/kg	5.0	98	70	130			
Silver		67.4	mg/kg	5.0	103	70	130.			
Sample ID:	B09091942-001ADIL	Serial Dilution				Bun: ICPMS	5203-B_090923A		09/23/	09 18:57
Arsenic		1,70	mg/kg	5.0		Þ	Ø		10	N
Selenium		ЙD	mg/kg	5.0		Q	Ø.		10	
Silver		0.278	mg/kg	5.0		Ŏ.	0_		10	Ŋ
Sample ID:	B09091684-001AMS3	Sample Matrix	Spike			Run: ICPMS	5203-B_090923A		09/23/	09 19:57
Arsenic		49.2	mg/kg	5.0	82	75	125			
Selenium		46:2	mg/kg	5.0	92	75	125			
Silver		20:6	mg/kg	5.0	83	75	125			·
Sample ID:	809091884-001AMSD3	Sample Matrix	Spike Duplica	ite		Run: ICPMS	203-B_090923A		09/23/	09:20:20
Arsenic		49.3	mg/kg	5.0	83	. 75	125°	0.3	20	
Selenium		44.6	mg/kg	5.0	89	75	125	3.6	20	
Silver	•	20.1	mg/kg	5.0	81	7,5	125	2.2	20	

Qualiflers:

RL - Analyte reporting limit.

 \mbox{N} - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

NO - Not detected at the reporting limit.



Client: Hall Environmental

Project: 0909356

Report Date: 09/24/09

Work Order: B09091942

Analyte		Result	Units:	RL	%REC	Low Limit	High Limit	RPD RPD	Limit	Qual
Method:	SW6020						Analytica	Run, ICPMS	3203-B	090923/
Sample ID:	QGS-090602A,090609B,0	Initial Calibrat	ion Verification Si	tandard					09/23	709 15:02
Arsenic		0.0487	mg/L	0.0010	97	90	110			
Selenium		0.0502	mg/L	0.0010	100	90	110			
Silver		0,0246	mg/L	0.0010	98	90	#10.			
Sample ID:	ICSA-ME090423A	Interference C	heck Sample A						09/23	/09 15:07
Arsenic		7.20E-05	mg/L	0.0010						
Selenium		0,000221	mg/L	0.0010						
Silver		0.000165	mg/L	0.0010					·	
Sample ID:	ICSAB-ME090423A,0901	Interference C	heck Sample AB	:					09/23	/09 15:11
Arsenic		0.0101	mg/Ľ	0.0010	101	7.0	130		•	
Selenium		0.00969	mg/L	0.0010	97	70	130			
Silver		0.0202	mg/L	0.0010	101	70	130			
Method:	SW7471A			14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					Bato	h: 41674
Sample ID:	MB-41574	Melhod Blank				Run: HGCV	201-B_090922A		09/22	09 13:07
Mercury		ND	mg/kg	0.05						
Sample ID:	LCS3-41574	Laboratory Co	ntrol Sample			Run HGCV	/201-B_090922A		09/22/	09 13:10
Mercury		4.98	mg/kg	1.0	100	70	130	-		
Sample ID:	B09091942-010AMS3	Sample Matrix	Spike			Run: HGOV	201-B_090922A		09/22/	09 13:43
Mercury		11,5	mg/kg	1,0	117	70	130			
Sample ID:	B09091942-010AMSD3	Sample Matrix	Spike Duplicate			Run: HGCV	201-B_090922A		09/22/	09 13:45
Mercury	•	11.4	mg/kg	1.0	116	70	130	8.0	30	
Sample ID:	B09091943-001ADIL	Serial Dilution				Run: HGCV	201-B_090922A		09/22/	09 13:50
Mercury		0:667	mg/kg	1.0		0	0		20	N.
Method:	SW7471A			· · · · · · · · · · · · · · · · · · ·			Analytica	Run: HGCV	201-B_	090922A
Sample ID:	ÖGS	Initial Calibration	on Verification St	andard					09/22/	09:13:00
Mercury	्राच्याच्याच्याच्याच्याच्याच्याच्याच्याच्य	0.00193	mg/kg	1.0	97	85	115			
Viethod:	SW846 Ch 7			<u></u>		· .		~,· * 	Bato	h: 41652
Sample ID:	MB-41552	Method Blank				Run: AUTO	AN201-B_09092	3A;	09/23/	09 10:07
Cyanide, Re:		ND	mg/kg	0.05						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit,

 $\ensuremath{\text{N}}$ - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.



Client: Hall Environmental

Project: 0909356

Report Date: 09/24/09 Work Order: B09091942

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RAD	RPDLImit	Qual
Method: SW846 Ch 7		to the state of th					**********	Batch	R136373
Sample ID: MB-R136373 Sulfide, Reactive	Method Blank NO	mg/kg	10		Run; MISC	-HZW_090922B		09/2 <i>2</i>	/09/08:00
Sample ID: LCS-R136373 Sulfide, Reactive	Laboratory Co	ntrol Sample mg/kg	20	133	Run: MISC 50	HZW_090922B 150		.09/22	709 08:00
Method: SW9045D	THE PARTY OF THE P					Analytica	i Run:	PH METER_	090924A
Sample ID: ICV	Initial Calibration	on Verification S	itendard					09/24	/09 10:00
pH of Soil and Waste	3.97	S.U _i .	0:10	99	98	102:			
Method: SW9045D								Batch:	R136481
Sample ID: B09091942-001ADUP pH of Soil and Waste	Sample Dublic 7.66	ate s.u.	0.10		Run PH MI	ETER_090924A	0.9	09/24/ 10	/09.10.00

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Sample Receipt Checklist

Date Received:

9/17/2009

Client Name WESTERN REFINING GALLUT			Date Received	d:	9/17/2009
Work Order Number 0909356 Checklist completed by:	\rangle	91:	Received by Sample ID la	: TLS abels checked by:	Initials TS
Signature	J	/ / · C	ne (
Matrix:	Carrier name: <u>Cl</u>	ient dro	p-off		
Shipping container/cooler in good condition?	Ye	es 🗹	· No 🗆	Not Present	
Custody seals intact on shipping container/coole	er? Ye	es 🗌	No 🗌	Not Present	Not Shipped 🗹
Custody seals intact on sample bottles?	Ye	s 🗌	No 🗌	N/A ☑	
Chain of custody present?	Ye	s 🗹	No 🗆		
Chain of custody signed when relinquished and	received? Ye	s 🗸	No 🗌		
Chain of custody agrees with sample labels?	Υe	s 🗹	No 🗌		
Samples in proper container/bottle?	Ye	s 🗹	No 🗌		
Sample containers intact?	Yε	s 🗹	No 🗔		
Sufficient sample volume for indicated test?	Ύε	s 🗹	No 🗆		
All samples received within holding time?	Ye	s 🗹	No 🗌		Number of preserved bottles checked for
Water - VOA vials have zero headspace?	No VOA vials submitte	d 🗹	Yes 🗌	No 🗌	pH:
Water - Preservation labels on bottle and cap ma	atch? Ye	s 🗌	No 🗌	N/A 🗹	
Water - pH acceptable upon receipt?	Ye	s 🗌	No 🗌	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?	•	0.9°	<6° C Acceptabl		bolow.
COMMENTS:			If given sufficient	time to cool.	
		==:			
·					
Client contacted	Date contacted:		Perso	on contacted	
Contacted by:	Regarding:				
Comments:					
Corrective Action					

REMIT TO:

Hall Environmental Analysis Lab, Inc.

Accounts Receivable 4901 Hawkins NE, Suite D

Albuquerque, New Mexico 87109-4372

TEL: (505) 345-3975

INVOICE

INV DATE:

October 08, 2009

Print DATE:

October 08, 2009

Invoice No:

0909356

Invoice TO:

Western Refining Southwest, Gallup Refinery

Rt 3 Box 7

Gallup, NM 87301

Attn:

Thurman B. Larsen (505) 722-3833

Phone:

0909356

Work Order:

PO Number:

Order Name

API Overflow Sample Points

Date Received

9/17/2009

Item	Remarks	Matrix	Qty	Unit Price	Mult	Quoted	Test Total
EPA Method 8015B: Diesel Range Organic		Soil	. 10	\$40.00	ı	\$40.00	\$400.00
EPA Method 8015B: Gasoline Range		Soil	10	\$40.00	1 ·	\$40.00	\$400.00
EPA Method 8260B: VOLATILES		Soil	10	\$120.00	1	\$120.00	\$1,200.00
EPA Method 8270C: Semivolatiles		Soil	10	\$300.00	1	\$300.00	\$3,000.00
RCRA 8 Metals		,	10	\$110.00	1.5	\$165.00	\$1,650.00
Reactivity, Corrosivity and Ignitability		Soil	10	\$140.00	1.5	\$210.00	\$2,100.00

Subtotal:

\$8,750.00

Discount:

10.00%

Sales Tax:

6.88% \$0.00

Misc Charges:

\$0.00

Payment Received:

INVOICE Total:

\$8,416.41

All invoices are due and payable net 30 days from receipt

Table A-1: NMED Soil Screening Levels

Social (mg/kg) point point point soil (mg/kg) point point point point point soil (mg/kg) point	Industrial/				Tap	ļ	L	, ,
ohthore 3.73E+03 nc 3.35E+04 nc lehyde 1.06E+02 nc 3.35E+04 nc lehyde 1.06E+02 nc 3.84E+02 nc e 2.31E+04 nc 1.00E+05 max henone 1.48E+03 sat 1.48E+03 sat n 2.06E-01 ca 1.26E+01 ca n 2.06E-01 ca 1.26E+01 ca n 2.06E-01 ca 1.26E+01 ca n 2.26E+04 nc 7.52E-01 nc n 2.36E-01 nc 7.52E-01 nc n 2.26E+04 nc 1.00E+05 max n 3.13E+04 nc 1.00E+05 max n 3.13E+04 nc 1.00E+05 max n 3.10E+04 nc 1.00E+05 max n 3.10E+04 nc 1.00E+05 max n 3.10E+01 <th< th=""><th>nt Soil (mg/kg)</th><th>nt (mg/kg)</th><th>point</th><th>VOC</th><th>(ug/L)</th><th>point</th><th>(mg/kg)</th><th>(mg/kg)</th></th<>	nt Soil (mg/kg)	nt (mg/kg)	point	VOC	(ug/L)	point	(mg/kg)	(mg/kg)
lehyde 1,06E+02 nc 3.84E+02 nc e 2,81E+04 nc 1,00E+05 max e 2,81E+04 nc 1,00E+05 max henone 1,48E+03 sat 1,26E+01 ca n 2,06E-01 nc 1,26E+01 ca n 2,06E-01 nc 7,52E-01 nc n 2,84E-01 ca 1,12E+00 ca cone 2,26E-01 nc 1,00E+05 max cone 2,28E-01 nc 1,00E+05 max n 2,28E-01 nc 1,00E+05 max n 2,20E+04 nc 1,00E+05 max n 3,90E+04 nc 1,00E+05 max n 1,56E+04 nc 1,00E+05 max e 2,14E+00 ca 2,34E+01 ca e 2,1E+01 ca 2,3E+02 ca hilloranthrene 6,21E+01	3.35E+04	1.41E+04	nc	×	3.65E+02	nc	2.75E+00	5.49E+01
e 2.81E+04 nc 1,00E+06 max intrile 4.27E+00 ca 1,26E+01 ca henone 1.48E+03 sat 1,26E+01 ca n 2.06E-01 nc 1,26E+01 ca n 2.06E-01 nc 7.5E-01 nc n 2.84E-01 ca 1,12E+00 ca um 2.28E-01 nc 1,0E+06 max cene 2.20E+04 nc 1,0E+06 max cene 2.20E+04 nc 1,0E+06 max n 1.56E+04 nc 1,0E+02 nc in 1.36E+04 nc 1,0E+02 nc in 1.36E+04 nc 1,0E+02 nc in 1.36E+04 nc 1,0E+02 nc in 2.14E+00 ca 2.34E+01 ca in 6.21E+01 ca 2.34E+01 ca in 1.56E+02 nc	3.84E+02	3.45E+02	nc	×	1.72E+01	ca		
thirling 4.27E+00 ca 1.26E+01 ca henone 1.48E+03 sat 1.26E+01 ca n 2.06E-01 nc 7.52E-01 nc um 2.84E-01 ca 1.12E+00 ca um 2.84E-01 nc 1.10E+00 ca um 7.78E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max ny 3.30E+00 ca 1.77E+01 ca cene 1.36E+04 nc 1.00E+05 max n 1.56E+04 nc 1.00E+05 max n 1.36E+04 nc 1.77E+01 ca n 2.11E+02 ca 2.34E+01 ca n 1.56E+04 <t< td=""><td>1.00E+05</td><td>9.85E+04</td><td>nc</td><td>×</td><td>5.48E+03</td><td>nc</td><td>9.55E-01</td><td>1.91E+01</td></t<>	1.00E+05	9.85E+04	nc	×	5.48E+03	nc	9.55E-01	1.91E+01
henone 1.48E+03 sat 1.48E+03 sat n 2.06E-01 nc 7.52E-01 nc um 2.84E-01 ca 1.12E+00 ca um 7.78E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max cene 1.56E+04 nc 1.00E+05 max cene 1.56E+04 nc 1.00E+05 max cene 1.03E+01 ca 2.34E+01 ca cene 2.11E-02 ca 2.34E+01 ca da)anthracene 6.21E+00 ca 2.34E+01 ca da)bituoranthene 6.21E+01 ca 2.34E+01 ca b)filuoranthene 6.21E+00 ca 2.34E+02 ca chCH) 0.02E-01 ca 2.34E+02 ca chCH) 0.02E-01 ca 2.34E+02 ca	1.26E+01	5.75E+01	nc	×	3.81E-01	ca	6.68E-05	1.34E-03
n 2.06E-01 nc 7.52E-01 nc um 2.84E-01 ca 1.12E+00 ca um 7.78E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max ny 3.90E+00 ca 1.77E+01 ca nc n 1.56E+04 nc 1.00E+05 max nc ne 1.03E+01 ca 1.77E+01 ca nc ne 1.03E+01 ca 2.34E+02 nc nc a)anthracene 6.21E+00 ca 2.34E+01 ca nc b)fluoranthene 6.21E+01 ca 2.34E+02 ca nc k)fluoranthene 6.21E+01 ca 2.34E+02 ca nc k)fluoranthene 6.21E+01 ca 2.34E+02 ca nc (HCH) 9.02E-01 ca 2.25E+03 nc	t 1.48E+03	1.48E+03	sat	×	6.08E+02	nc	1.48E-01	2.95E+00
um 2.84E-01 ca 1.12E+00 ca cene 7.78E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max ny 3.13E+01 nc 1.00E+05 nc ny 3.39E+00 ca 1.77E+01 ca ne 1.03E+01 nc 1.06E+05 max ne 1.03E+01 ca 1.77E+01 ca ne 1.03E+01 ca 2.58E+01 ca ne 1.03E+01 ca 2.34E+01 ca a)anthracene 6.21E+00 ca 2.34E+01 ca a)plyrene 6.21E+01 ca 2.34E+01 ca b)fluoranthene 6.21E+01 ca 2.34E+02 ca k)fluoranthene 6.21E+01 ca 2.25E+03 nc (HCH) 9.02E+01 ca 2.25E+03 nc (HCH) 3.08E+03 nc 2.73E+04 nc (HCH	7.52E-01	6.75E-01	nc	×	4.16E-02	วน	8.55E-06	1.71E-04
um 7.78E+04 nc 1.00E+05 max cene 2.20E+04 nc 1.00E+05 max ny 3.13E+01 nc 4.54E+02 nc ny 3.39E+00 ca 1.77E+01 ca n 1.56E+04 nc 1.00E+05 max ne 1.03E+01 ca 2.58E+01 ca ne 1.03E+04 nc 1.00E+05 max ne 1.03E+04 nc 1.00E+05 max ne 2.11E-02 ca 2.58E+01 ca a)a)anthracene 6.21E+00 ca 2.34E+01 ca a)a)pyrene 6.21E+01 ca 2.34E+02 ca b)fluoranthene 6.21E+01 ca 2.34E+02 ca c)HCH) 9.02E-01 ca 2.25E+03 nc d)HCH) 3.08E+03 nc 2.25E+03 nc d)HCH) 3.08E+03 nc 2.73E+00 ca heny <td>1.12E+00</td> <td>6.99E+00</td> <td>nc</td> <td></td> <td>3.87E-02</td> <td>ca</td> <td>1.42E-01</td> <td>2.84E+00</td>	1.12E+00	6.99E+00	nc		3.87E-02	ca	1.42E-01	2.84E+00
cene 2.20E+04 nc 1.00E+05 max ny 3.13E+01 nc 4.54E+02 nc c 3.90E+00 ca 1.77E+01 ca n 1.56E+04 nc 1.00E+05 max ne 1.03E+01 ca 2.58E+01 ca line 2.11E-02 ca 2.58E+01 ca line 2.11E-02 ca 2.34E+01 ca a) anthracene 6.21E-01 ca 2.34E+01 ca b) fluoranthene 6.21E-01 ca 2.34E+02 ca k) fluoranthene 6.21E-01 ca 2.25E+03 nc (HCH) 3.0EE+02 ca 1.40E+01 ca (HCH) 3.0E+03 ca 1.3E+04 ca	1.00E+05	1.44E+04	nc		3.65E+04	nc	5.48E+04	1.10E+06
ny 3.13E+01 nc 4.54E+02 nc c 3.90E+00 ca 1.77E+01 ca de 1.56E+04 nc 1.00E+05 max ne 1.56E+04 nc 1.00E+05 max ne 1.03E+01 ca 2.58E+01 ca nine 2.1E-02 ca 2.34E+01 ca a)anthracene 6.21E+01 ca 2.34E+01 ca b)fluoranthene 6.21E+01 ca 2.34E+01 ca k)fluoranthene 6.21E+01 ca 2.3E+01 ca k)fluoranthene 6.21E+01 ca 2.3E+01 ca k)fluoranthene 6.21E+01 ca 2.3E+01 ca (HCH) 9.02E-01 ca 2.25E+03 nc (HCH) 3.08E+03 nc 2.73E+01 ca (HCH) 3.08E+03 nc 2.73E+04 nc nloroseptropyl) ether 2.44E+00 ca 7.45E+00 ca	1.00E+05	8.60E+04	nc	×	1.83E+03	nc	8.11E+01	1.62E+03
c 3.90E+00 ca 1.77E+01 ca l 1.56E+04 nc 1.00E+05 max le 1.03E+01 ca 2.58E+01 ca line 2.11E-02 ca 8.33E-02 ca a)anthracene 6.21E+00 ca 2.34E+01 ca a)pyrene 6.21E+01 ca 2.34E+01 ca k)fluoranthene 6.21E+01 ca 2.34E+01 ca k)fluoranthene 6.21E+01 ca 2.3E+01 ca k)fluoranthene 6.21E+01 ca 2.3E+02 ca k)fluoranthene 6.21E+01 ca 2.3E+02 ca k)fluoranthene 6.21E+01 ca 2.2E+02 ca (HCH) 9.02E-01 ca 2.2E+02 ca (HCH) 3.08E+03 nc 2.73E+04 nc hloroethyl) ether 2.4E+00 ca 7.45E+00 ca thylocostryly) other 4.72E-03 ca 1.23E-02	4.54E+02	1.24E+02	nc		1.46E+01	bu	6.61E-01	1.32E+01
ne 1.56E+04 nc 1.00E+05 max ne 1.03E+01 ca 2.58E+01 ca line 2.11E-02 ca 2.58E+01 ca a)anthracene 6.21E+00 ca 2.34E+01 ca a)byrene 6.21E-01 ca 2.34E+01 ca b)fluoranthene 6.21E+01 ca 2.34E+01 ca k)fluoranthene 6.21E+01 ca 2.34E+02 ca k)fluoranthene 6.21E+01 ca 2.25E+03 nc HCH) 9.02E-01 ca 1.40E+01 ca (HCH) 3.16E+00 ca 1.37E+04 nc henyl 3.37E+01 ca 1.37E+02 ca titylhexyl) pithalate 4.72E-03 ca 1.23E	1.77E+01	8.52E+01	nc		4.42E-01	ca	1.45E-02	2.90E-01
ine 2.11E-02 ca 8.33E-02 ca a glanthracene 6.21E+00 ca 2.34E+01 ca a alparthracene 6.21E+00 ca 2.34E+01 ca a b)fluoranthene 6.21E+00 ca 2.34E+01 ca b)fluoranthene 6.21E+01 ca 2.34E+01 ca ca can b)fluoranthene 6.21E+01 ca 2.34E+01 ca ca can alparthracene 6.21E+01 ca a can alparthracene 6.21E+01 ca a can alparthracene 6.21E+01 ca a alparthracene 6.21E+	1.00E+05	6.02E+04	nc		7.30E+03	ou	3.01E+02	6.03E+03
ine 2.11E-02 ca 8.33E-02 ca a glab de la comparable de 2.11E-01 ca 2.34E+01 ca dispyrene 6.21E+00 ca 2.34E+01 ca dispyrene 6.21E+00 ca 2.34E+01 ca dispyrene 6.21E+00 ca 2.34E+01 ca dispyrene 6.21E+01 ca dispyrene 6.21E+01 ca dispyrence 6.21E+01 ca dispyrence 6.21E+01 ca dispyrence 6.21E+01 ca dispyrence dispyrence 6.21E+01 ca dispyrence di	2.58E+01	1.74E+02	nc	×	3.49E+00	ca	1.00E-03	2.01E-02
a)anthracene 6.21E+00 ca 2.34E+01 ca a)pyrane 6.21E-01 ca 2.34E+00 ca b)fluoranthene 6.21E+01 ca 2.34E+01 ca k)fluoranthene 6.21E+01 ca 2.34E+02 ca k)fluoranthene 6.21E+01 ca 2.34E+02 ca imm 1.56E+02 nc 2.25E+03 nc (HCH) 9.02E-01 ca 3.99E+00 ca (HCH) 3.16E+00 ca 1.40E+01 ca (HCH) 3.16E+00 ca 1.93E+01 ca henyl 3.08E+03 nc 2.73E+04 nc hloroseptropyl) ether 2.44E+00 ca 7.45E+02 ca thythexyl) pothalate 3.47E+02 ca 1.37E+03 ca strythexyl) pothalate 4.72E-03 ca 1.06E+05 max	8.33E-02	7.09E-01	ca		2.89E-03	ca	1.24E-05	2.47E-04
a)pyrene 6.21E-01 ca 2.34E+00 ca b)fluoranthene 6.21E+00 ca 2.34E+01 ca k)fluoranthene 6.21E+01 ca 2.34E+02 ca lm 1.56E+02 nc 2.25E+03 nc (HCH) 9.02E-01 ca 3.99E+00 ca (HCH) 3.16E+02 ca 1.40E+01 ca (HCH) 3.16E+00 ca 1.93E+01 ca (HCH) 3.08E+03 nc 2.73E+04 nc hloroethyl) ether 2.44E+00 ca 7.45E+00 ca hloroisopropyl) ether 3.87E+01 ca 1.37E+02 ca stythexyl) phthalate 3.47E+02 ca 1.37E+03 ca stromethyl) ether 4.72E-03 ca 1.23E-02 ca	2.34E+01	2.12E+02	ca		9.09E-01	ca	5.43E-01	1.09E+01
b)fluoranthene 6.21E+00 ca 2.34E+01 ca Im 1.56E+02 nc 2.25E+03 nc (HCH) 9.02E-01 ca 3.99E+00 ca (HCH) 3.16E+00 ca 1.40E+01 ca (HCH) 3.16E+00 ca 1.40E+01 ca (HCH) 3.08E+03 nc 2.73E+04 nc henyl 3.08E+03 nc 2.73E+00 ca hloroeitryl) ether 2.44E+00 ca 7.45E+00 ca thyricosopropyl) ether 3.87E+01 ca 1.37E+02 ca orometryl) ether 4.72E+02 ca 1.23E-02 ca orometryl) ether 4.72E-03 ca 1.23E-02 ca	2.34E+00	2.12E+01	ca		9.09E-02	сэ	1.39E-01	2.78E+00
k)fluoranthene 6.21E+01 ca 2.34E+02 ca Im 1.56E+02 nc 2.25E+03 nc (HCH) 9.02E-01 ca 3.99E+00 ca (HCH) 3.16E+00 ca 1.40E+01 ca (HCH) 4.37E+00 ca 1.93E+01 ca heny 3.08E+03 nc 2.73E+04 nc hloroethyl) ether 2.44E+00 ca 7.45E+00 ca hloroisopropyl) ether 3.87E+01 ca 1.37E+02 ca trythexyl) phthalate 3.47E+02 ca 1.23E-02 ca oromethyl) ether 4.72E-03 ca 1.23E-02 ca	2.34E+01	2.12E+02	ca		9.09E-01	ca	1.68E+00	3.35E+01
Inm 1.56E+02 nc 2.25E+03 nc (HCH) 9.02E-01 ca 3.99E+00 ca (HCH) 3.16E+00 ca 1.40E+01 ca heny 4.37E+00 ca 1.93E+01 ca hloroethyl) ether 2.44E+00 ca 7.45E+00 ca hloroisopropyl) ether 3.87E+01 ca 1.19E+02 ca stryhexyl) prihalate 3.47E+02 ca 1.37E+03 ca oromethyl) ether 4.72E-03 ca 1.23E-02 ca oromethyl ether 1.56E+04 nc 1.00E+05 max	2.34E+02	2.12E+03	ca		9.09E+00	ca	1.68E+01	3.35E+02
(HCH) 9.02E-01 ca 3.99E+00 ca (HCH) 3.16E+00 ca 1.40E+01 ca henyl 3.08E+03 nc 2.73E+04 nc hloroethyl) ether 2.44E+00 ca 7.45E+00 ca hloroisopropyl) ether 3.87E+01 ca 1.19E+02 ca trylhexyl) phthalate 3.47E+02 ca 1.23E-02 ca oromethyl) ether 4.72E-03 ca 1.23E-02 ca oromethyl) ether 1.56E+04 nc 1.00E+05 max	2.25E+03	5.62E+01	nc		7.30E+01	วน	5.77E+01	1.15E+03
(HCH) 3.16E+00 ca 1.40E+01 ca henyl 4.37E+00 ca 1.93E+01 ca henyl 3.08E+03 nc 2.73E+04 nc hloroethyl) ether 2.44E+00 ca 7.45E+00 ca hloroisopropyl) ether 3.87E+01 ca 1.19E+02 ca tryphexyl) phthalate 3.47E+02 ca 1.23E-03 ca oromethyl) ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max	3.99E+00	3.00E+01	ca		1.05E-01	ca	2.13E-04	4.25E-03
henyl ca 1.93E+01 ca horoethyl 3.08E+03 nc 2.73E+04 nc hloroethyl ether 2.44E+00 ca 7.45E+00 ca hloroisopropyl ether 3.87E+01 ca 1.19E+02 ca trylhexyl phthalate 3.47E+02 ca 1.37E+03 ca oromethyl ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max max	1.40E+01	5.39E+01	nc		3.69E-01	ca	7.61E-04	1.52E-02
phenyl 3.08E+03 nc 2.73E+04 nc chloroethyl) ether 2.44E+00 ca 7.45E+00 ca chloroisopropyl) ether 3.87E+01 ca 1.19E+02 ca ethylhexyl) phthalate 3.47E+02 ca 1.37E+03 ca loromethyl) ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max ca	1.93E+01	8.09E+01	nc		5.10E-01	ca	9.08E-04	1.82E-02
chloroethyl) ether 2.44E+00 ca 7.45E+00 ca chloroisopropyl) ether 3.87E+01 ca 1.19E+02 ca ethylhexyl) phthalate 3.47E+02 ca 1.37E+03 ca loromethyl) ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max	2.73E+04	1.17E+04	nc	×	3.04E+02	nc	3.61E+00	7.22E+01
chloroisopropyl) ether 3.87E+01 ca 1.19E+02 ca ethylhexyl) phthalate 3.47E+02 ca 1.37E+03 ca loromethyl) ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max	7.45E+00	1.05E+02	ca	×	9.65E-02	ca	2.77E-05	5.55E-04
ethylhexyl) phthalate 3.47E+02 ca 1.37E+03 ca loromethyl) ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max	1.19E+02	4.53E+02	sat	×	2.71E+00	ca	7.21E-04	1.44E-02
loromethyl) ether 4.72E-03 ca 1.23E-02 ca 1.56E+04 nc 1.00E+05 max	1.37E+03	4.66E+03	nc		4.74E+01	еэ	1.07E+03	2.15E+04
1.56E+04 nc 1.00E+05 max	1.23E-02	2.32E-01	ca	×	5.09E-04	ca	8.95E-08	1.79E-06
	1.00E+05	3.09E+04	υ		7.30E+03	ПC	2.40E+01	4.80E+02
3.70E+01 nc 1.37E+02 nc	nc 1.37E+02 nc	1.21E+02	nc	×	2.06E+01	nc	1.07E-02	2.14E-01
Bromodichloromethane 1.44E+01 ca 3.72E+01 ca 7.17E+0	3.72E+01	7.17E+02	ca	×	1.78E+00	ca	5.90E-04	1.18E-02

	. 1		Industrial/		Construction			Тар			
Chemical	Residential Soil (mg/kg)	End- point	Occupational Soil (mg/kg)	End- point	Worker Soil (mg/kg)	End- point	Voc	Water (ug/L)	End- point	DAF 1 (mg/kg)	DAF 20 (mg/kg)
Bromomethane	8.51E+00	uc	3.28E+01	nc	2.82E+01	nc	×	8.66E+00	υC	1.87E-03	3.74E-02
1,3-Butadiene	9.93E-01	ca	2.38E+00	ca	4.59E+00	nc	×	1.26E+00	ca		
2-Butanone (MEK)	3.18E+04	ou	4.87E+04	sat	4.87E+04	sat	×	7.06E+03	υc	1.27E+00	2.55E+01
tert-Butyl methyl ether (MTBE)	3.88E+02	еэ	9.84E+02	са	1.96E+04	ca	×	6.14E+01	ca		
n-Butylbenzene	6.21E+01	sat	6.21E+01	sat	6.21E+01	sat	×	6.08E+01	nc	2.70E-01	5.40E+00
sec-Butylbenzene	6.06E+01	sat	6.06E+01	sat	6.06E+01	sat	×	6.08E+01	วน	2.17E-01	4.33E+00
tert-Butylbenzene	1.06E+02	sat	1.06E+02	sat	1.06E+02	sat	×	6.08E+01	nc	2.15E-01	4.30E+00
Cadmium	3.90E+01	nc	5.64E+02	nc	1.54E+02	nc		1.83E+01	uc	1.37E+00	2.75E+01
Carbon disulfide	4.60E+02	sat	4.60E+02	sat	4.60E+02	sat	×	1.04E+03	nc	3.95E-01	7.89E+00
Carbon tetrachloride	3.47E+00	ca	8.64E+00	ca	1.80E+02	ca	×	1.69E+00	ca	9.74E-04	1.95E-02
Chlordane	1.62E+01	ca	7.19E+01	ca	1.30E+02	nc		1.90E+00	ca	3.42E-01	6.83E+00
2-Chloroacetophenone	4.25E-02	nc	1.62E-01	nc	1.41E-01	nc	×	5.22E-02	nc	4.37E-05	8.75E-04
2-Chloro-1,3-butadiene	6.32E+00	nc	2.30E+01	nc	2.06E+01	nc	×	1.43E+01	nc	5.66E-03	1.13E-01
1-Chloro-1,1-difluoroethane	2.11E+02	sat	2.11E+02	sat	2.11E+02	sat	×	8.66E+04	nc	6.28E+01	1.26E+03
Chlorobenzene	1.94E+02	υC	2.45E+02	sat	2.45E+02	sat	×	1.06E+02	nc	5.50E-02	1.10E+00
1-Chlorobutane	1.22E+02	nc	2.99E+02	sat	2.99E+02	sat	×	2.43E+02	nc	9.63E-02	1.93E+00
Chlorodifluoromethane	2.11E+02	sat	2.11E+02	sat	2.11E+02	sat	×	9.75E+04	nc	7.07E+01	1.41E+03
Chloroethane	6.33E+01	ca	1.54E+02	ca	1.42E+03	sat	×	3.81E+01	ca	9.41E-03	1.88E-01
Chloroform	4.00E+00	са	9.59E+00	ca	2.16E+02	ca	×	1.65E+00	ca	4.12E-04	8.25E-03
Chloromethane	2.18E+01	ca	5.34E+01	ca	2.84E+02	nc	×	1.49E+01	ca	5.02E-03	1.00E-01
b-Chloronaphthalene	3.99E+03	nc	2.78E+04	nc	1.47E+04	nc	×	4.87E+02	nc	1.25E+00	2.51E+01
o-Chloronitrobenzene	1.49E+00	nc	5.48E+00	nc	4.88E+00	nc	×	1.45E-01	nc	3.94E-05	7.88E-04
p-Chloronitrobenzene	1.05E+01	nc	4.23E+01	nc	3.51E+01	nc	×	1.20E+00	nc	3.25E-04	6.51E-03
2-Chlorophenol	1.66E+02	nc	8.85E+02	5	5.86E+02	nc	×	3.04E+01	DU	2.36E-02	4.72E-01
2-Chloropropane	2.83E+02	nc	7.05E+02	sat	7.05E+02	sat	×	1.76E+02	nc	4.60E-02	9.19E-01
o-Chlorotoluene	2.02E+02	sat	2.02E+02	sat	2.02E+02	sat	×	1.22E+02	nc	5,22E-02	1.04E+00
Chromium III	1.00E+05	max	1.00E+05	max	1.00E+05	max		5.48E+04	nc	9.86E+07	1.97E+09
Chromium VI	2.34E+02	nc	3.40E+03	nc	2.61E+01	ca		1.10E+02	nc	2.10E+00	4.20E+01
Chrysene	6.15E+02	ca	2.31E+03	ca	2.12E+04	ca	×	2.91E+01	g	1.74E+01	3.48E+02
Cobalt	1.52E+03	nc	2.05E+04	nc	6.10E+01	nc		7.30E+02	ည	3.31E+01	6.61E+02
Copper	3.13E+03	nc	4.54E+04	nc	1.24E+04	nc		1.46E+03	JC	5.15E+01	1.03E+03
Crotonaldehyde	7.01E-02	ca	1.70E-01	ca	3.73E+00	ca	×	5.82E-02	ca	1.49E-04	2.99E-03

	Residential	End-	Industrial/ Occupational	End-	Construction Worker Soil	End-		Tap	End-	DAF 1	DAF 20
Chemical	Soil (mg/kg)	point	Soil (mg/kg)	point	(mg/kg)	point	VOC	(ng/L)	point	(mg/kg)	(mg/kg)
Cumene (isopropylbenzene)	2.71E+02	SI.	3.89E+02	sat	3.89E+02	sat	×	6.78E+02	nc	4.10E+00	8.21E+01
Cyanide	1.22E+03	nc C	1.37E+04	nc	4.76E+03	nc		7.30E+02	ည	7.35E+00	1.47E+02
Cyanogen	1.71E+03	sat	1.71E+03	sat	1.71E+03	sat	×	1.46E+03	ПС	2.91E-01	5.82E+00
Cyanogen bromide	2.02E+03	sat	2.02E+03	sat	2.02E+03	sat	×	3.29E+03	nc	7.76E-01	1.55E+01
Cyanogen chloride	2.02E+03	sat	2.02E+03	sat	2.02E+03	sat	×	1.83E+03	nc	4.31E-01	8.62E+00
DDD	2.44E+01	ca	1.11E+02	ca	8.07E+02	ca		2.77E+00	ca	4.15E+00	8.30E+01
DDE	1.72E+01	g	7.81E+01	ca	5.70E+02	ca		1.95E+00	ca	1.31E+01	2.62E+02
DDT	1.72E+01	ca	7.81E+01	ca	1.38E+02	nc		1.95E+00	ca	7.70E+00	1.54E+02
Dibenz(a,h)anthracene	6.21E-01	ca	2.34E+00	ca	2.12E+01	ca		9.09E-02	ca	5.18E-01	1.04E+01
Dibenzofuran	1.42E+02	nc	1.62E+03	nc	5.52E+02	nc	×	1.22E+01	nc	1.44E-01	2.87E+00
1,2-Dibromo-3-chloropropane	1.84E+00	nc	9.68E+00	nc	6.48E+00	nc	×	3.47E-01	nc	1.49E-04	2.98E-03
Dibromochloromethane	1.48E+01	ca	3.95E+01	ca	7.16E+02	ca	×	1.32E+00	ca	3.58E-04	7.16E-03
1,2-Dibromoethane	5.04E-01	ca	1.31E+00	ca	2.48E+01	ca	×	5.53E-02	ca	1.20E-05	2.40E-04
1,4-Dichloro-2-butene	1.22E-01	ca	3.23E-01	ca	5.97E+00	ca	×	1.19E-02	ca	2.93E-06	5.87E-05
1,2-Dichlorobenzene	3.74E+01	sat	3.74E+01	sat	3.74E+01	sat	×	4.96E+01	nc	1.19E-02	2.37E-01
1,3-Dichlorobenzene	3.26E+01	ည	3.74E+01	sat	3.74E+01	sat	×	1.83E+01	nc	4.36E-03	8.73E-02
1,4-Dichlorobenzene	3.95E+01	ca	1.03E+02	ca	1.96E+03	ca	×	4.95E+00	ca	5.49E-03	1.10E-01
3,3-Dichlorobenzidine	1.08E+01	g	4.26E+01	ca	3.63E+02	ca		1.47E+00	ca	1.86E-03	3.71E-02
Dichlorodifluoromethane	1.61E+02	nc	2.11E+02	sat	2.11E+02	sat	×	3.95E+02	nc	2.86E-01	5.72E+00
1,1-Dichloroethane	1.40E+03	nc	1.42E+03	sat	1.42E+03	sat	×	1.22E+03	nc	3.39E-01	6.79E+00
1,2-Dichloroethane	6.04E+00	ca	1.52E+01	ca	6.42E+01	υC	×	1.22E+00	ça	2.85E-04	5.71E-03
cis-1,2-Dichloroethene	7.65E+01	ПС	3.00E+02	nc	2.54E+02	ЭC	×	6.08E+01	nc	1.49E-02	2.99E-01
trans-1,2-Dichloroethene	1.12E+02	nc	4.29E+02	nc	3.70E+02	υC	×	1.22E+02	JC	3.33E-02	6.67E-01
1,1-Dichloroethene	2.06E+02	nc	7.77E+02	nc	6.78E+02	nc	×	3.39E+02	ပ	1.34E-01	2.68E+00
2,4-Dichlorophenol	1.83E+02	nc	2.05E+03	22	6.99E+02	nc		1.10E+02	ည	4.31E-02	8.63E-01
1,2-Dichloropropane	6.00E+00	ca	1.49E+01	ca	3.33E+01	nc	×	1.63E+00	ca	4.10E-04	8.19E-03
1,3-Dichloropropene	1.20E+01	ca	3.17E+01	ca	8.98E+01	υC	×	3.90E+00	g	1.16E-03	2.31E-02
Dicyclopentadiene	2.21E+01	ဥ	8.26E+01	nc	7.28E+01	nc	×	1.39E+01	nc	1.50E-02	3.00E-01
Dieldrin	3.04E-01	g	1.20E+00	ca	1.02E+01	· ca		4.15E-02	ca	1.34E-03	2.68E-02
Diethyl phthalate	4.89E+04	nc	1.00E+05	max	1.00E+05	max		2.92E+04	nc	1.77E+01	3.54E+02
Dimethyl phthalate	1.00E+05	max	1.00E+05	max	1.00E+05	max		3.65E+05	nc	8.36E+01	1.67E+03
Di-n-butyl phthalate	6.11E+03	nc	6.84E+04	2	2.33E+04	5		3.65E+03	DC.	1.86E+02	3.72E+03

	Residential	End.	Industrial/ Occupational	щ С	Construction Worker Soil	Fnd-		Tap Water	End.	DAF 1	DAF 20
Chemical	Soil (mg/kg)	point	Soil (mg/kg)	point	(mg/kg)	point	VOC	(ng/L)	point	(mg/kg)	(mg/kg)
2,4-Dimethylphenol	1.22E+03	n S	1.37E+04	20	4.66E+03	nc		7.30E+02	ЭĽ	3.55E-01	7.11E+00
4,6-Dinitro-o-cresol	6.11E+00	٦ کا	6.84E+01	nc	2.33E+01	nc		3.65E+00	nc	3.93E-03	7.85E-02
2,4-Dinitrophenol	1.22E+02	nc	1.37E+03	nc	4.66E+02	nc		7.30E+01	nc	5.25E-02	1.05E+00
2,4-Dinitrotoluene	1.22E+02	nc	1.37E+03	nc	4.66E+02	uc		7.30E+01	nc	2.31E-02	4.62E-01
1,2-Diphenylhydrazine	6.08E+00	ca	2.39E+01	ca	2.04E+02	ca		8.30E-01	ca	4.48E-03	8.95E-02
Endosulfan	3.67E+02	nc	4.10E+03	nc	1.40E+03	nc		2.19E+02	nc	7.41E-01	1.48E+01
Endrin	1.83E+01	nc	2.05E+02	nc	6.99E+01	nc		1.10E+01	nc	2.04E-01	4.08E+00
Epichlorohydrin	1.66E+01	nc	6.56E+01	nc	5.54E+01	nc	×	2.03E+00	nc	3.62E-04	7.25E-03
Ethyl acetate	2.10E+04	sat	2.10E+04	sat	2.10E+04	sat	×	5.48E+03	nc	1.44E+00	2.87E+01
Ethyl acrylate	2.79E+00	ca	6.75E+00	ca	5.22E+01	sat	×	2.30E+00	ca	5.86E-03	1.17E-01
Ethyl chloride	6.33E+01	ca	1.54E+02	ca	1.42E+03	sat	×	3.81E+01	ca	9.41E-03	1.88E-01
Ethyl ether	1.94E+03	sat	1.94E+03	sat	1.94E+03	sat	×	1.22E+03	nc	2.37E-01	4.73E+00
Ethyl methacrylate	5.27E+01	sat	5.27E+01	sat	5.27E+01	sat	×	5.48E+02	nc	1.41E+00	2.81E+01
Ethylbenzene	1.28E+02	sat	1.28E+02	sat	1.28E+02	sat	×	1.34E+03	nc	1.01E+00	2.02E+01
Ethylene oxide	2.65E+00	ca	8.07E+00	ca	1.15E+02	ca	×	2.41E-01	ca	4.27E-05	8.54E-04
Fluoranthene	2.29E+03	nc	2.44E+04	nc	8.73E+03	nc		1.46E+03	nc	2.35E+02	4.69E+03
Fluorene	2.66E+03	nc	2.65E+04	nc	1.02E+04	nc	×	2.43E+02	nc	2.93E+00	5.85E+01
Fluoride	3.67E+03	nc	4.10E+04	nc	1.43E+04	nc		2.19E+03	nc	3.29E+02	6.58E+03
Furan	5.53E+00	nc	2.12E+01	nc	1.83E+01	nc	×	6.08E+00	uc	1.32E-03	2.63E-02
Heptachlor	1.08E+00	ca	4.26E+00	ca	3.63E+01	ca		1.47E-01	eo	3.12E-01	6.24E+00
Hexachlorobenzene	3.04E+00	ca	1.20E+01	ca	1.02E+02	ca		4.15E-01	ca	3.43E-02	6.86E-01
Hexachloro-1,3-butadiene	1.22E+01	nc	1.37E+02	nc	4.66E+01	nc		7.30E+00	nc	5.90E-01	1.18E+01
Hexachlorocyclopentadiene	3.66E+02	nc	4.10E+03	nc	4.31E+02	nc		2.19E+02	nc	6.58E+01	1.32E+03
Hexachloroethane	6.11E+01	ည	6.84E+02	nc	2.33E+02	nc		3.65E+01	nc	1.04E-01	2.09E+00
n-Hexane	3.80E+01	sat	3.80E+01	sat	3.80E+01	sat	×	4.16E+02	nc	8.64E-01	1.73E+01
HMX	3.06E+03	nc	3.42E+04	nc	1.17E+04	nc		1.83E+03	nc	5.39E+00	1.08E+02
Hydrogen cyanide	2.24E+01	nc	8.22E+01	nc	7.33E+01	nc	×	6.20E+00	nc	1.24E-03	2.47E-02
Indeno(1,2,3-c,d)pyrene	6.21E+00	ca	2.34E+01	ca	2.12E+02	ca		9.09E-01	са	4.73E+00	9.46E+01
Iron	2.35E+04	υC	1.00E+05	max	9.29E+04	nc		1.10E+04	nc	2.77E+02	5.54E+03
Isobutanol	1.38E+04	υC	2.26E+04	sat	2.26E+04	sat	×	1.83E+03	nc	4.86E-01	9.72E+00
Isophorone	5.12E+03	ca	2.02E+04	ca	4.66E+04	υc		6.99E+02	са	1.70E-01	3.40E+00
Lead	4.00E+02	EUBK	8.00E+02	EUBK	8.00E+02	IEUBK					

	Residential	End-	Industrial/ Occupational	End-	Construction Worker Soil	End-		Tap Water	End-	DAF 1	DAF 20
Cnemical Lead (tetraethyl-)	Soil (mg/kg) 6 11E-03	boint of	Soll (mg/kg)	boint	(mg/kg) 2.38F-02	point	000 NOC	(ug/L)	point	(mg/kg) 6 33E-07	(mg/kg)
Maleic hydrazide	1.61E+03	sat	1.61E+03	sat	1.61E+03	sat	×	3.04E+03	20	8.12E-01	1.62E+01
Manganese	3.59E+03	nc	4.84E+04	SI.	1.50E+02	nc		1.72E+03	ЭL	1.12E+02	2.24E+03
Mercury (elemental)	1.00E+05	max	1.00E+05	max	9.27E+02	22				1.05E-01	2.09E-03
Mercury (methyl)	6.11E+00	nc	6.84E+01	nc	2.38E+01	рu		3.65E+00	nc	8.26E-04	1.65E-02
Methacrylonitrile	3.84E+00	nc	2.20E+01	nc	1.37E+01	nc	×	1.04E+00	nc	1.83E-04	3.65E-03
Methomyl	8.44E+01	nc	3.17E+02	nc	2.78E+02	nc	×	1.52E+02	nc	5.74E-02	1.15E+00
Methyl acetate	3.76E+04	nc	1.00E+05	max	1.00E+05	max	×	6.08E+03	nc	1.08E+00	2.15E+01
Methyl acrylate	9.28E+01	nc	1.57E+02	sat	1.57E+02	sat	×	1.83E+02	nc	4.64E-01	9.29E+00
Methyl isobutyl ketone	5.51E+03	nc	7.01E+03	sat	7.01E+03	sat	×	1.99E+03	nc	7.35E-01	1.47E+01
Methyl methacrylate	2.92E+03	sat	2.92E+03	sat	2.92E+03	sat	×	1.42E+03	nc	2.76E-01	5.52E+00
Methyl styrene (alpha)	2.17E+02	sat	2.17E+02	sat	2.17E+02	sat	×	4.26E+02	nc	3.08E-01	6.17E+00
Methyl styrene (mixture)	1.39E+02	nc	2.17E+02	sat	2.17E+02	sat	×	5.48E+01	nc	3.96E-02	7.93E-01
Methylcyclohexane	7.89E+01	sat	7.89E+01	sat	7.89E+01	sat	×	5.23E+03	nc	2.88E+01	5.77E+02
Methylene bromide	1.79E+02	DC	7.85E+02	nc	6.09E+02	nc	×	6.08E+01	nc	2.72E-02	5.44E-01
Methylene chloride	1.82E+02	ca	4.90E+02	ca	2.63E+03	sat	×	4.22E+01	ca	8.51E-03	1.70E-01
Molybdenum	3.91E+02	nc	5.68E+03	nc	1.55E+03	nc		1.83E+02	nc	3.70E+00	7.40E+01
Naphthalene	7.95E+01	nc	3.00E+02	nc	2.62E+02	nc	×	6.20E+00	nc	1.97E-02	3.94E-01
Nickel	1.56E+03	၁	2.27E+04	nc	6.19E+03	nc		7.30E+02	nc	4.77E+01	9.53E+02
Nitrate	1,00E+05	max	1,00E+05	max	1.00E+05	max		5.84E+04	nc	1.67E+01	3.35E+02
Nitrite	7.82E+03	nc	1.00E+05	max	3.10E+04	nc		3.65E+03	nc	7.63E-01	1.53E+01
Nitrobenzene	2.28E+01	nc	1.47E+02	υC	8.28E+01	nc	×	3.40E+00	nc	9.18E-04	1.84E-02
Nitroglycerin	3.47E+02	ca	1.37E+03	ca	1.17E+04	ca		4.74E+01	ca	2.80E-02	5.61E-01
N-Nitrosodiethylamine	3.24E-02	ca	1.28E-01	ca	1.09E+00	ca		4.42E-03	ca	8.73E-06	1.75E-04
N-Nitrosodimethylamine	9.54E-02	ca	3.76E-01	ca	1.86E+00	nc		1.30E-02	ca	1.17E-05	2.34E-04
N-Nitrosodi-n-butylamine	2.69E-01	ca	7.28E-01	ca	1.24E+01	ca	×	1.99E-02	ca	1.12E-05	2.24E-04
N-Nitrosodiphenylamine	9.93E+02	gg	3.91E+03	ca	4.66E+03	nc		1.35E+02	ca	2.86E-01	5.71E+00
N-Nitrosopyrrolidine	2.32E+00	ca	9.12E+00	ca	7.77E+01	ca		3.16E-01	ca	1.30E-04	2.60E-03
m-Nitrotoluene	5.69E+02	sat	5.69E+02	sat	5.69E+02	sat	×	1.22E+02	nc	3.30E-02	6.59E-01
o-Nitrotoluene	1.08E+01	g	3.23E+01	ca	4.73E+02	ca	×	4.81E-01	ca	1.30E-04	2.61E-03
p-Nitrotoluene	1.46E+02	g	4.37E+02	ca	1.55E+03	nc	×	6.51E+00	ca	1.76E-03	3.53E-02
Pentachlorobenzene	4.89E+01	2	5.47E+02	nc	1.86E+02	nc		2.92E+01	2	9.37E-02	1.87E+00

			Industrial/		Construction			Тар			
Chemical	Residential Soil (mg/kg)	End- point	Occupational Soil (mg/kg)	End- point	Worker Soil (mg/kg)	End- point	000	Water (ug/L)	End- point	DAF 1 (mg/kg)	DAF 20 (mg/kg)
Pentachlorophenol	2.98E+01	са	1.00E+02	ca	1.02E+03	ca		5.53E+00	ca	5.87E-03	1.17E-01
Phenanthrene	1.83E+03	nc	2.05E+04	nc	6.99E+03	nc		1.10E+03	DU	2.32E+01	4.64E+02
Phenol	1.83E+04	nc	1.00E+05	max	6.99E+04	nc		1.10E+04	uc	2.37E+00	4.74E+01
Polychlorinatedbiphenyls											
Aroclor 1016	3.93E+00	nc	4.13E+01	nc	1.50E+01	nc		2.56E+00	nc	1.73E-01	3.45E+00
Aroclor 1221	1.12E+00	nc	8.26E+00	ca	4.28E+00	nc		3.32E-01	ca	2.24E-02	4.47E-01
Aroclor 1232	1.12E+00	nc	8.26E+00	ca	4.28E+00	nc		3.32E-01	ca	2.24E-02	4.47E-01
Aroclor 1242	1.12E+00	nc	8.26E+00	ca	4.28E+00	рu		3.32E-01	ca	2.24E-02	4.47E-01
Aroclor 1248	1.12E+00	nc	8.26E+00	ca	4.28E+00	nc		3.32E-01	ca	2.64E-01	5.28E+00
Aroclor 1254	1.12E+00	nc	8.26E+00	ca	4.28E+00	nc		3.32E-01	ca	2.64E-01	5.28E+00
Aroclor 1260	1.12E+00	nc	8.26E+00	ca	4.28E+00	nc		3.32E-01	са	2.64E-01	5.28E+00
n-Propylbenzene	6.21E+01	sat	6.21E+01	sat	6.21E+01	sat	×	6.08E+01	nc	2.70E-01	5.40E+00
Propylene oxide	2.22E+01	ca	9.33E+01	ca	7.92E+02	nc	×	2.18E+00	ca	4.60E-04	9.20E-03
Pyrene	2.29E+03	n S	3.09E+04	nc	9.01E+03	nc	×	1.83E+02	nc	1.86E+01	3.73E+02
RDX	4.42E+01	g	1.74E+02	ca	6.99E+02	nc		6.03E+00	ca	1.68E-03	3.36E-02
Selenium	3.91E+02	nc	5.68E+03	nc	1.55E+03	nc		1.83E+02	nc	9.52E-01	1.90E+01
Silver	3.91E+02	nc	5.68E+03	J.	1.55E+03	nc		1.83E+02	nc	1.57E+00	3.13E+01
Strontium	4.69E+04	nc	1.00E+05	max	1.00E+05	max		2.19E+04	nc	7.73E+02	1.55E+04
Styrene	1.00E+02	sat	1.00E+02	sat	1.00E+02	sat	×	1.62E+03	nc	5.23E-01	1.05E+01
1,2,4,5-Tetrachlorobenzene	1.83E+01	nc	2.05E+02	nc	6.99E+01	nc		1.10E+01	nc	2.14E-02	4.29E-01
1,1,1,2-Tetrachloroethane	4.32E+01	ca	1.14E+02	ca	2.11E+03	ca	×	4.27E+00	ca	1.25E-03	2.50E-02
1,1,2,2-Tetrachloroethane	5.55E+00	ca	1.46E+01	ca	2.71E+02	ca	×	5.46E-01	g	1.60E-04	3.21E-03
Tetrachloroethene	1.25E+01	ca	3.16E+01	ca	1.34E+02	sat	×	4.32E+00	ca	2.87E-03	5.74E-02
Thallium	5.16E+00	nc	7.49E+01	nc	2.04E+01	nc		2.41E+00	υC	1.72E-01	3.43E+00
Toluene	2.52E+02	sat	2.52E+02	sat	2.52E+02	sat	×	2.27E+03	nc	1.08E+00	2.17E+01
Toxaphene	4.42E+00	ca	1.74E+01	ca	1.48E+02	ca		6.03E-01	ca	2.33E-01	4.65E+00
Tribromomethane	6.21E+02	ca	2.46E+03	g	4.44E+03	nc		2.44E+01	ca	1.73E-01	3.47E+00
1,1,2-Trichloro-1,2,2-trifluoroethane	3.28E+03	sat	3.28E+03	sat	3.28E+03	sat	×	5.92E+04	nc	1.68E+02	3.36E+03
1,2,4-Trichlorobenzene	6.93E+01	nc	2.69E+02	nc	2.30E+02	nc	×	7.16E+00	nc	2.04E-02	4.08E-01
1,1,1-Trichloroethane	5.63E+02	sat	5.63E+02	sat	5.63E+02	sat	×	3.17E+03	nc	1.33E+00	2.65E+01
1,1,2-Trichloroethane	1.19E+01	ca	3.02E+01	ca	1.94E+02	nc	×	1.97E+00	ca	4.98E-04	9.95E-03
Trichloroethylene	6.38E-01	ca	1.56E+00	ca	3.36E+01	ca	×	2.77E-01	ca	1.00E-04	2.00E-03

		1 1	Industrial/	, , , , , , , , , , , , , , , , , , ,	Construction	L		Тар		L	
Chemical	Soil (mg/kg)	point	Soil (mg/kg)	point	(mg/kg)	point	700	(ug/L)	point	(mg/kg)	(mg/kg)
Trichlorofluoromethane	5.88E+02	nc	9.83E+02	sat	9.83E+02	sat	×	1.29E+03	υc	1.12E+00	2.23E+01
2,4,5-Trichlorophenol	6.11E+03	пс	6.84E+04	nc	2.33E+04	nc		3.65E+03	nc	7.13E+00	1.43E+02
2,4,6-Trichlorophenol	6.11E+00	nc	6.84E+01	nc	2.33E+01	nc		3.65E+00	nc	7.13E-03	1.43E-01
1,1,2-Trichloropropane	2.53E+01	nc	9.64E+01	nc	8.35E+01	nc	×	3.04E+01	nc	1.17E-02	2.35E-01
1,2,3-Trichloropropane	8.61E-02	ca	2.09E-01	ca	4.57E+00	ca	×	5.53E-02	ca	2.07E-05	4.14E-04
1,2,3-Trichloropropene	1.21E+00	nc	4.39E+00	nc	3.95E+00	uc	×	2.10E+00	nc	7.88E-04	1.58E-02
Triethylamine	4.90E+01	nc	2.33E+02	nc	1.69E+02	nc	×	1.21E+01	nc	2.14E-03	4.29E-02
1,2,4-Trimethylbenzene	5.80E+01	nc	2.13E+02	nc	1.90E+02	nc	×	1.23E+01	nc	7.09E-02	1.42E+00
1,3,5-Trimethylbenzene	2.48E+01	nc	6.92E+01	sat	6.92E+01	sat	×	1.23E+01	nc	1.77E-02	3.55E-01
2,4,6-Trinitrotoluene	3.06E+01	nc	3.42E+02	пс	1.17E+02	bu		1.83E+01	nc	5.34E-02	1.07E+00
Vanadium	7.82E+01	nc	1.14E+03	nc	3.10E+02	ЭU		3.65E+01	nc	3.65E+01	7.30E+02
Vinyl acetate	1.07E+03	nc	3.68E+03	sat	3.52E+03	nc	×	4.12E+02	nc	7.57E-02	1.51E+00
Vinyl bromide	2.85E+00	ca	6.84E+00	ca	1.93E+01	วน	×	1.18E+00	ca	4.71E-04	9.41E-03
Vinyl chloride (Child)	2.25E+00	ca					×	4.28E-01	ca	1.40E-04	2.80E-03
Vinyl chloride (adult)	4.37E+00	ca	1.40E+01	ca	1.82E+02	ca	×	8.33E-01	са	2.72E-04	5.45E-03
m-Xylene	8.20E+01	sat	8.20E+01	sat	8.20E+01	sat	×	2.03E+02	ПС	1.03E-01	2.06E+00
o-Xylene	9.95E+01	sat	9.95E+01	sat	9.95E+01	sat	×	7.30E+03	nc	4.07E+00	8.14E+01
Xylenes	8.20E+01	sat	8.20E+01	sat	8.20E+01	sat	×	2.03E+02	эu	1.03E-01	2.06E+00
Zinc	2.35E+04	nc	1.00E+05	max	9.29E+04	nc		1.10E+04	n Sr	6.82E+02	1.36E+04

Table A-2

	Default Expose	ire Factors	
Symbol	Definition (units)	Default	Reference
CSF.	Cancer slope factor oral (mg/kg-day) ⁻¹	Chemspec.	IRIS, HEAST, or NCEA
CSF _i	Cancer slope factor inhaled (mg/kg-day) ⁻¹	Chemspec.	IRIS, HEAST, or NCEA
RfD。	Reference dose oral (mg/kg-day)	Chemspec.	IRIS, HEAST, or NCEA
RfD _i	Reference dose inhaled (mg/kg-day)	Chemspec.	IRIS, HEAST, or NCEA
TR	Target cancer risk	1E-05	NMED-specific value
THQ	Target hazard quotient	1	US EPA, 1989
BW	Body weight (kg)		
	adult	70	US EPA, 1989
	child	15	US EPA, 1991
AT	Averaging time (days)		
, , ,	carcinogens	25550	US EPA, 1989
	noncarcinogens	ED*365	
	Exposed surface area for soil/dust		
SA	(cm²/day)		US EPA, 1989
	– adult resident	5700	US EPA, 1996a
	– adult worker	3300	US EPA, 1996a
	child	2800	US EPA, 1989
AF	Adherence factor, soils (mg/cm²)	2000	US EPA, 1989
~	adult resident	0.07	US EPA, 1996a
	– adult vorker	0.2	US EPA, 1996a
	child resident	0.2	US EPA, 1989
		0.2	•
ADC	- construction worker	0.3	NMED-specific value
ABS	Skin absorption defaults (unitless):	0.4	HC CDA 4000
	 semi-volatile organics 	0.1	US EPA, 1989
	 volatile organics 	na	US EPA, 2003a
	- inorganics	na	US EPA, 2000s
IRA	Inhalation rate (m³/day)		
	adult resident	20	US EPA, 1991
	 adult worker 	20	US EPA, 2001a
	child resident	10	Exposure Factors, (US EPA, 1997)
IRW	Drinking water ingestion rate (L/day)		
	adult	2 ·	US EPA, 2004b
	child	1	US EPA, 2004b
IRS	Soil ingestion (mg/day)		
	adult resident	100	US EPA, 1991
	child resident	200	US EPA, 1991
	commercial/industrial worker	100	US EPA, 2001a
	construction worker	330	US EPA, 1991
EF	Exposure frequency (days/yr)		
	residential	350	US EPA, 1991
	commercial/industrial	225	US EPA, 2001a
	 construction worker 	250	NMED-specific value
ED	Exposure duration (years)		
LD	residential	30ª	US EPA, 1991)
	child	6	(US EPA, 1991)
	commercial/industrial	25	(US EPA, 1999)
	construction worker	1	NMED-specific value
	Age-adjusted factors for carcinogens	•	WILD-Specific Value
ודיים		111	US EPA, 2001a
IFSadj	Ingestion factor, soils ([mg-yr]/[kg-day])	114	•
SFSadj	Dermal factor, soils ([mg-yr]/[kg-day])	361	US EPA, 2001a
InhFadj	Inhalation factor, air ([m³-yr]/[kg-day])	11	By analogy to RAGS: Part B, (US EPA, 1991)
IFWadj	Ingestion factor, water ([L-yr]/[kg-day])	1.1	By analogy to RAGS: Part B, (US EPA, 1991)
PEF	Particulate emission factor (m³/kg)	Chemspec.	US EPA, 2001a
VFs	Volatilization factor for soil (m³/kg)	Chemspec.	US EPA, 2001a
VFw	Volatilization factor for water (L/m³)	0.5	US EPA, 1991
Csat	Soil saturation concentration (mg/kg)	Chemspec.	US EPA, 2001a

^aExposure duration for lifetime residents is assumed to be 30 years total. For carcinogens, exposures are combined for children (6 years) and adults (24 years).
Chem.-spec.- Chemical-specific value
RAGS – Risk Assessment Guidance for Superfund

na - not applicable IRIS – Integrated Risk Information System, USEPA, 2003b

HEAST – Health Effects Assessment Summary Tables, USEPA, 1997 NCEA – National Center for Environmental Assessment, Office of Research and Development (USEPA, 2003c)

NMED - New Mexico Environment Department

APPENDIX B

Table B-1: Physical and Chemical Properties

		=									
Chemical	MW (a/mole)	(atm-	H' (dimensionless)		D.w.	K 30	κ _α (cm ³ /α)	S (mg/L-	DA (527,5)	VF	SAT
Acenaphthene	154.21	1.6E-04	6.36E-03	4.21E-02	7.69E-06	4.90E+03	7.35E+00	4.24E+00	4,13E-07	1.93E+05	3,19E+01
Acetaldehyde	44	7.8E-05	3.20E-03	1.20E-01	1.40E-05	1.80E+01	2.70E-02	1.00E+06	2.28E-05	2.60E+04	2.01E+05
Acetone	58	3.9E-05	1.60E-03	1.20E-01	1.10E-05	5.80E-01	8.70E-04	1.00E+06	1.40E-05	3.31E+04	1.74E+05
Acrylonitrile	53	8.8E-05	3.60E-03	1.08E-01	1.34E-05	8.50E-01	1.28E-03	7.90E+04	2.64E-05	2.42E+04	1.38E+04
Acetophenone	120	1.1E-05	4.51E-04	6.00E-02	8.70E-06	4.62E+01	6.93E-02	6.10E+03	2.59E-06	7.71E+04	1.48E+03
Acrolein	56	1.2E-04	4.90E-03	1.05E-01	1.22E-05	2.10E+01	3.15E-02	2.10E+05	2.86E-05	2.32E+04	4.31E+04
Aldrin	365	1.7E-04	6.97E-03	1.32E-02	4.86E-06	2.45E+06	3.68E+03	1.80E-01			
Aluminum	26.98	2.4E-02	1.00E+00			1.43E+01	1.50E+03				
Anthracene	178	6.5E-05	2.67E-03	3.24E-02	7.74E-06	2.95E+04	4.43E+01	4.34E-02	2.73E-08	7.51E+05	1.93E+00
Antimony	121.75	2.4E-02	1.00E+00			1.43E+01	4.50E+01				
Arsenic	74.92	7.7E-01	3.16E+01			1.43E+01	2.90E+01				İ
Barium	137.33	2.4E-02	1.00E+00			1.43E+01	4.10E+01				
Benzene	78.1	5.6E-03	2.28E-01	8.80E-02	9.80E-06	5.89E+01	8.84E-02	1.75E+03	7.30E-04	4.59E+03	5.06E+02
Benzidine	184.23	7.0E-11	2.88E-09	3.40E-02	1.50E-05	2.74E+03	4.11E+00	3.22E+02			
Benzo(a)anthracene	228	3.3E-06	1.37E-04	5.10E-02	9.00E-06	3.98E+05	5.97E+02	9.40E-03			
Benzo(a)pyrene	250	1.1E-06	4.63E-05	4.30E-02	9.00E-06	1.02E+06	1.53E+03	1.62E-03			
Benzo(b)fluoranthene	252.3	1.1E-04	4.55E-03	2.26E-02	5.56E-06	1.23E+06	1.85E+03	1.50E-03			
Benzo(k)fluoranthene	252.3	8.3E-07	3.40E-05	2.26E-02	5.56E-06	1.23E+06	1.85E+03	8.00E-04			
Beryllium	9.01	2.4E-02	1.00E+00			1.43E+01	7.90E+02				
α-BHC ·	290.85	1.1E-05	4.35E-04	1.42E-02	7.34E-06	1.23E+03	1.85E+00	2.00E+00			
В-ВНС	290.85	7.4E-07	3.05E-05	1.42E-02	7.34E-06	1.26E+03	1.89E+00	2.40E-01			
y-BHC	290.85	1.4E-05	5.74E-04	1.42E-02	7.34E-06	1.07E+03	1.61E+00	6.80E+00			
1,1-Biphenyl	150	2.9E-04	1.20E-02	4.00E-02	8.20E-06	7.80E+03	1.17E+01	7.50E+00	4.50E-07	1.85E+05	8.91E+01
Bis(2-chloroethyl) ether	140	1.8E-05	7.38E-04	6.92E-02	7.53E-06	7.60E+01	1.14E-01	1.72E+04	2.90E-06	7.29E+04	4.94E+03
Bis(2-chforoisopropyl) ether	170	1.1E-04	4.60E-03	6.30E-02	6.40E-06	6.17E+01	9.25E-02	1.70E+03	1.23E-05	3.53E+04	4.53E+02
Bis(2-ethylhexyl) phthalate	390.54	1.0E-07	4.18E-06	3.51E-02	3.66E-06	-1.51E+07	2.27E+04	3.40E-01			7.70E+03
Bis(chloromethyl) ether	120	2.0E-04	8.20E-03	8.90E-02	9.40E-06	1.20E+00	1.80E-03	2.20E+04	4.55E-05	1.84E+04	3.87E+03
Boron	10.81	2.4E-02	1.00E+00			1.43E+01	3.00E+00				
Bromobenzene	157.02	3.7E-03	1.50E-01	7.30E-02	8.70E-06	2.20E+02	3.30E-01	4.70E+02	2.21E-04	8.36E+03	2.45E+02
Bromodichloromethane	164	1.6E-03	6.56E-02	2.98E-02	1.06E-05	1.00E+02	1.50E-01	6.74E+03	6.31E-05	1.56E+04	2.23E+03
	,,	33 13::	10000	4.00L-04	1.00t-30	1.00E 104	1.00F-0 :	0.74	╛	0.01-1.00	\dashv

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Chemical	MW (g/mole)	(atm- m³/mole)	H' (dimensionless)	D _a (cm²/s)	D _w (cm ² /s)	K _{oc} (cm ³ /g)	K _d (cm ³ /g)	(mg/L- water)	D _A (cm²/s)	VF (m³/kg)	SAT (mg/kg)
Bromomethane	94.95	6.2E-03	2.56E-01	7.28E-02	1.21E-05	9.00E+00	1.35E-02	1.52E+04	9.03E-04	4.13E+03	3.31E+03
1,3-Butadiene	54	1.8E-01	7.30E+00	9.80E-02	1.10E-05	1,20E+02	1.80E-01	7.40E+02	6.24E-03	1.57E+03	9.10E+02
2-Butanone (MEK)	72	2.7E-05	1.10E-03	9.00E-02	9.80E-06	4.50E+00	6.75E-03	2.70E±05	7.91E-06	4.41E+04	4.87E+04
tert-Butyl methyl ether (MTBE)	88.2	5.9E-04	2.40E-02	8.00E-02	1.00E-05	6.00E+00	9.00E-03	1.50E+05	1.11E-04	1.18E+04	2.78E+04
n-Butylbenzene	130	1.3E-02	5.40E-01	7.50E-02	7.80E-06	2.80E+03	4.20E+00	1.40E+01	9.56E-05	1.27E+04	6.21E+01
sec-Butylbenzene	130	1.9E-02	7.70E-01	7.50E-02	7.80E-06	2.20E+03	3.30E+00	1.70E+01	1.70E-04	9.53E+03	6.06E+01
tert-Butylbenzene	130	1.3E-02	5.20E-01	7.50E-02	7.80E-06	2.20E+03	3.30E+00	3.00E+01	1.16E-04	1.15E+04	1.06E+02
Cadmium	112.41	2.4E-02	1.00E+00			1.43E+01	7.50E+01				
Carbon disulfide	76	2.9E-02	1.20E+00	1.04E-01	1.00E-05	4.60E+01	6.90E-02	1.19E+03	3.42E-03	2.12E+03	4.60E+02
Carbon tetrachloride	154	3.0E-02	1.25E+00	7.80E-02	8.80E-06	1.74E+02	2.61E-01	7.93E+02	1.76E-03	2.96E+03	4.63E+02
Chlordane	409.8	4.9E-05	1.99E-03	1.18E-02	4.37E-06	1.20E+05	1.80E+02	5.60E-02			
2-Chloroacetophenone	154.59	3.7E-02	1.50E+00	7.20E-02	6.80E-06	3.30E+02	4.95E-01	4.70E+02	1.34E-03	3.39E+03	3.99E+02
2-Chloro-1,3-butadiene	88	3.2E-02	1.30E+00	1.10E-01	1.10E-05	5.00E+01	7.50E-02	7.40E+02	3.75E-03	2.03E+03	2.99E+02
1-Chloro-1,1-difluoroethane	100.5	1.0E-01	4.10E+00	8.00E-02	1.10E-05	5.80E+01	8.70E-02	2.80E+02	4.67E-03	1.82E+03	2.11E+02
Chlorobenzene	113	3.7E-03	1.50E-01	7.30 <u>E</u> -02	8.70E-06	2.19E+02	3.29E-01	4.72E+02	2.21E-04	8.34E+03	2.45E+02
1-Chlorobutane	92.57	3.2E-02	1.30E+00	1.10E-01	1.10E-05	5.00E+01	7.50E-02	7.40E+02	3.75E-03	2.03E+03	2.99E+02
Chlorodifluoromethane	86.47	1.0E-01	4.10E+00	8.00E-02	1.10E-05	5.80E+01	8.70E-02	2.80E+02	4.67E-03	1.82E+03	2.11E+02
Chloroethane	65	1.1E-02	4.50E-01	1.00E-01	1.20E-05	1.50E+01	2.25E-02	5.70E+03	1.90E-03	2.85E+03	1.42E+03
Chloroform	120	3.7E-03	1.50E-01	1.04E-01	1.00E-05	3.98E+01	5.97E-02	7.92E+03	6.53E-04	4.86E+03	1.99E+03
Chloromethane	51	2.4E-02	9.80E-01	1.09E-01	6.50E-06	3.50E+01	5.25E-02	8.20E+03	3.29E-03	2.16E+03	2.82E+03
ß-Chloronaphthalene	160	3.2E-04	1.30E-02	3.50E-02	8.80E-06	1.60E+03	2.40E+00	1.20E+01	1.98E-06	8.81E+04	3.09E+01
o-Chloronitrobenzene	153.33	4.4E-05	1.80E-03	7.60E-02	8.60E-06	6.50E+01	9.75E-02	2.10E+03	6.54E-06	4.85E+04	5.69E+02
p-Chloronitrobenzene	153.33	5.1E-05	2.10E-03	7.60E-02	8.60E-06	6.50E+01	9.75E-02	2.10E+03	7.42E-06	4.56E+04	5.69E+02
2-Chlorophenol	130	3.9E-04	1.60E-02	5.01E-02	9.46E-06	4.00E+02	6.00E-01	2.20E+04	1.13E-05	3.69E+04	1.71E+04
2-Chloropropane	78.54	2.3E-03	9.40E-02	8.00E-02	1.00E-05	5.10E+01	7.65E-02	2.70E+03	3.03E-04	7.13E+03	7.05E+02
o-Chlorotoluene	172.57	3.4E-03	1.40E-01	7.20E-02	8.70E-06	1.60E+02	2.40E-01	4.70E+02	2.46E-04	7.91E+03	2.02E+02
Chromium III	52						1.80E+06				
Chromium VI	52						1.90E+01				
Chrysene	228.28	9.5E-05	3.88E-03	2.48E-02	6.21E-06	3.98E+05	5.97E+02	1.60E-03	2.10E-09	2.71E+06	9.55E-01
Cobalt	58.93	2.4E-02	1.00E+00			1.43E+01	4.50E+01				į
Copper	63.55	2.4E-02	1.00E+00			1.43E+01	3.50E+01				
Crotonaldehyde	70.09	2.4E-01	1.00E+01	9.10E-02	1.00E-05	8.40E+02	1.26E+00	2.00E+01	3.67E-03	2.05E+03	5.27E+01

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Chemical	MW (g/mole)	(atm- m³/mole)	H' (dimensionless)	D _a (cm²/s)	D _w (cm ² /s)	الكور (cm³/q)	K _d (cm³/g)	(mg/L- water)	D _A (cm ² /s)	VF (m³/kq)	SAT (mg/kg)
Cumene (isopropylbenzene)	120	1.2E+00	4.90E+01	7.50E-02	7.10E-06	2.20E+02	3.30E-01	6.10E+01	6.22E-03	1.57E+03	3.89E+02
Cyanide	27.03		5.44E-03			2.71E+00	9.90E+00				
Cyanogen	52	5.1E-03	2.10E-01	2.00E-01	1.40E-05	1.40E+00	2.10E-03	8.50E+03	2.20E-03	2.64E+03	1.71E+03
Cyanogen bromide	52	5.1E-03	2.10E-01	9.60E-02	1.00E-05	2.60E+01	3.90E-02	8.50E+03	8.93E-04	4.15E+03	2.02E+03
Cyanogen chloride	52	5.1E-03	2.10E-01	9.60E-02	1.00E-05	2.60E+01	3.90E-02	8.50E+03	8.93E-04	4.15E+03	2.02E+03
000	320	4.0E-06	1.64E-04	1.69E-02	4.76E-06	1.00E+06	1.50E+03	9.00E-02			
DDE	318	2.1E-05	8.61E-04	1.44E-02	5.87E-06	4.47E+06	6.71E+03	1.20E-01			
DDT	354.5	8.1E-06	3.32E-04	1.37E-02	4.95E-06	2.63E+06	3.95E+03	2.50E-02			
Dibenz(a,h)anthracene	278.3	1.5E-08	6.03E-07	2.02E-02	5.18E-06	3.80E+06	5.70E+03	2.49E-03			
Dibenzofuran	284.8	1.3E-05	5.33E-04	6.01E-02	1.00E-05	7.76E+03	1.16E+01	3.10E+00	6.20E-08	4.98E+05	3.66E+01
1,2-Dibromo-3-chloropropane	240	1.5E-04	6.00E-03	8.00E-02	8.00E-06	1.70E+02	2.55E-01	1.20E+03	1.24E-05	3.52E+04	5.15E+02
Dibromochloromethane	210	8.5E-04	3.50E-02	2.00E-02	1.00E-05	6.30E+01	9.45E-02	4.40E+03	2.84E-05	2.33E+04	1.20E+03
1,2-Dibromoethane	188	3.2E-04	1.30E-02	7.33E-02	8.06E-06	2.80E+01	4.20E-02	3.40E+03	4.75E-05	1.80E+04	7.37E+02
1,4-Dichloro-2-butene	130	2.7E-04	1.10E-02	7.30E-02	8.10E-06	4.80E+01	7.20E-02	2.80E+03	3.54E-05	2.09E+04	6.91E+02
1,2-Dichlorobenzene	147	1.9E-03	7.79E-02	6.90E-02	7.90E-06	3.80E+01	5.70E-02	1.56E+02	2.36E-04	8.07E+03	3.74E+01
1,3-Dichlorobenzene	147	1.9E-03	7.80E-02	6.90E-02	7.90E-06	3.80E+01	5.70E-02	1.56E+02	2.37E-04	8.07E+03	3.74E+01
1,4-Dichlorobenzene	147	2.4E-03	9.96E-02	6.90E-02	7.90E-06	6.16E+02	9.24E-01	7.38E+01	6.51E-05	1.54E+04	8.19E+01
3,3-Dichlorobenzidine	253.13	4.0E-09	1.64E-07	1.94E-02	6.74E-06	7.24E+02	1.09E+00	3.11E+00			
Dichlorodifluoromethane	120	1.0E-01	4.10E+00	8.00E-02	1.05E-05	5.80E+01	8.70E-02	2.80E+02	4.67E-03	1.82E+03	2.11E+02
1,1-Dichloroethane	66	5.6E-03	2.30E-01	7.42E-02	1.05E-05	5.30E+01	7.95E-02	5.06E+03	6.40E-04	4.90E+03	1.42E+03
1,2-Dichloroethane	66	9.8E-04	4.01E-02	1.04E-01	9.90E-06	3.80E+01	5.70E-02	8.52E+03	1.87E-04	9.07E+03	2.00E+03
cis-1,2-Dichloroethene	26	4.1E-03	1.67E-01	7.36E-02	1.13E-05	3.55E+01	5.33E-02	3.50E+03	5.25E-04	5.42E+03	8.63E+02
trans-1,2-Dichloroethene	26	9.4E-03	3.85E-01	7.07E-02	1.19E-05	3.80E+01	5.70E-02	6.30E+03	1.04E-03	3.85E+03	1.74E+03
1,1-Dichloroethene	97	2.7E-02	1.10E+00	9.00E-02	1.00E-05	6.50E+01	9.75E-02	2.30E+03	2.60E-03	2.43E+03	9.27E+02
2,4-Dichlorophenol	163	3.2E-06	1.30E-04	3.46E-02	8.77E-06	1.47E+02	2.21E-01	4.50E+03			
1,2-Dichloropropane	110	2.7E-03	1.10E-01	7.80E-02	8.70E-06	4.40E+01	6.60E-02	2.80E+03	3.58E-04	6.56E+03	7.07E+02
1,3-Dichloropropene	111	1.8E-02	7.26E-01	6.26E-02	1.00E-05	2.70E+01	4.05E-02	2.80E+03	1.60E-03	3.11E+03	8.43E+02
Dicyclopentadiene	130	1.1E-02	4.40E-01	6.70E-02	1.00E-05	5.70E+02	8.55E-01	1.80E+03	2.86E-04	7.34E+03	1.95E+03
Dieldrin	381	1.5E-05	6.19E-04	1.25E-02	4.74E-06	2.14E+04	3.21E+01	1.95E-01			
Diethyl phthalate	222.2	4.5E-07	1.85E-05	2.56E-02	6.35E-06	2.88E+02	4.32E-01	1.08E+03			
Dimethyl phthalate	194.19	4.1E-07	1.70E-05	5.68E-02	6.29E-06	3.71E+01	5.56E-02	4.00E+03			
Di-n-butyl phthalate	278.34	9.4E-10	3.85E-08	4.38E-02	7.86E-06	3.39E+04	5.09E+01	1.12E+01			

		I						S			
Chemical	MW (g/mole)	(atm- m³/mole)	H' (dimensionless)	D _a (cm ² /s)	D _w (cm ² /s)	K _{oc} (cm³/q)	К _а (с m ³/q)	(mg/L- water)	D _A (cm ² /s)	VF (m³/ka)	SAT (ma/ka)
2,4-Dimethylphenol	122.16	2.0E-06	8.20E-05	5.84E-02	8.69E-06	2.09E+02	3.14E-01	7.87E+03		/*	,,,
4,6-Dinitro-o-cresol	198.14	1.4E-06	5.72E-05	2.93E-02	6.91E-06	6.02E+02	9.02E-01	1.98E+02			
2,4-Dinitrophenol	184.11	8.6E-08	3.52E-06	2.73E-02	90-390'6	3.64E+02	5.46E-01	2.79E+03			
2,4-Dinitrotoluene	182.14	9.3E-08	3.80E-06	2.03E-01	7.06E-06	9.55E+01	1.43E-01	2.70E+02			
1,2-Diphenylhydrazine	184.24	4.6E-11	1.90E-09	3.17E-02	7.36E-06	3.48E+03	5.22E+00	2.21E+02			
Endosulfan	406.95	1.1E-05	4.59E-04	1.15E-02	4.55E-06	2.14E+03	3.21E+00	5.10E-01			
Endrin	381	7.5E-06	3.08E-04	1.25E-02	4.74E-06	1.23E+04	1.85E+01	2.50E-01			
Epichlorohydrin	93	3.2E-05	1.30E-03	8.80E-02	9.80E-06	3.50E+00	5.25E-03	6.00E+04	8.88E-06	4.17E+04	1.07E+04
Ethyl acetate	88	1.4E-04	5.70E-03	7.30E-02	9.70E-06	5.90E+01	8.85E-02	8.00E+04	1.81E-05	2.92E+04	2.10E+04
Ethyl acrylate	100.1	2.4E-01	9.80E+00	9.10E-02	8.60E-06	8.40E+02	1.26E+00	2.00E+01	3,63E-03	2.06E+03	5.22E+01
Ethyl chloride	65	1.1E-02	4.50E-01	1.00E-01	1.20E-05	1.50E+01	2.25E-02	5.70E+03	1.90E-03	2.85E+03	1.42E+03
Ethyl ether	74.12	1.3E-05	5.30E-04	7.00E-02	9.30E-06	1.40E+01	2.10E-02	1.00E+04	3.90E-06	6.29E+04	1.94E+03
Ethyl methacrylate	114.12	2.4E-01	1.00E+01	9.10E-02	8.60E-06	8.40E+02	1.26E+00	2.00E+01	3.67E-03	2.05E+03	5.27E+01
Ethylbenzene	106.2	7.9E-03	3.23E-01	7.50E-02	7.80E-06	3.63E+02	5.45E-01	1.69E+02	3.36E-04	6.77E+03	1.28E+02
Ethylene oxide	44	7.6E-05	3.10E-03	1.30E-01	1.50E-05	2.20E+00	3.30E-03	1.00E+06	2.72E-05	2.38E+04	1.77E+05
Fluoranthene	202.3	1.6E-05	6.60E-04	3.02E-02	6.35E-06	1.07E+05	1.61E+02	2.06E-01			
Fluorene	166.21	7.8E-05	3.20E-03	6.10E-02	90-388.7	7.90E+03	1.19E+01	1.90E+00	1.96E-07	2.80E+05	2.28E+01
Fluoride	38	2.4E-02	1.00E+00			1.43E+01	1.50E+02	1.69E+00			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Furan	68	5.4E-03	2.20E-01	1.00E-01	1.20E-05	1.20E+01	1.80E-02	1.00E+04	1.06E-03	3.81E+03	2.18E+03
Heptachlor	373.5	1.1E-03	4.47E-02	1.12E-02	90-369'S	1.41E+06	2.12E+03	1.80E-01			
Hexachlorobenzene	284.8	1.3E-03	5.41E-02	5.42E-02	5.91E-06	5.50E+04	8.25E+01	6.20E+00			
Hexachloro-1,3-butadiene	260.76	8.1E-03	3.34E-01	5.61E-02	6.16E-06	5.37E+04	8.06E+01	3.23E+00			
Hexachlorocyclopentadiene	272.75	2.7E-02	1.11E+00	1.61E-02	7.21E-06	2.00E+05	3.00E+02	1.80E+00			
Hexachloroethane	236.74	3.9E-03	1.59E-01	2.50E-03	6.80E-06	1.78E+03	2.67E+00	5.00E+01			
n-Hexane	86	1.2E-01	5.00E+00	2.00E-01	90-308.7	8.90E+02	1.34E+00	1.80E+01	5.01E-03	1.75E+03	3.80E+01
HMX	296.2	1.0E-11	4.10E-10			1.85E+03	2.78E+00	2.56E+03			
Hydrogen cyanide	27	1.3E-04	5.30E-03	1.80E-01	1.80E-05	1.70E+01	2.55E-02	1.00E+06	5.36E-05	1.69E+04	1.99E+05
Indeno(1,2,3-c,d)pyrene	276.3	1.6E-06	6.56E-05	1.90E-02	5.66E-06	3.47E+06	5.21E+03	2.20E-05			
Iron	55.84	2.4E-02	1.00E+00			1.43E+01	2.50E+01				
Isobutanol	74	1.2E-05	4.90E-04	8.60E-02	9.30E-06	6.20E+01	9.30E-02	8.50E+04	3.04E-06	7.12E+04	2.26E+04
Isophorone	138.21	6.6E-06	2.72E-04	6.23E-02	6.76E-06	4.68E+01	7.02E-02	1.20E+04			
Lead	207.2	2.4E-02	1.00E+00			1.43E+01	9.00E+02				

Chemical · lead (Tetraethyl-) Maleic hydrazide											
Chemical lead (Tetraethyl-) Maleic hydrazide		I						S			
lead (Tetraethyl-) Maleic hydrazide	MW (g/mole)	(atm- m³/mole)	H' (dimensionless)	D _a (cm ² /s)	D _w (cm ² /s)	K _{gc} (cm ³ /a)	K _d (cm ³ /a)	(mg/L- water)	D _A (cm ² /s)	VF (m³/ka)	SAT (ma/ka)
Maleic hydrazide	64.52					3	6				6.6
	110	6.6E-03	2.70E-01	9.00E-02	1.10E-05	4.20E+01	6.30E-02	6.00E+03	9.52E-04	4.02E+03	1.61E+03
Manganese	54.94	2.4E-02	1.00E+00			1.43E+01	6.50E+01				
Mercury (elemental)	200.59	2.4E-02	1.00E+00	3.07E-02	6.30E-06	1.43E+01	5.20E+01				
Mercury (methyl)	215.62	1.1E-02	4.67E-01			1.43E+01					
Methacrylonitrile	62.09	8.8E-05	3.60E-03	1.10E-01	1.30E-05	8.40E-01	1.26E-03	7.90E+04	2.66E-05	2.41E+04	1.38E+04
Methomyl	160	3.9E-02	1.60E+00	6.90E-02	1.00E-05	1.50E+01	2.25E-02	1.70E+05	3.03E-03	2.25E+03	6.59E+04
Methyl acetate	74.08	2.0E-05	8.40E-04	1.00E-01	1.00E-05	2.20E+00	3.30E-03	1.00E+06	7.22E-06	4.62E+04	1.77E+05
Methyl acrylate	86.09	2.4E-01	9.80E+00	9.10E-02	8.60E-06	8.40E+02	1.26E+00	6.00E+01	3.63E-03	2.06E+03	1.57E+02
Methyl isobutyl ketone	100	1.4E-04	5.70E-03	7.50E-02	7.80E-06	1.30E+02	1.95E-01	1.90E+04	1.30E-05	3.45E+04	7.01E+03
Methyl methacrylate	100	3.4E-04	1.40E-02	7.70E-02	8.60E-06	1.30E+01	1.95E-02	1.50E+04	5.98E-05	1.61E+04	2.92E+03
Methyl styrene (alpha)	118.18	2.3E-03	9.40E-02	7.10E-02	8.00E-06	3.60E+02	5.40E-01	3.00E+02	9.69E-05	1.26E+04	2.17E+02
Methyl styrene (mixture)	118.18	2.3E-03	9.40E-02	7.10E-02	8.00E-06	3.60E+02	5.40E-01	3.00E+02	9.69E-05	1.26E+04	2.17E+02
Methylcyclohexane	98	4.4E-01	1.80E+01	7.00E-02	9.00E-06	2.20E+03	3.30E+00	1.40E+01	2.37E-03	2.55E+03	7.89E+01
Methylene bromide	170	9.0E-04	3.70E-02	8.00E-02	8.00E-06	1.80E+02	2.70E-01	1.20E+04	6.99E-05	1.48E+04	5.37E+03
Methylene chloride	85	2.2E-03	9.00E-02	1.00E-01	1.20E-05	1.20E+01	1.80E-02	1.30E+04	4.69E-04	5.73E+03	2.63E+03
Molybdenum	95.94	2.4E-02	1.00E+00			1.43E+01	2.00E+01				
Naphthalene	128.16	4.8E-04	1.98E-02	5.90E-02	7.50E-06	2.00E+03	3.00E+00	3.10E+01	3.94E-06	6.25E+04	9.84E+01
Nickel	58.71	2.4E-02	1.00E+00			1.43E+01	6.50E+01				
Nitrate	101.1	2.4E-02	1.00E+00			1.43E+01					
Nitrite	46	2.0E-07	8.38E-06			2.37E+01	3.56E-02				
Nitrobenzene	120	2.4E-05	9.84E-04	7.60E-02	8.60E-06	6.46E+01	9.69E-02	2.10E+03	4.16E-06	6.09E+04	5.68E+02
Nitroglycerin	227.08	6.1E-03	2.50E-01			2.60E+02	3.90E-01	1.80E+03			
N-Nitrosodiethylamine	102.14	3.7E-06	1.50E-04	6.48E-02	9.13E-06	1.20E+03	1.80E+00	1.06E+05			
N-Nitrosodimethylamine	74.08	1.4E-01	5.90E+00	3.12E-02	6.35E-06	3.82E+01	5.73E-02	1.00E+06			
N-Nitrosodi-n-butylamine	158.2	3.2E-04	1.31E-02	5.80E-02	9.72E-06	2.60E+02	3.90E-01	1.27E+03	1.48E-05	3.23E+04	7.17E+02
N-Nitrosodiphenylamine	198.23	5.0E-06	2.05E-04	3.12E-02	6.35E-06	1.29E+03	1.94E+00	3.51E+01			7.40E+01
N-Nitrosopyrrolidine	100.2	4.9E-08	2.00E-06			1.59E+02	2.38E-01	1.00E+06			
<i>m</i> -Nitrotoluene	137.1	2.4E-05	9.80E-04	7.60E-02	8.60E-06	6.50E+01	9.75E-02	2.10E+03	4.14E-06	6.10E+04	5.69E+02
o-Nitrotoluene	137.13	2.4E-05	9.80E-04	7.60E-02	8.60E-06	6.50E+01	9.75E-02	2.10E+03	4.14E-06	6.10E+04	5.69E+02
p-Nitrotoluene	137.1	2.4E-05	9.80E-04	7.60E-02	8.60E-06	6.50E+01	9.75E-02	2.10E+03	4.14E-06	6.10E+04	5.69E+02
Pentachlorobenzene	250.32	7.1E-03	2.90E-01	5.70E-02	6.30E-06	2.00E+03	3.00E+00	8.31E+02			

·	MM.	H (atm-	È:	, Da	^	×	₹.	S (mg/L-	ک	VF.	SAT
Chemical	(g/mole)	m'/mole)	(dimensionless)	(cm²/s)	(cm²/s)	(cm2/g)	(cm²/g)	water)	(cm²/s)	(m ⁷ /kg)	(mg/kg)
- entaction option	700.34	2.4E-U8	1.00E-06	5.60E-02	6.10E-06	5.92E+02	8.88E-01	1.95E+03			
Phenanthrene	178.2	2.3E-05	9.40E-04			1.40E+04	2.10E+01	1.15E+00			
Phenol	94	4.0E-07	1.63E-05	8.20E-02	9.10E-06	2.88E+01	4.32E-02	8.28E+04			
Polychlorinatedbiphenyls	(291.98 - 360.86)										
Aroclor 1016	variable	4.2E-02	1.73E+00	1.75E-02	8.00E-06	4.48E+04	6.72E+01	2.77E-01			
Aroclor 1221	variable	1.8E-08	7.40E-07	1.75E-02	8.00E-06	4.48E+04	6.72E+01	2.77E-01	l		
Aroclor 1232	variable	1.8E-08	7.40E-07	1.75E-02	8.00E-06	4.48E+04	6.72E+01	2.77E-01			
Aroclor 1242	variable	1.8E-08	7.40E-07	1.75E-02	8.00E-06	4.48E+04	6.72E+01	2.77E-01			
Aroclor 1248	variable	1.8E-08	7.40E-07	5.70E+03	6.00E-01	5.30E+05	7.95E+02	2.77E-01			
Aroclor 1254	variable	1.8E-08	7.40E-07	5.70E+03	6.00E-01	5.30E+05	7.95E+02	2.77E-01			
Aroclor 1260	variable	1.8E-08	7.40E-07	5.70E+03	6.00E-01	5.30E+05	7.95E+02	2.77E-01			
n-Propylbenzene	120.19	1.3E-02	5.40E-01	7.50E-02	7.80E-06	2.80E+03	4.20E+00	1.40E+01	9.56E-05	1.27E+04	6.21E+01
Propylene oxide	28	8.5E-05	3.50E-03	1.20E-01	1.30E-05	2.50E+01	3.75E-02	4.80E+05	2.33E-05	2.57E+04	1.01E+05
Pyrene	200	1.1E-05	4.51E-04	2.72E-02	7.24E-06	6.80E+04	1.02E+02	1.35E-01	4.07E-09	1.95E+06	1.38E+01
RDX	222.12	6.3E-08	2.60E-06			7.00E+01	1.05E-01	5.97E+01			
Sefenium	78.96	9.7E-03	3.98E-01			1.43E+01	5.00E+00				
Silver	107.87	2.4E-02	1.00E+00			1.43E+01	8.30E+00				
Strontium	87.62	2.4E-02	1.00E+00			1.43E+01	3.50E+01				
Styrene	100	2.7E-03	1.10E-01	7.10E-02	8.00E-06	9.10E+01	1.37E-01	3.10E+02	2.54E-04	7.78E+03	1.00E+02
1,2,4,5-Tetrachlorobenzene	215.89	1.0E-03	4.10E-02	2.11E-02	8.76E-06	1.19E+03	1.78E+00	5.95E-01			
1,1,1,2-Tetrachloroethane	167.85	3.4E-04	1.41E-02	7.10E-02	7.90E-06	7.90E+01	1.19E-01	2.97E+03	3.68E-05	2.05E+04	8.72E+02
1,1,2,2-Tetrachloroethane	169.86	3.4E-04	1.40E-02	7.10E-02	7.90E-06	7.90E+01	1.19E-01	2.97E+03	3.65E-05	2.05E+04	8.72E+02
Tetrachloroethene	170	1.8E-02	7.54E-01	7.20E-02	8.20E-06	2.70E+02	4.05E-01	2.00E+02	8.54E-04	4.25E+03	1.34E+02
Thallium	204.37	2.4E-02	1.00E+00			1.43E+01	7.10E+01				
Toluene	92	6.6E-03	2.72E-01	8.70E-02	8.60E-06	1.82E+02	2.73E-01	5.26E+02	5.19E-04	5.45E+03	2.52E+02
Toxaphene	414	6.0E-06	2.46E-04	1.16E-02	4.34E-06	2.57E+05	3.86E+02	7.40E-01			
Tribromomethane	252.73	6.6E-04	2.70E-02	1.49E-02	1.03E-05	8.70E+01	6.92E+00	3.10E+03	6.51E-07	1.54E+05	2.20E+04
1,1,2-Trichloro-1,2,2- trifluoroethane	187.38	5.2E-01	2.14E+01	2.88E-02	8.07E-06	1.60E+02	2.40E-01	1.10E+03	2.23E-03	2.63E+03	3.28E+03
1,2,4-Trichlorobenzene	181	1.4E-03	5.82E-02	3.00E-02	8.23E-06	1.78E+03	2.67E+00	3.00E+02	6.53E-06	4.86E+04	8.55E+02
1,1,1-Trichloroethane	130	1.7E-02	7.05E-01	7.80E-02	8.80E-06	1.10E+02	1.65E-01	1.33E+03	1.37E-03	3.35E+03	5.63E+02
1,1,2-Trichloroethane	133	9.1E-04	3.74E-02	7.80E-02	8.80E-06	5.01E+01	7.52E-02	4.42E+03	1.22E-04	1.12E+04	1.12E+03

		3						c			
Chemical	MW (a/mole)	atm- m/mole)	H' (dimensionless)		D _w (cm ² /s)	K _{oc}	K _d	S (mg/L- water)	DA (cm ² /s)	VF (m³/kg)	SAT (mg/kg)
Trichloroethylene	131	1.0E-02		7.90E-02	9.10E-06	9.40E+01	1.41E-01	1.10E+03	9.61E-04	4.00E+03	4.01E+02
Trichlorofluoromethane	140	9.8E-02	4.00E+00	8.70E-02	1.30E-05	1.60E+02	2.40E-01	1.10E+03	4.15E-03	1.93E+03	9.83E+02
2,4,5-Trichlorophenol	197.46	4.4E-06	1.80E-04	2.91E-02	7.03E-06	1.19E+03	1.78E+00	1.20E+03			
2,4,6-Trichlorophenol	197.46	7.8E-06	3.20E-04	3.18E-02	6.25E-06	1.19E+03	1.78E+00	8.00E+02			
1,1,2-Trichloropropane	147.43	2.9E-02	1.20E+00	4.00E-02	9.30E-06	5.10E+01	7.65E-02	2.70E+03	1.29E-03	3.45E+03	1.06E+03
1,2,3-Trichloropropane	147.43	2.7E-02	1.10E+00	7.10E-02	7.90E-06	5.10E+01	7.65E-02	2.70E+03	2.17E-03	2.67E+03	1.03E+03
1,2,3-Trichloropropene	145.42	2.7E-02	1.10E+00	7.10E-02	90-306.7	5.10E+01	7.65E-02	2.70E+03	2.17E-03	2.67E+03	1.03E+03
Triethylamine	101.19	9.0E-05	3.70E-03	1.20E-01	1.30E-05	2.20E+00	3.30E-03	1.00E+06	2.92E-05	2.30E+04	1.77E+05
1,2,4-Trimethylbenzene	120	5.6E-03	2.30E-01	7.50E-02	7.10E-06	3.70E+03	5.55E+00	2.60E-01	3.14E-05	2.21E+04	1.50E+00
1,3,5-Trimethylbenzene	120	7.8E-03	3.20E-01	7.50E-02	7.10E-06	8.20E+02	1.23E+00	4.80E+01	1.75E-04	9.40E+03	6.92E+01
2,4,6-Trinitrotoluene	227.13	4.6E-07	1.90E-05	2.45E-02	6.36E-06	1.83E+03	2.75E+00	1.30E+02			
Vanadium	50.94	2.4E-02	1.00E+00			1.43E+01	1.00E+03				
Vinyl acetate	86	5.1E-04	2.10E-02	8.50E-02	9.20E-06	5.30E+00	7.95E-03	2.00E+04	1.04E-04	1.22E+04	3.68E+03
Vinyl bromide	106.95	6.3E-03	2.60E-01	1.00E-01	1.20E-05	1.30E+02	1.95E-01	1.80E+04	6.84E-04	4.75E+03	7.19E+03
Vinyl chloride	63	2.7E-02	1,11E+00	1.10E-01	1.20E-06	1.86E+01	2.79E-02	2.80E+03	3.87E-03	1.99E+03	9.36E+02
Vinyl chloride	63	2.7E-02	1.11E+00	1.10E-01	1.20E-06	1.86E+01	2.79E-02	2.80E+03	3.87E-03	1.99E+03	9.36E+02
m-Xylene	106	7.3E-03	3.01E-01	7.00E-02	7.80E-06	2.00E+02	3.00E-01	1.61E+02	4.34E-04	5.96E+03	8.20E+01
o-Xylene	106	5.2E-03	2.13E-01	8.70E-02	1.00E-05	2.40E+02	3.60E-01	1.78E+02	3.48E-04	6.65E+03	9.95E+01
Xylenes	106	7.3E-03	3.00E-01	7.00E-02	7.80E-06	2.00E+02	3.00E-01	1.61E+02	4.33E-04	5.96E+03	8.20E+01
Zinc	65.38	2.4E-02	1.00E+00			1.43E+01	6.20E+01				
Notes.											

 $MW-Molecular weight $HW-Dimensionless Henry's Law Constant $D_w-Diffusivity in water $K_d-Soil-water partition coefficient $D_A-Apparent diffusivity (calculated for VOCs only) $AT-Soil saturation limit (calculated for VOCs only) $AT-Soil saturation limit (calculated for VOCs only)$

H – Henry's Law Constant
D_a – Diffusivity in air
K_{oc} – Soil organic carbon partition coefficient
S - Solubility in water
VF – Volatilization factor (calculated for VOCs only)
VOC – Volatile organic compound

Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Monday, September 21, 2009 10:59 AM 'Rajen, Gaurav'; Monzeglio, Hope, NMENV

To: Cc:

Riege, Ed

Subject:

RE: Final report - Tank 116 spill

Raj:

Re: Final Report Section 4.0 Conclusions below.

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 – 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

Approved. Please provide a schedule for installing the perforated pipes as proposed and notify the agencies when the pipes are installed in accordance with the schedule.

Please contact me if you have questions. Thank you.

Please be advised that NMOCD approval of this corrective action does not relieve Western Refining Southwest, Inc.-Gallup Refinery of responsibility should their operations fail to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve the Gallup Refinery of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Tuesday, August 25, 2009 1:58 PM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc: Riege, Ed

Subject: Final report - Tank 116 spill

August 25, 2009

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Dear Carl:

It is a pleasure to send you our final report for our Tank 116 spill of Ultra Low Sulfur Diesel which we have cleaned up. Two paper copies will go out in the mail today. Electronic copies are attached.

As you will note in the report, we excavated soil from within our berm area up to two feet. As there are active pipelines in the area, and ongoing work activity, we found it difficult to excavate any further near the pipelines, and had to cover our excavation with clean soil to prevent any hazard to workers in the area. This covering was done before our second set of laboratory results had arrived, for safety reasons. Our first set of laboratory results showed levels of DRO around 50,000 ppm. After excavation the DRO levels were of the order of 4000-6000 ppm (no BTEX was detected). As these levels were below 2 feet, we believe they did not come from the recent Tank 116 spill. We have conducted a small test at one of these locations of passive venting, using a perforated pipe to get air into the ground. The levels below the perforated pipe have fallen from 4700 ppm to 190 ppm. With your concurrence, we could now place more such perforated pipes in the area and we believe we will be able to reduce all the areas that were found to have DRO levels around 4000-6000 ppm to below concern. If we place many such perforated pipes we will also get concurrence (as needed) from the NMED's Air Quality Bureau.

We look forward to your response at your earliest convenience,
Sincerely,
Gaurav Rajen
This inbound email has been scanned by the MessageLabs Email Security System.

Chavez, Carl J, EMNRD

From:

Monzeglio, Hope, NMENV

Sent:

Tuesday, September 15, 2009 9:46 AM

To:

Riege, Ed; Larsen, Thurman

Cc:

Kieling, John, NMENV; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; Martinez, Cynthia,

NMEŇV

Subject:

9/5/09 API overflow report

Attachments:

GRCC 9_5_09 formal rpt API overflow.pdf

Ed and Beck

The hard copy will go out in the mail today.

Hope

Hope Monzeglio Environmental Specialist New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, BLDG 1 Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

New Mexico Environment Department

Hazardous Waste Bureau



BILL RICHARDSON Governor

DIANE DENISH Lieutenant Governor

NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505-6303 Phone (505) 476-6000 Fax (505) 476-6030

www.nmenv.state.nm,us



RON CURRY Secretary

JON GOLDSTEIN Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

September 15, 2009

Mr. Ed Riege Environmental Superintendent Western Refining, Southwest Inc., Gallup Refinery Route 3 Box 7 Gallup, New Mexico 87301 Mr. Beck Larsen
Environmental Engineer
Western Refining, Southwest Inc.,
Gallup Refinery
Route 3 Box 7
Gallup, New Mexico 87301

SUBJECT:

FORMAL REPORT SUBMITTAL TO THE

SEPTEMBER 5, 2009 API SEPARATOR OVERFLOW

WESTERN REFINING, SOUTHWEST INC., GALLUP REFINERY

EPA ID NO. NMD000333211

HWB-GRCC-MISC

Dear Messrs Riege and Larsen:

The New Mexico Environment Department (NMED) requires Western Refining Southwest Inc., Gallup Refinery (the Permittee) to submit a formal report summarizing the events and actions taken to address the API separator overflow which occurred on September 5, 2009. This spill released K051, F038, and potentially D018 hazardous wastes into the environment. As a reminder, the Permittee must comply with Section II.F.2 (Twenty-four Hour Reporting) of the Post-Closure Care Permit which can be found using the following link: http://www.nmenv.state.nm.us/hwb/giant/GRC-C%20PCC%20PERMIT.pdf.

The Permittee met the 24-hour oral reporting requirements by contacting Steve Connolly, the NMED Incident Response Coordinator. When reporting all future spills, the facility may continue to contact Steve Connolly; however, the Permittee must also contact the Project Leader for Gallup (Hope Monzeglio) of the Hazardous Waste Bureau.

Mr. Ed Riege Gallup Refinery September 15, 2009 Page 2 of 2

The formal report addressing the September 5, 2009 API separator overflow must describe the following:

- The incident (how the overflow occurred). a.
- b. The volume of overflow and how this value was determined.
- All cleanup activities. Describe the methods and procedures of the cleanup, what c. activities were conducted (e.g., soil removal methods, waste management, sample collection), and include the volume of soil removed and any chemical analytical results from sampling.
- d. The hazardous wastes that were potentially released to the environment.
- The activities that were conducted to demonstrate the spill was cleaned up. e.
- f. Disposal activities.
- The steps Gallup will implement to ensure overflows to the API separator do not g. continue to occur.

The formal report must be submitted to NMED on or before October 21, 2009. If you have questions please contact Hope Monzeglio of my staff at 505-428-2545.

Sincerely.

John E. Kieling

Program Manager

Permits Management Program

Hazardous Waste Bureau

co:

D. Cobrain, NMED HWB

H. Monzeglio, NMED HWB

C. Chavez, NMEMNRD OCD

File: Reading GRCC 2009

GRCC-MISC

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Tuesday, September 15, 2009 9:19 AM

To:

Monzeglio, Hope, NMENV; Riege, Ed

Cc:

Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD RE: 9 5 09 API Overflow-C141 Initial Report

Subject: Attachments:

C-141 Initial Report 090509.pdf

Hope.

The following is the Initial C-141 Report as required from the API Overflow that occurred on September 5, 2009. I will be following up this initial report with a final report addressing issues as described below. Sincerely,

Beck

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Thursday, September 10, 2009 4:02 PM

To: Larsen, Thurman, Riege, Ed

Cc: Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD

Subject: 9 5 09 API Overflow

Beck

This e-mail is to address the September 5, 2009 API separator overflow. The hazardous wastes released during the API separator overflow include K051, F038, and potentially D018. In addition to the C-141 form, Gallup must also submit a formal report. The formal report must describe the incident (how it occurred), describe all clean up actions, discuss where contaminated soils were stockpiled, explain what actions were completed to demonstrate that cleanup is complete, identify where all waste was or will be disposed, discuss how Gallup determined the volume of the release, and include what actions Gallup will be implementing to ensure overflows to the API do not continue to occur. NMED will follow up this e-mail with a written letter. Gallup must comply with Section II.F.2 (Twenty-four Hour Reporting) of the Post-Closure Care Permit which can be found using the following link: http://www.nmenv.state.nm.us/hwb/giant/GRC-C%20PCC%20PERMIT.pdf

Please let me know if you have any questions.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

New Mexico Environment Department Hazardous Waste Bureau

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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

			Rele	ease Notific	cation	and Co	orrective A	etion_			
						OPERAT		Init	al Report	Fin	nal Repor
		estern Refin				Contact Bed		N=0			
Facility Na		Jamestown,	NM 8/3	4 /		Telephone I Facility Typ	No.(505) 722-02	258			
		Retificity				raciity Typ	e Refillery				
Surface Ow	ner			Mineral (Owner.			Lease	No.		
				LOCA		OF RE	LEASE				
Unit Letter	Section 28	Township 15N	Range 15W	Feet from the	North/	South Line	Feet from the	East/West Line	County McKinley		
			La	titude35° 29′		_	-	0′′			
Type of Rele	ase.		:	<u>NA I</u>	UKE	OF REL		Volume	Recovered		
		API Ov	erflow			6.5	5 bbls (oil)	5.5 bbls	(oil) (estimated		
Source of Re	elease API (JNIT				1	Hour of Occurrence 1215 hrs / 1830		Hour of Disco 9; 1215 hrs / 18		
Was Immedi	ate Notice		Yes [] No □ Not R	equired	If YES, To	Whom?		<u> </u>		
By Whom? I							Hour 9/06/2009 /				
Was a Water	course Rea		Yes ∑] No		If YES, Vo	olume Impacting	the Watercourse.			
Or po fac Th Th the thi sto	n Saturday sssible rain cility. It be ne API Ope ne rain slace e excessive understorn ormwater. ches.	september event. At ab gan raining le erators began ked off from erain. The A a cell passing The total over	5 at approper to a pumping a heavy PI conting over the erflow for Action Ta	to 1230 hrs, Sa or about 20 to 30 g from the new to a moderate to used to overflow facility. Once a r both events wa	hrs, Offiturday, 0 minute API to o light. of for aboagain, that approximate approximate the approximat	September, es. At 1220 \(\Gamma\)-105/T-10' At 1245 hrs out an hour. he new API eximately 2	5, 2009, a heaven hrs the new AP in order to renthe new API (EAT 1800 hrs as began to overflown and the new API thours. A total range in the new API thours.	ssing filters and y rain and thund I began to overflove as much water and West) Becond rain eventow a second time ainfall for both expenses.	erstorms passiow into the Buter as possible ays began to cobegan due to be for an hour covents was app	ed over aker Fra e from the overflow a second due to ex roximate	the ac Tank. he API. v due to dary xcess ely 1.6
pe su tha int pe	rsonnel be rrounding at any cont to a roll-of rsonnel de	gan cleaning the API area amination m f box to be to	up the and Personn ay or did ested (and pread ne	ny aqueous/oily el conduct clear spread. After in alyzed by an out	portion nup of a mmedia tside lab	of overflow reas such as te cleanup e b), prior to s	v contamination depressions or fforts were com hipment off site	g a vacuum truck and any contam other conveyand apleted, all conta for disposal to a nal cleanup of th	inated soil an ces adjacent to minated mate in approved fa	d rock do the AP rial were cility. C	debris PI area e put Contract
regulations a public health should their	all operators n or the env operations	are required ironment. The have failed to	to report a e acceptan adequatel	nd/or file certain ce of a C-141 rep y investigate and	release n ort by th remediat	otifications a e NMOCD n e contaminat	ind perform corre narked as "Final F ion that pose a th	understand that pu ctive actions for re Report" does not re reat to ground wat responsibility for	leases which m lieve the operater, surface water	nay endar tor of liab er, human	nger bility 1 health

federal, state, or local laws and/or regulations.

	OIL CONSERVATION DIVISION				
Signature: Printed Name: Beck Larsen	Approved by District Supervisor:				
Title: Environmental Engineer	Approval Date:	Expiration Date:			
E-mail Address: Thurman.larsen@wnr.com	Conditions of Approval:		Attached		
Date: 7/21/2009 Phone: (505) 722-0258		, 			

^{*} Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From:

Rajen, Gaurav [Gaurav.Rajen@wnr.com]

Sent:

Tuesday, August 25, 2009 1:58 PM

To:

Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc:

Riege, Ed

Subject:

Final report - Tank 116 spill

Attachments:

C-141-final signed.pdf; Soil samples 6-09.pdf; Soil samples 6-17.pdf; Samples - July 2009.pdf;

C-141 final-report 8-25-2009.doc

August 25, 2009

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Dear Carl:

It is a pleasure to send you our final report for our Tank 116 spill of Ultra Low Sulfur Diesel which we have cleaned up. Two paper copies will go out in the mail today. Electronic copies are attached.

As you will note in the report, we excavated soil from within our berm area up to two feet. As there are active pipelines in the area, and ongoing work activity, we found it difficult to excavate any further near the pipelines, and had to cover our excavation with clean soil to prevent any hazard to workers in the area. This covering was done before our second set of laboratory results had arrived, for safety reasons. Our first set of laboratory results showed levels of DRO around 50,000 ppm. After excavation the DRO levels were of the order of 4000-6000 ppm (no BTEX was detected). As these levels were below 2 feet, we believe they did not come from the recent Tank 116 spill. We have conducted a small test at one of these locations of passive venting, using a perforated pipe to get air into the ground. The levels below the perforated pipe have fallen from 4700 ppm to 190 ppm. With your concurrence, we could now place more such perforated pipes in the area and we believe we will be able to reduce all the areas that were found to have DRO levels around 4000-6000 ppm to below concern. If we place many such perforated pipes we will also get concurrence (as needed) from the NMED's Air Quality Bureau.

* * 7		C 1							1.	•
W/P	LOOK	torward	tΩ	vour	TAC	$n \cap n \in A$	at	WOHR	earliest	convenience,
** C	TOOK	ioiwaiu	w	your	100	ponse	aı	your	carnest	convenience,

Sincerely,

Gaurav Rajen

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Attach Additional Sheets If Necessary

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

			11010	ase i willie			•		157 57 15		
Name of Company Western Refining Southwest Inc.						OPERATOR ☐ Initial Report ☐ Final Report ☐ Contact Gaurav Rajen					
								77			
						Telephone No. 505-722-0227 Facility Type Oil refinery					
Surface Owner Western Refining Mineral Owner					wner V	Western Refining			Lease No.		
				LOCA	TION	OF REI	LEASE				
							Feet from the	East/West Line	County McKinley		
		Lati	tude3:	5°29'22"		_ Longitud	e108°25'24	"			
				NAT	URE	OF RELI	EASE				
Type of Rele	ase Ultra-L	ow Sulfur Die	sel (ULSI))		Volume of (1890 galle	Recovered 12 barrels (500 estimate				
Source of Re	lease Overf	low from Tan	k 116						our of Discovery 4/24/2008;		
						(approxima					
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required									RD, Oil Conservation Division; ireau (via telephone)		
By Whom? (Gaurav Raje	n and Cheryl	Johnson	····		Date and F	lour 4/24/2008 (a	pproximately) 11:0	00 am		
Was a Water		hed?						he Watercourse. N			
			Yes 🗵	No No							
If a Watercou	ırse was Im	pacted, Descr	be Fully.	Not applicable		·					
over. The Pursurrounded be in the ground containment	mp Operatory a berm. A l outside the dike on this	r was notified lesser amour berm area, so	and a train t of ULSI ome ULSI the tank b	nsfer was started in I ran down within I leaked out onto a erm area, and the s	nto Tank the foar a service	k 583. Tank 1 m line leadin e road runnin	16 had run over a g into the tank. The g adjacent to Tanl	and spilled ULSD on The spilled ULSD on The sperators on the sperators of the spilled on the spi	r discovered Tank 116 running onto the soil within the area ve on the foam line that is buried r used a backhoe to build a		
Through exc. 500 feet in le road. The ma	avation and ength and av aterial on the	sampling, thi verage 5 feet v e road surface	s area has vide (rang penetrate	a final estimate of ng between 2-10 id to a depth of 3 in	approxi feet dependenches (m	imately 1000 ending on the naximum) int	square feet, and of amount of pooling the underlying s	of 2 feet depth. An ng of the spilled m surface as the road	cal penetration of the ULSD. affected area of approximately aterial) lay along the service surface is partially paved. ent material was placed on the		
spill along the	e road; and al samples v	this area was	isolated th and analy	rough the use of bezeed, and all conta	oarricade	es. In further	cleanup actions, o	contaminated soils	were excavated, confirmatory able regulations at a permitted		
I hereby certi regulations a public health should their or the enviro	ify that the ill operators or the envionment. In a	information g are required t ronment. The nave failed to	ven above o report a acceptandequately OCD accept	e is true and comp nd/or file certain re ce of a C-141 repo investigate and re	elease no ort by the emediate	otifications a NMOCD m contaminati	nd perform correct arked as "Final R on that pose a three the operator of	ctive actions for rel eport" does not rel eat to ground wate responsibility for c	suant to NMOCD rules and eases which may endanger ieve the operator of liability r, surface water, human health compliance with any other		
Signature:	Mal	L S. Gr	uni.				OIL CON	SERVATION	DIVISION		
Printed Nam	e: Mark B.	Turri				Approved by	District Supervis	or:			
Title: Refine	ry Manager	Gallup				Approval Da	e:	Expiration	Date:		
E-mail Addr	ess: <u>mark.tu</u>	ırri@wnr.com	-			Conditions o	f Approval:		Attached		
Date: 8-20-2	0-2009 Phone: 505-722-3833										

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

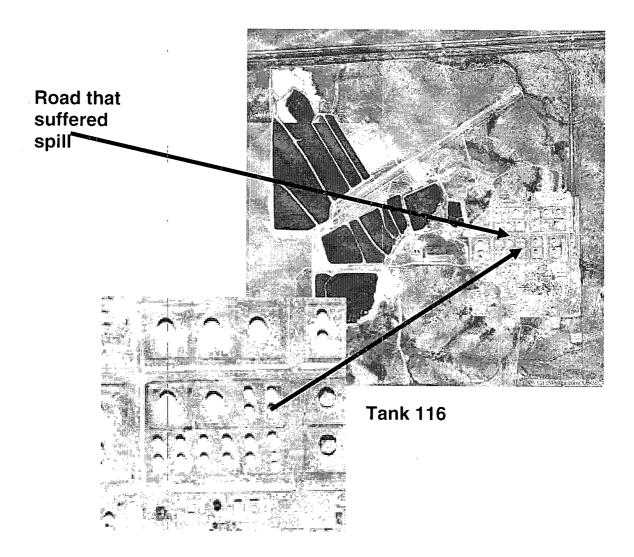
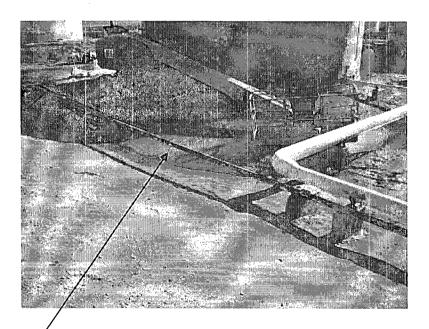


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

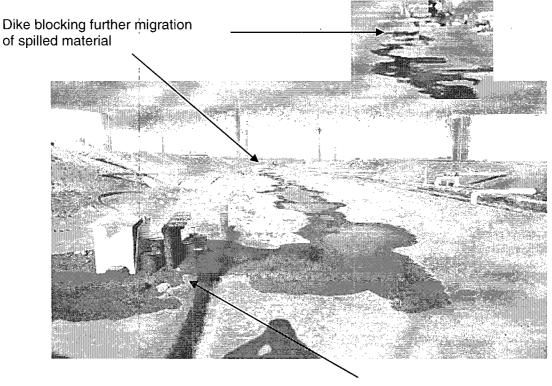
At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.



Area around Tank 116, Tank 115, and within the berm affected by the ULSD spill

Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road



Material emanating from drain valve on the foam line

Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.

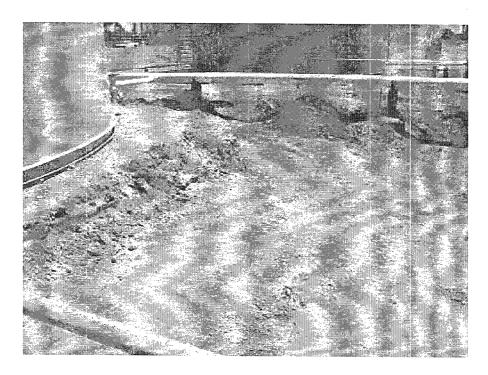


Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.



Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank



Figure 6: Preliminary clean-up of road which had experienced run-off of product.

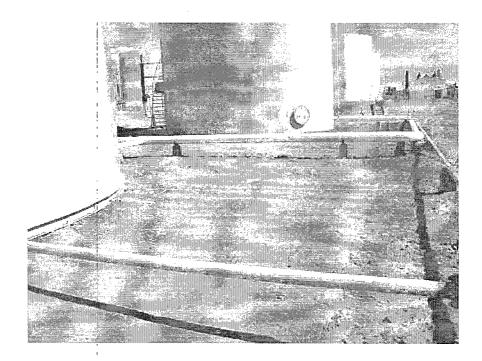


Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan – Tank 116

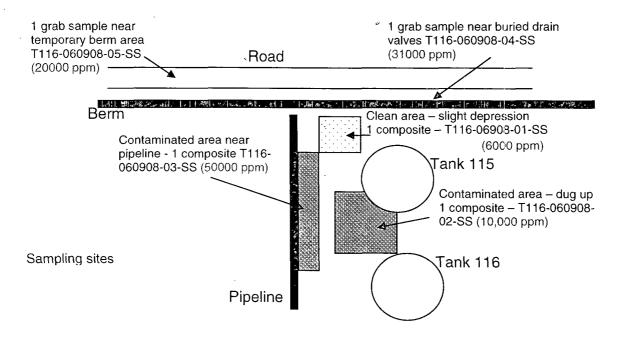


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan - Tank 116

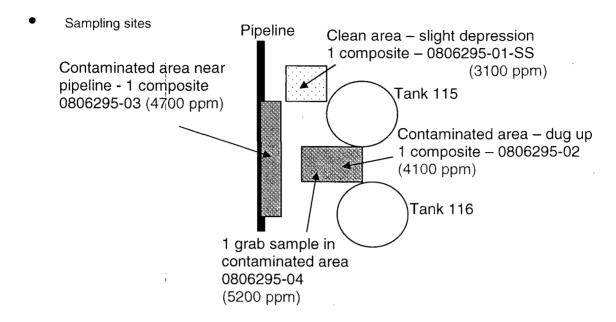


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 – 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

• We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1

foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours – this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

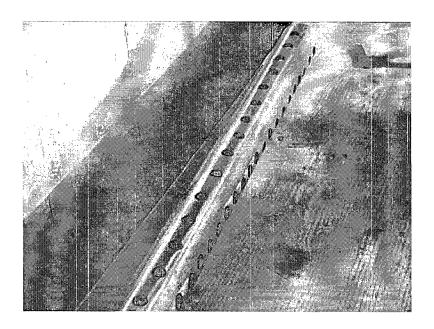
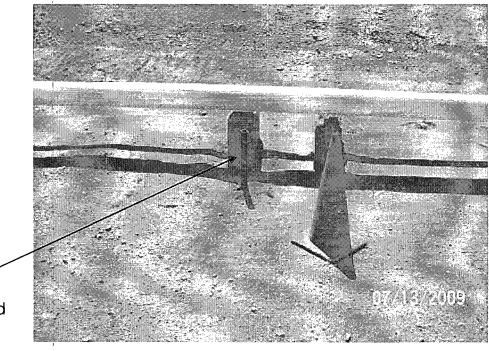


Figure 10: Perforated pipe that has been constructed



Perforated pipe placed into the ground

Figure 11: Photograph of emplaced pipe – the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. This level is now 190 ppm. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

Sampling Plan – Tank 116

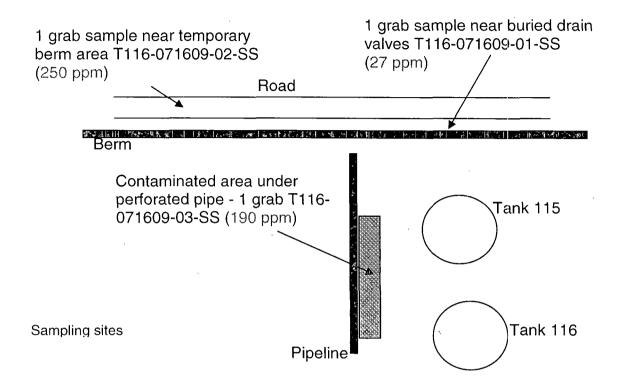


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 – 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

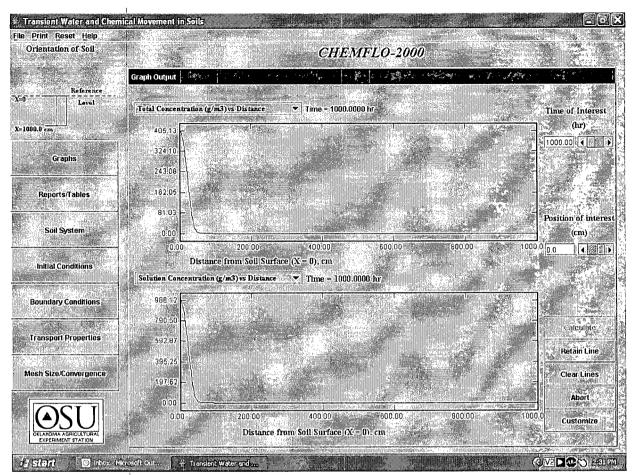


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

CHEMFLO-2000

(1986) 1986 16 (1986) 1896 1896 1896 1896 1896 1896 1896 1896 1896 1896 1896 189		-					,
				onamanan ramo-anaran mini manarahan anda maharahan bahahaha			
	Soil:	Sandy Clay te Length So		igth (cm.): 500.0			
	the state of	i-infinite Soi		90 41			
	Layer	Thickness	Conductivity	Water Characteristic	Owensta		. 1
	Layer	(cm)	Function	Function	Organic Carbon (g/g)	Bulk Density (Mg/m3)	a in consecution of
	i				Carbon	Density	
	i	(cm)	Function van Genuchten	Function van Genuchten	Carbon (g/g)	Density (Mg/m3)	A

Figure A.2: Assumed soil parameters

1 Ayens Man / 100 p 100 c	CHEMFLO-2	วกักเ		· · · · · · · · · · · · · · · · · · ·	The second second second second second second second second second second second second second second second se
Transport Propertie				edhilalasid	ket odlazi ize
	Difference Coefficient of Chamical in Metacon 2010		0.03528		
	Diffusion Coefficient of Chemical in Water(cm2/hr) Dispersivity (cm)		0.03528	4	
	Uniform Partition Coefficient (m3/Mg soil)	Y	0.095	()	
	Uniform 1st-Order Degradation Const. in Liquid (1/hr) Uniform 1st-Order Degradation Const. on Solids (1/hr)		0.47 n nnn4		
	Uniform Zero-Order Production Constant (g/m3/hr)	¥.	0.0		

Figure A.3: Assumed chemical transport properties



COVER LETTER

Friday, June 13, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank-116-Spill Site

Dear Gaurav Rajen:

Order No.: 0806136

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 6/10/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Hall Environmental Analysis Laboratory, Inc.

Date: 13-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Lab Order:

0806136

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable, or elevated, due to sample dilution or matrix interferences.

Date: 13-Jun-08

	Western Refining South Tank-116-Spill Site	west, Gallup		Western	× 10 10 10 10 10 10 10 10 10 10 10 10 10	La	b Order:	0806136
Lab ID:	0806136-01				Collecti	on Date:	6/9/2008	9:00:00 AM
Client Sample ID:	T-116-060908-01-SS					Matrix:	SOIL	
Analyses		Result	PQL	Quai	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Organ	nics (DRO)	6000	500		mg/Kg		50	6/12/2008 7:15:26 PM
Motor Oil Range Or	ganics (MRO)	ND	2500		mg/Kg		50	6/12/2008 7:15:26 PM
Surr: DNOP		0	61.7-135	S	%REC		50	6/12/2008 7:15:26 PM
Lab ID:	0806136-02			entello persona	Collecti	on Date:	6/9/2008	9:05:00 AM
Client Sample ID:	T-116-060908-02-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Organ	•	10000	200		mg/Kg		20	6/12/2008 7:49:50 PM
Motor Oil Range Org	ganics (MRO)	ND	1000		mg/Kg		20	6/12/2008 7:49:50 PM
Surr: DNOP		135	61.7-135	S	%REC		20	6/12/2008 7:49:50 PM
Lab ID:	0806136-03	***************************************		enterior -: s	Collecti	on Date:	6/9/2008	9:10:00 AM
Client Sample ID:	T-116-060908-03-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Organ	ics (DRO)	50000	1000		mg/Kg		100	6/12/2008 8:24:14 PM
Motor Oil Range Org	janics (MRO)	ND	5000		mg/Kg		100	6/12/2008 8:24:14 PM
Surr: DNOP		0	61.7-135	S	%REC		100	6/12/2008 8:24:14 PM
Lab ID:	0806136-04		and the state of t	CHINICH THE EOK	Collecti	on Date:	6/9/2008	9:15:00 AM
Client Sample ID:	T-116-060908-04-SS			•		Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Organ	ics (DRO)	31000	500		mg/Kg		50	6/12/2008 9:33:04 PM
Motor Oil Range Org	anics (MRO)	ND	2500		mg/Kg		50	6/12/2008 9:33:04 PM
Surr: DNOP		0	61.7-135	s	%REC		50	6/12/2008 9:33:04 PM

Qualifiers	Q	ua	lif	ici	ş
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- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 13-Jun-08

CLIENT: Project:

Western Refining Southwest, Gallup

Tank-116-Spill Site

Lab Order:

0806136

Lab ID:

0806136-05

Collection Date: 6/9/2008 9:20:00 AM

Client Sample ID: T-116-060908-0	Matrix: SOIL							
Analyses	Result	PQL	Qual	Units	DF	Date Analyzed		
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC		
Diesel Flange Organics (DRO)	20000	1000		mg/Kg	100	6/12/2008 10:07:28 PM		
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	6/12/2008 10:07:28 PM		
Surr: DNOP	0	61.7-135	S	%REC	100	6/12/2008 10:07:28 PM		

- Value exceeds Maximum Contaminant Level
- Ε Value above quantitation range
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Η Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 13-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Work Order:

0806136

Analyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RF	PDLimit Qual
Method: EPA Method 8015B: D Sample ID: MB-16175	iesel Range	Organics MBLK			Batch ID: 16175	Analysis Date:	6/12/2008 5:32:13 PM
Diesel Range Organics (DRO)	ND	mg/Kg	10				
Motor Oil Range Organics (MRO)	ND	mg/Kg	50				
Sample ID: LCS-16175		LCS			Batch ID: 16175	Analysis Date:	6/12/2008 6:06:34 PM
Diesel Range Organics (DRO)	38.04	mg/Kg	10	76.1	64.6 116		
Sample ID: LCSD-16175	:	LCSD			Batch ID: 16175	Analysis Date:	6/12/2008 6:41:01 PM
Diesel Range Organics (DRO)	35.48	mg/Kg	10	71.0	64.6 116	6.98 1	7.4

R RPD outside accepted recovery limits

S Spike recovery outside accepted recovery limits

Page 1

E Value above quantitation range

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Sample Receipt Checklist

Client Name VVESTERN REFINING GALLU				Date Received	l :		6/10/2008	
Work Order Number 0806136				Received by:	ARS	.40	(\ \	
Checklist completed by:	This		Le/10	Sample ID la	bels checked		nitials	
Signature"		ļ	Date	,				
Matrix:	Carrier name	Fedi	<u> </u>				,	
Shipping container/cooler in good condition?		Yes	$ \mathbf{Z} $	No 🗌	Not Present		•	
Custody seals intact on shipping container/cool	er?	Yes	V	No 🗔	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes	V	No 🗀	N/A			
Chain of custody present?		Yes	V	No 🗔				
Chain of custody signed when relinquished and	received?	Yes	V	No 🗌				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗆				
Samples in proper container/bottle?		Yes	\checkmark	No 🗀				
Sample containers intact?	•	Yes	✓	No 🗀				
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗌				
All samples received within holding time?		Yes	\checkmark	No 🗆				
Water - VOA vials have zero headspace?	No VOA vials subn	nitted	\checkmark	Yes	No 🗀			
Water - Preservation labels on bottle and cap m	atch?	Yes		No 🗌	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹			
Container/Temp Blank temperature?			1°	<6° C Acceptable				
COMMENTS:				If given sufficient	time to cool.			
						-		
Client contacted	Date contacted:			Perso	on contacted			
Contacted by:	Regarding:				***************************************		•	
Comments:								

	·							
Corrective Action								

ANALYSIS LABORATORY Www.hallenvironmental.com wkins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request	8310 (PNA or PAH) Anions (F,CI,NO3,NO2,PO4,SO4) 8081 Pesticides \ 8082 PCB's 8270 (Semi-VOA) 8270 (Semi-VOA) Alr Bubbles (Y or N)	> X >	* * *	* *		
######################################	BTEX + MTBE + TMB's (8021) BTEX + MTBE + TPH (Gas only) TPH Method 8015B (Gas/Diesel) TPH (Method 418.1) EDB (Method 504.1) EDC (Method 8260)					Remarks:
Turn-Around Time: Description Rush Project Name: $1 \text{ANK-116-5} \text{Pl.UL}$ Project #: $7 - 116 - 0609 - 08$	PPF: GAURAV RASEN FERSL_SOMNSON Braine Preservative HEAL No. Type O&C 13 6	1	NONE -3	NOWE -S		Received by: 9-10 6 10 08
Chain-of-Custody Record Client: WESTERN REFINER GALLUP REFINER Address: Route Box7 GALLUP NM 87301 Project #: Phone #: 905 722 0227	Project Manages Samples:Ci	803 × 2	108 0.10 AM 1116-060908-03-55 80x 2	13 A :20 #MT116-060908-05 55 809 x 2		Date: Time: Relinquished by: GAURAN RAJEN Revenue Date: Time: Relinquished by:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



COVER LETTER

Wednesday, June 25, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank 116 Spill Site

Dear Gaurav Rajen:

Order No.: 0806295

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 6/19/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Lab Order:

0806295

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_S, SAMPLE 0806295-01A: DNOP not recovered due to dilution

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Client Sample ID: T-116-061708-01SS

Collection Date: 6/17/2008 1:30:00 PM

Project:

Tank 116 Spill Site

Date Received: 6/19/2008

Matrix: SOIL Lab ID: 0806295-01

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS				*******	Analyst: SCC
Diesel Range Organics (DRO)	3100	200		m g/Kg	20	6/21/2008 10:51:57 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	6/21/2008 10:51:57 AM
Surr: DNOP	0	61.7-135	s	%REC	20	6/21/2008 10;51:57 AM
EPA METHOD 8015B: GASOLINE RAN	GE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: BFB	90.5	84-138		%REC	20	6/25/2008 4:21:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Toluene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Ethylbenzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Xylenes, Total	ND	2.0		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: 4-Bromofluorobenzene	87.7	81.4-117		%REC	20	6/25/2008 4:21:31 AM-

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Project:

Tank 116 Spill Site

Lab ID:

0806295-02

Client Sample ID: T-116-061708-02SS

Collection Date: 6/17/2008 1:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	4100	100	mg/Kg	10	6/21/2008 11:26:21 AM
Motor Oil Range Organics (MRO)	ND	500	mg/Kg	10	6/21/2008 11:26:21 AM
Surr: DNOP	88.8	61.7-135	%REC	10	6/21/2008 11:26:21 AM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 4:51:31 AM
Surr: BFB	93.5	84-138	%REC	20	6/25/2008 4:51:31 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg ·	20	6/25/2008 4:51:31 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Ethylbenzene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 4:51:31 AM
Surr: 4-Bromoflugrobenzene	91.1	81.4-117	%REC	20	6/25/2008 4:51:31 AM

Qualifiers:

Value exceeds Maximum Contaminant Level

E . Value above quantitation range

J Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Project:

Tank 116 Spill Site

Lab ID:

0806295-03

Client Sample ID: T-116-061708-03SS

Collection Date: 6/17/2008 1:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL (Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	4700	200	mg/Kg	20	6/21/2008 12:00:45 PM
Motor Oil Range Organics (MRO)	ND	1000	mg/Kg	20	6/21/2008 12:00:45 PM
Surr: DNOP	120	61.7-135	%REC	20	6/21/2008 12:00:45 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 5:21:35 AM
Surr: BFB	92.4	84-138	%REC	20	6/25/2008 5:21:35 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 5:21:35 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 5:21:35 AM
Ethylbenzene	, ND	1.0	mg/Kg	20	6/25/2008 5:21:35 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 5:21:35 AM
Surr: 4-Bromofluorobenzene	89.0	81.4-117	%REC	20	6/25/2008 5:21:35 AM

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Client Sample ID: T-116-061708-04SS

Lab Order:

0806295

Collection Date: 6/17/2008 4:30:00 PM

Project:

Tank 116 Spill Site

Date Received: 6/19/2008

Lab ID:

0806295-04

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	5200	200	mg/Kg	20	6/21/2008 1:09:31 PM
Motor Oil Range Organics (MRO)	ND	1000	mg/Kg	20	6/21/2008 1:09:31 PM
Surr: ONOP	96.8	61.7-135	%REC	20	6/21/2008 1:09:31 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 5:51:32 AM
Surr: BFB	102	84-138	%REC	20	6/25/2008 5:51:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Ethylbenzene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 5:51:32 AM
Surr: 4-Bromofluorobenzene	101	81.4-117	%REC	20	6/25/2008 5:51:32 AM

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 25-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Work Order:

0806295

1						<u>.</u>		0111		0000293
Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPD	Limit C	lual
Method: EPA Method 8015B: D	iesel Range	_								
Sample ID: MB-16266		MBLK			Batch	ID: 16266	Analysis Da	ite:	6/20/20	08 1:24:03 AN
Diesel Range Organics (DRO)	ND	mg/Kg	10							
Motor Oil Range Organics (MRO)	ND	mg/Kg	50							
Sample ID: LCS-16266		LCS			Batch	ID: 16266	Analysis Da	ite:	6/20/20	08 1:58:25 AN
Diesel Range Organics (DRO)	33.93	mg/Kg	10	67.9	64.6	116				
Sample ID: LCSD-16266		LCSD			Batch	ID: 16266	Analysis Da	ıte:	6/20/20	08 2:32:46 AN
Diesel Range Organics (DRO)	33.99	mg/Kg	10	68.0	64.6	116	0.177	17.4	4	
Method: EPA Method 8015B: G	asoline Ran	ige								
Sample ID: MB-16271		MBLK			Batch	ID: 16271	Analysis Da	ite:	6/25/20	08 2:48:53 AN
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0				•			
Sample ID: LCS-16271		LCS			Batch	ID: 16271	Analysis Da	ite:	6/25/20	08 1:18:42 AN
Gasoline Range Organics (GRO)	24.56	mg/Kg	5.0	87.4	69.5	120				
Sample ID: LCSD-16271		LCSD			Batch	ID: 16271	Analysis Da	ite:	6/25/20	08 1:48:48 AN
Gasoline Range Organics (GRO)	25.01	mg/Kg	5.0	89.2	69.5	120	1.82	11.6	3	
Method: EPA Method 8021B: V	olatiles									
Sample ID; MB-16271	:	MBLK			Batch	ID: 16271	Analysis Da	ite:	6/25/20	08 2:48:53 AN
Benzene	ND	mg/Kg	0.050							
Toluene	ND	mg/Kg	0.050							
Ethylbenzene	ND	mg/Kg	0.050							
Xylenes, Total	ND	mg/Kg	0.10							
Sample ID: LCS-16271		LCS			Batch	ID: 16271	Analysis Da	ite:	6/25/20	08 1:18:42 AM
Benzene	0.2928	mg/Kg	0.050	105	78.8	132				
Toluene	2.030	mg/Kg	0.050	101	78.9	112				
Ethylbenzene	0.4135	mg/Kg	0.050	103	69.3	125				
Xylenes, Total	2.465	mg/Kg	0.10	107	73	128			•	
Sample ID: LCSD-16271		LCSD		•	Batch	ID: 16271	Analysis Da	ite:	6/25/20	08 1:48:48 AM
Benzene	0.2963	m g/Kg	0.050	106	78.8	132	1.19	27		
Toluene	2.037	mg/Kg	0.050	101	78.9	112	0.354	19		
Ethylbenzene	0.4119	mg/Kg	0.050	103	69.3	125	0.388	10		
Xylenes, Total	2.470	mg/Kg	0.10	107	73	128	0.190	13		

Qualifiers:

E Value above quantitation range

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU Work Order Number 0806295 Checklist completed by:	In.		<i>La [[a</i>	Date Received Received by: Sample ID late	: AT pels checked t		9/2008 W	W
Matrix:	Carrier name	FedE					,	
Shipping container/cooler in good condition?		Yes	V	No 🗌	Not Present			
Custody seals intact on shipping container/cooler?	,	Yes		No 🗌	Not Present	[] No	Shipped	¥
Custody seals intact on sample bottles?	,	Yes		No 🗔	N/A			
Chain of custody present?		Yes	$ \mathbf{V} $	No 🗆				
Chain of custody signed when relinquished and re	ceived?	Yes	\checkmark	No 🗀				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗌				
Samples in proper container/bottle?		Yes	\checkmark	No 🗌				
Sample containers intact?		Yes	V	No 🗆				
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗀				
All samples teceived within holding time?		Yes	\checkmark	No 🗆				
Water - VOA vials have zero headspace?	No VOA vials subm	nitted	\checkmark	Yes 🗌	No 🗌			
Water - Preservation labels on bottle and cap mate	ch?	Yes		No 🗌	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹			
Container/Temp Blank temperature?		1	6°	<6° C Acceptable)			
COMMENTS:				If given sufficient	time to cool.		•	
Client contacted D	ate contacted:		. 	Paren	on contacted			
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Contacted by:	egarding:							
Comments:								
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Corrective Action								
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Chain-of-Custody Record	WESTERN		GAi									T	片	1-30 TIL6061708-0355	4:201										f naraceany camples cultimitted to Hall Emissamonial may be cultionitizated to other
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COVER LETTER

Friday, July 31, 2009

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0227 FAX (505) 722-0210

RE: T116

Dear Gaurav Rajen:

Order No.: 0907508

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 7/28/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

NM Lab # NM9425

AZ license # AZ0682

ORELAP Lab # NM100001

Texas Lab# T104704424-08-TX



Date: 31-Jul-09

	Western Refining South F116	iwest, Gallup			L	ab Order:	0907508
Lab ID: Client Sample ID:	0907508-01 T1160716090155			(Collection Date:		2:00:00 PM
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE C	RGANICS					Analyst: SCC
Diesel Range Organ		27	10		mg/Kg	1	7/31/2009
Motor Oil Range Organ	•	120	50		mg/Kg		7/31/2009
Surr: DNOP	gariios (mito)	67.3	61.7-135		%REC		7/31/2009
EPA METHOD 801:	5B: GASOLINE RANG	E					Analyst: NSB
Gasoline Range Org	ganics (GRO)	ND	5.0		mg/Kg	1	7/30/2009 2:41:54 PM
Surr: BFB	-	107	58.8-123		%REC	1	7/30/2009 2:41:54 PM
Lab ID:	0907508-02		*****		Collection Date:	7/16/2009	9 2:15:00 PM
Client Sample ID:	T1160716090255				Matrix:		
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE C	RGANICS					Analyst: SCC
Diesel Range Organ	nics (DRO)	250	50		mg/Kg	5	7/30/2009
Motor Oil Range Org	ganics (MRO)	250	250		mg/Kg	5	7/30/2009
Surr: DNOP		77.9	61.7-135		%REC	5	7/30/2009
EPA METHOD 801	5B: GASOLINE RANG	E					Analyst: NSE
Gasoline Range Org	ganics (GRO)	ND	5.0		mg/Kg	1	7/30/2009 3:12:28 PM
Surr. BFB		102	58.8-123		%REC	1	7/30/2009 3:12:28 PM
Lab ID:	0907508-03	<u> </u>			Collection Date:	7/16/2009	9 2:25:00 PM
Client Sample ID:	T1160716090355				Matrix	SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE C	RGANICS					Analyst: SCC
Diesel Range Orgar		190	10		mg/Kg	1,	7/30/2009
Motor Oil Range Or	ganics (MRO)	ND	50		mg/Kg	1	7/30/2009
Surr: DNOP		83.5	61.7-135		%REC	1	7/30/2009
EPA METHOD 801	5B: GASOLINE RANG	iΕ					Analyst: NSE
Gasoline Range Org	ganics (GRO)	ND	5.0		mg/Kg	1	7/30/2009 3:43:00 PM

Surr: I3FB

Value exceeds Maximum Contaminant Level

97.6

58.8-123

- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
 - RL Reporting Limit

%REC

7/30/2009 3:43:00 PM

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

T116

Work Order:

Date: 31-Jul-09

0907508

Analyte	Result	Units	PQL	%Rec	LowLimit Highl	_imit	%RPD	RPDLimit	Qual
Tethod: EPA Method 8015B: Di	esel Range	• .				<u> </u>			
ample ID: MB-19724		MBLK			Batch ID:	19724	Analysis Da	ate:	7/29/2009
iesel Range Organics (DRO)	ND	mg/Kg	10						
Notor Oil Range Organics (MRO)	ND	mg/Kg	50						•
ample ID: LCS-19724		LCS			Batch ID:	19724	Analysis Da	ate:	7/29/2009
iesel Range Organics (DRO)	35.49	mg/Kg	10	71.0	64.6 116				
ample ID: LCSD-19724		LCSD			Batch ID:	19724	Analysis Da	ate:	7/29/2009
iesel Range Organics (DRO)	41.25	mg/Kg	10	82.5	64.6 116		15.0	17.4	
lethod: EPA Method 8015B; Ga	asoline Ran	ge							
ample ID: MB-19740		MBLK			Batch ID:	19740	Analysis Da	ate: 7/30/	2009 8:17:32 PM
Sasoline Range Organics (GRO)	ND	mg/Kg	5.0						
ample ID: LCS-19740		LCS			Batch ID:	19740	Analysis Da	ate: 7/30/	/2009 7:16:37 PM
asoline Range Organics (GRO)	30.59	mg/Kg	5.0	112	64.4 133				
ample ID: LCSD-19740		LCSD			Batch ID:	19740	Analysis Da	ate: 7/30/	2009 7:47:11 PM
Sasoline Range Organics (GRO)	30.13	mg/Kg	5.0	110	69.5 120		1.52	11.6	

Qualifiers:

E Estimated value

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Sample Receipt Checklist

Checklist completed by: Carrier name	Client Name WESTERN REFINING GALLU	1			Date Receive	ed:	7/28/2009
Checkist completed by: Carrier name	Work Order Number 0907508)		Received b	y: AT	$\mathcal{O}_{\mathcal{O}}$
Matrix: Carrier name Client drop off Shipping container/cooler in good condition? Yes No No Not Present Not Shipped No Not Shipped No Not Shipped Not Shipp			1	,			101
Shipping container/cooler in good condition? Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped Custody seals intact on sample bottles? Chain of custody present? Chain of custody signed when relinquished and roceived? Yes No Chain of custody signed when relinquished and roceived? Yes No Chain of custody agrees with sample labels? Samples in proner container/bottle? Samples in proner container/bottle? Yes No Samples containers intact? Yes No Number of preserved with sample too indicated test? Yes No Number of preserved bottles roceived within holds time? Water - VOA vials have zero holdspace? No VOA vials submitted Yes No Ni Ves No Water - Preservation labels on bottle and cap match? Yes No Ni Ves No Ni Ves Ves No Ni Ves Ves No Ni Ves Ves No Ni Ves Ves No Vester - Preservation labels on bottle and cap match? Water - Preservation labels on bottle and cap match? Yes No Ni Ves No Ni Ves Ves No Ni Ves Vester - Preservation labels on bottle and cap match? Water - Preservation labels upon receipt? Yes No Ni Vester - Preservation labels on bottle and cap match? Water - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation labels on bottle and cap match? Yes No Ni Vester - Preservation label		in Jo		Date	1128107	<u>-</u>	initials
Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped P Custody seals intact on sample bottles? Yes No No Not Not Not Not Not Not	Matrix:	Carrier name	Clier	nt drop-of	<u>f</u>	•	
Custody seals intact on shipping container/cooler? Yes No Not Present Not Shipped P Custody seals intact on sample bottles? Yes No No Not Not Not Not Not Not						()	•
Custody seals intact on sample bottles? Chain of custody present? Chain of custody signed when relinquished and received? Chain of custody signed when relinquished and received? Chain of custody agrees with sample labels? Samples in proper container/bottle? Samples in proper container/bottle? Sample containers intact? Yes No No Number of preserved bottles sample volume for indicated test? Yes No Number of preserved within holding time? Water - VOA vials have zoro headspace? No VOA vials submitted Yes No No Number of preserved bottles checked for pH: Water - Preservation labels on bottle and cap match? Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No NiA Weter - Preservation labels on bottle and cap match? Yes No No No No No No No No No No							
Chain of custody present? Chain of custody signed when relinquished and received? Chain of custody agrees with sample labels? Samples in proper container/bottle? Samples in proper container/bottle? Sample containers intact? Yes No No No No No No No No No No No No		iler?				— 1	Not Shipped ✓
Chain of custody signed when relinquished and received? Yes						N/A LJ	
Chain of custody agrees with sample labels? Samples in proper container/bottle? Sample sontainers intact? Sufficient sample volume for indicated test? Sufficient sample volume for indicated test? All samples received within holding time? Water - VOA vials have zero headspace? No VOA vials submitted	•		Yes				
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HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request	EDC (Method 8260) 8310 (PNA or PAH) Anions (F,CI,NO ₃ ,NO ₂ ,PO ₄ ,SO ₄) 8081 Pesticides / 8082 PCB's 8260B (VOA) 8270 (Semi-VOA) 7 (NOY)		8	*						
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From:

Monzeglio, Hope, NMENV

Sent:

Thursday, September 10, 2009 4:02 PM

To:

Larsen, Thurman; Riege, Ed

Cc:

Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD

Subject:

9 5 09 API Overflow

Beck

This e-mail is to address the September 5, 2009 API separator overflow. The hazardous wastes released during the API separator overflow include K051, F038, and potentially D018. In addition to the C-141 form, Gallup must also submit a formal report. The formal report must describe the incident (how it occurred), describe all clean up actions, discuss where contaminated soils were stockpiled, explain what actions were completed to demonstrate that cleanup is complete, identify where all waste was or will be disposed, discuss how Gallup determined the volume of the release, and include what actions Gallup will be implementing to ensure overflows to the API do not continue to occur. NMED will follow up this e-mail with a written letter. Gallup must comply with Section II.F.2 (Twenty-four Hour Reporting) of the Post-Closure Care Permit which can be found using the following link: http://www.nmenv.state.nm.us/hwb/giant/GRC-C%20PCC%20PERMIT.pdf

Please let me know if you have any questions.

Hope

Hope Monzeglio **Environmental Specialist** New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, BLDG 1 Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

New Mexico Environment Department Hazardous Waste Bureau

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, September 10, 2009 3:27 PM

To:

'Larsen, Thurman'

Subject:

RE: API Overflow on September 5, 2009

Thanks Thurman.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Thursday, September 10, 2009 2:37 PM

To: Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Cc: Monzeglio, Hope, NMENV

Subject: RE: API Overflow on September 5, 2009

Carl,

This was a minor spill (< 25 bbls) due to a little over 1 ½ inches rain. The amount will be in the neighborhood of about 5 to 6 bbls. I am working on the initial report and I will try to get it out sometimes nest week. I am still trying to gather extra data from others to compile my report.

Thanks,

From: Chavez, Carl J, EMNRD [mailto:CarlJ.Chavez@state.nm.us]

Sent: Thursday, September 10, 2009 2:27 PM **To:** Larsen, Thurman; Powell, Brandon, EMNRD

Cc: Monzeglio, Hope, NMENV

Subject: RE: API Overflow on September 5, 2009

Thurman:

Was the release a "minor release" or less than 25 barrels under 19.15.29 NMAC? OCD needs a completed and signed C-141 Form for this release. Thanks.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3490 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Thursday, September 10, 2009 2:16 PM

To: Powell, Brandon, EMNRD

Cc: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV Subject: API Overflow on September 5, 2009
Dear Mr. Powell, As a follow-up of our conversation this past weekend, I am sending several pictures of before the event and the cleanup afterwards. All material has been cleanup and put in a roll-off box for proper disposal. The first two pictures (007 and 009) are the before the event, and the last two pictures are after final clean-up (1207 and 1217).
Sincerely, Beck Larsen
This inbound email has been scanned by the MessageLabs Email Security System.
Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are no the intended recipient, please contact the sender and destroy all copies of this message This email has been scanned by the Sybari - Antigen Email System.
Confidentiality Notice: This e-mail,including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review,use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are no the intended recipient, please contact the sender and destroy all copies of this message This email has been scanned by the MessageLabs Email Security System.
This inbound email has been scanned by the MessageLabs Email Security System.

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Thursday, September 10, 2009 2:16 PM

To:

Powell, Brandon, EMNRD

Cc:

Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Subject:

API Overflow on September 5, 2009

Attachments:

API OVERFLOW 090509 007.jpg; API OVERFLOW 090509 009.jpg; 100_1217.jpg; 100_

1207.jpg

Dear Mr. Powell,

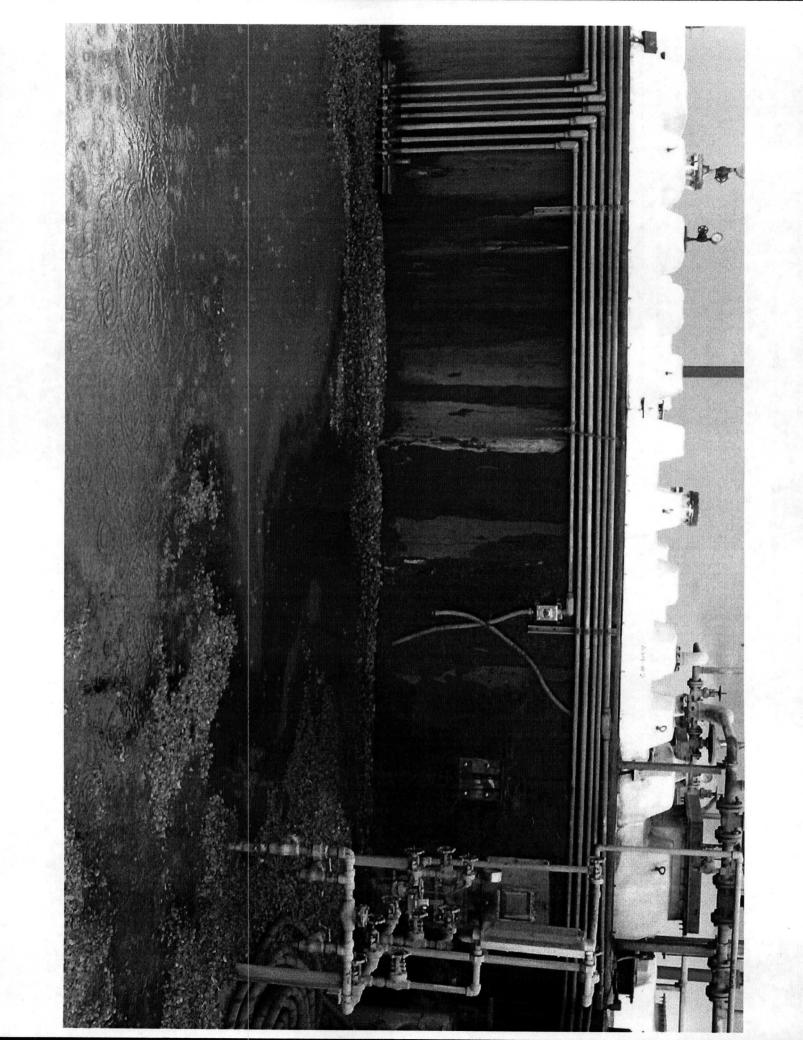
As a follow-up of our conversation this past weekend, I am sending several pictures of before the event and the cleanup afterwards. All material has been cleanup and put in a roll-off box for proper disposal.

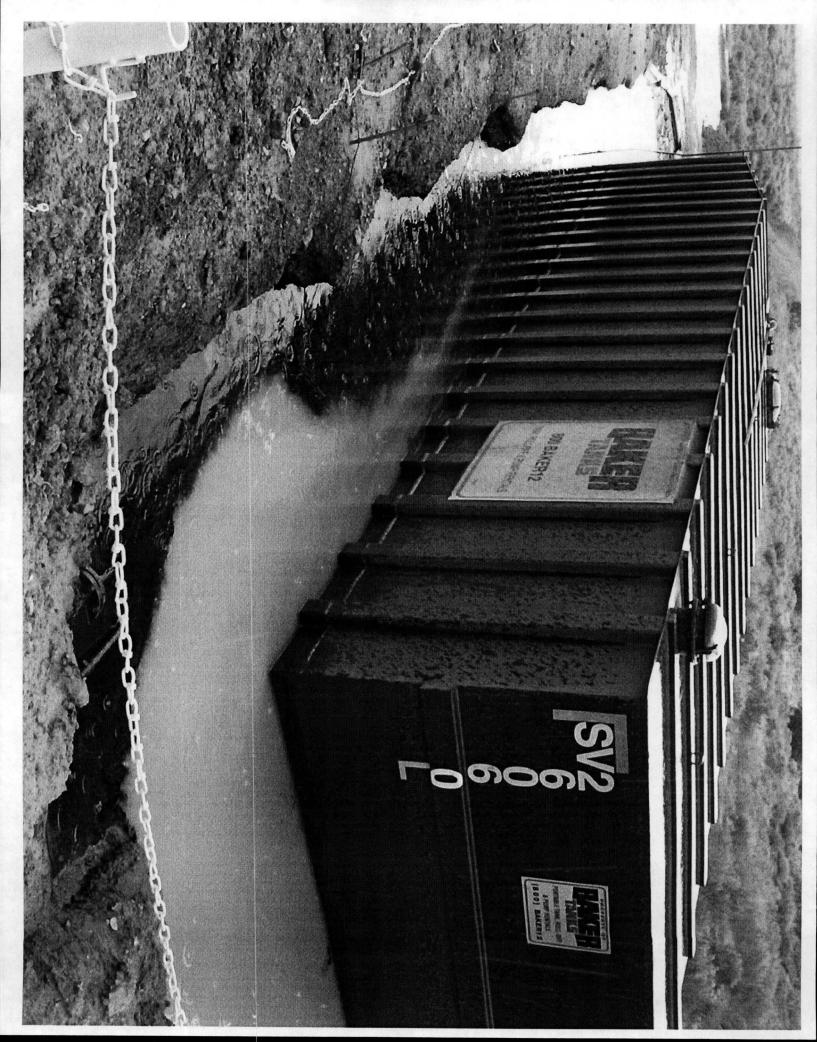
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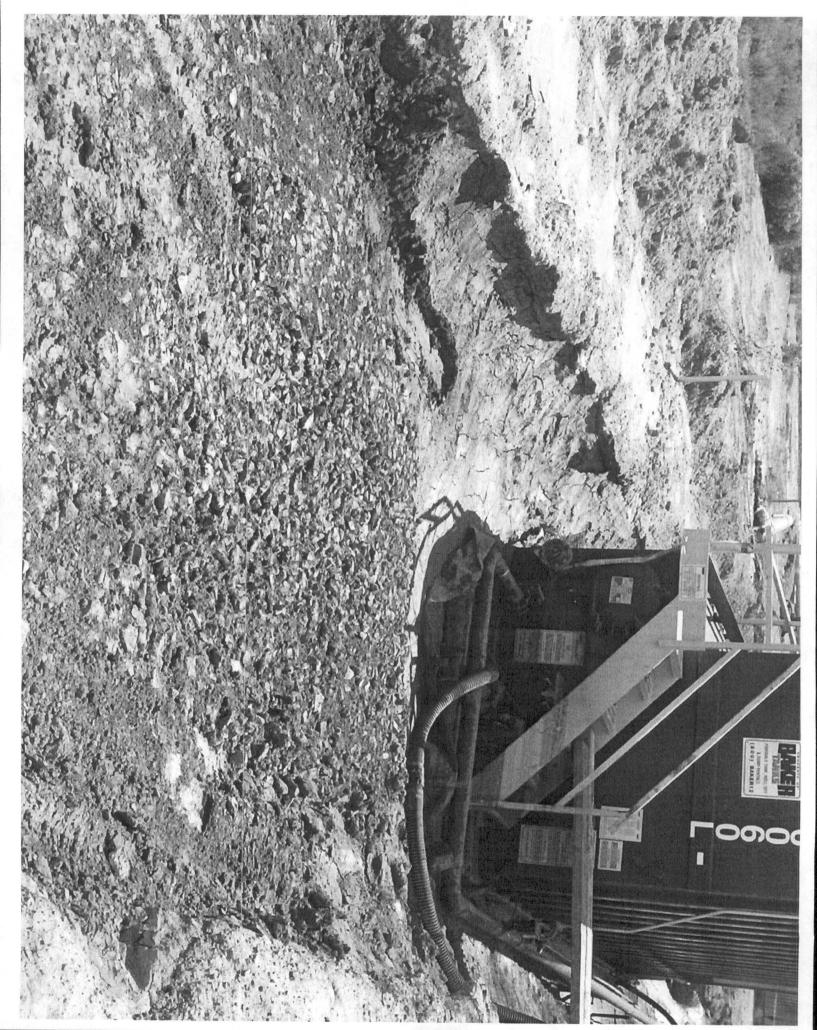
two pictures (007 and 009) are the before the event, and the last two pictures are after final clean-up (1207 and 1217).

Sincerely, Beck Larsen

This inbound email has been scanned by the MessageLabs Email Security System.









From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Thursday, September 10, 2009 2:16 PM

To:

Powell, Brandon, EMNRD

Cc:

Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Subject:

API Overflow on September 5, 2009

Attachments:

API OVERFLOW 090509 007.jpg; API OVERFLOW 090509 009.jpg; 100_1217.jpg; 100_

1207.jpg

Dear Mr. Powell,

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The first

two pictures (007 and 009) are the before the event, and the last two pictures are after final clean-up (1207 and 1217).

Sincerely, Beck Larsen

This inbound email has been scanned by the MessageLabs Email Security System.



GALLUP REFINERY

RECEIVED

2009 AUG 28 AM 10 50

August 25, 2009

Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Dear Carl:

It is a pleasure to send you our final report for our Tank 116 spill of Ultra Low Sulfur Diesel which we have cleaned up.

As you will note in the report, we excavated soil from within our berm area up to two feet. As there are active pipelines in the area, and ongoing work activity, we found it difficult to excavate any further near the pipelines, and had to cover our excavation with clean soil to prevent any hazard to workers in the area. This covering was done before our second set of laboratory results had arrived, for safety reasons. Our first set of laboratory results showed levels of DRO around 50,000 ppm. After excavation the DRO levels were of the order of 4000-6000 ppm (no BTEX was detected). As these levels were below 2 feet, we believe they did not come from the recent Tank 116 spill. We have conducted a small test at one of these locations of passive venting, using a perforated pipe to get air into the ground. The levels below the perforated pipe have fallen from 4700 ppm to 190 ppm. With your concurrence, we could now place more such perforated pipes in the area and we believe we will be able to reduce all the areas that were found to have DRO levels around 4000-6000 ppm to below concern. If we place many such perforated pipes we will also get concurrence (as needed) from the NMED's Air Quality Bureau.

We look forward to your response at your earliest convenience,

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

			Kele	ease Nothic	ation	and Co	rrective A	ction						
				•		OPERATOR								
Name of Co						Contact Gaurav Rajen								
Address I-40	Exit 39,	Jamestown,	NM 8734	17 <u> </u>		Telephone No. 505-722-0227								
Facility Nan	ne Gallup	Refinery			F	Facility Type Oil refinery								
Surface Own	ner Weste	rn Refining		Mineral ()	wner W	estern Refi	ning		Lease N	<u> </u>				
Surface Own	ilci vy este	in iteming		1 Willietar O	VVIICI VI	CSCCIII ICCI	ning	_	Lease IV					
						OF REI	LEASE							
Unit Letter	Section 23&33	Township 15N	Range 15W	Feet from the	he North/South Line Feet from the East/West Line County McKinley									
Latitude 35°29'22" Longitude 108°25'24"														
NATURE OF RELEASE														
Type of Relea	ase Ultra-L	ow Sulfur Die	sel (ULSI			Volume of	Release 45 barrel			Recovered 1	2 barre	ls (500		
Source of Rel	la a a a Carant	law from Ton	1, 116				ons) final estimate		gallons) e	stimate Hour of Disc		4/24/2009.		
Source of Re	lease Overi	iow irom Tan	K 110			4/24/2008; (approximate)		e	2:50 am	Hour of Disc	covery	4/24/2008;		
Was Immedia	ite Notice (Given?	·····					Chavez, 1	NMEMNR	D, Oil Cons	ervatio	n Division;		
			Yes [No Not Re	quired	If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division; Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone)								
By Whom? C				Date and Hour 4/24/2008 (approximately) 11:00 am If YES, Volume Impacting the Watercourse. Not applicable										
Was a Watero	course Read	ched?		If YES, Vo	lume Impacting t	he Wate	rcourse. No	ot applicable	;					
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landfill. Deta	ils are prov	ided in the att	ached repo	ort.										
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				ce of a C-141 repo										
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other											other			
federal, state,	or local la	ws and/or reg	lations					~~~~~						
Signature: Mal A. Jun. OIL CONSERVATION DIVISION														
Printed Name	:: Mark B.	Furri			. A	Approved by	District Superviso	or:		*****				
Title: Refiner	y Manager	– Gallup	<u> </u>		A	Approval Dat	approval Date: Expiration Date:							
E-mail Addre	ss: <u>mar</u> k.tu	rri@wnr.com				Conditions of	Approval:			Attached				
Date: 8-20-20	100		Ī	Phone: 505-722-38	233									

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

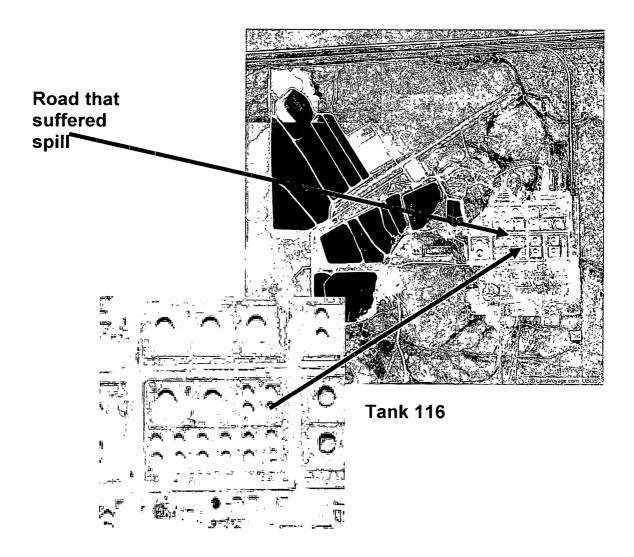
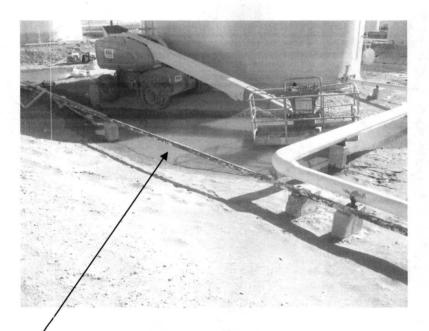


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

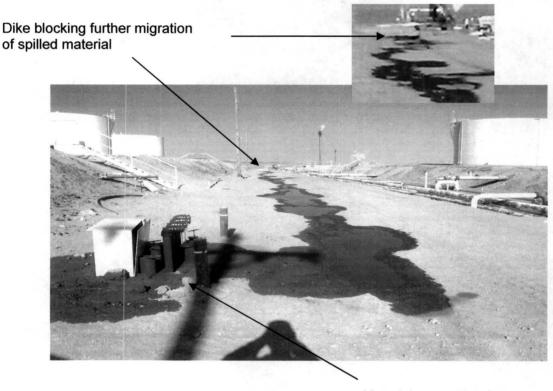
At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.



Area around Tank 116, Tank 115, and within the berm affected by the ULSD spill

Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road



Material emanating from drain valve on the foam line

Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.



Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.



Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank

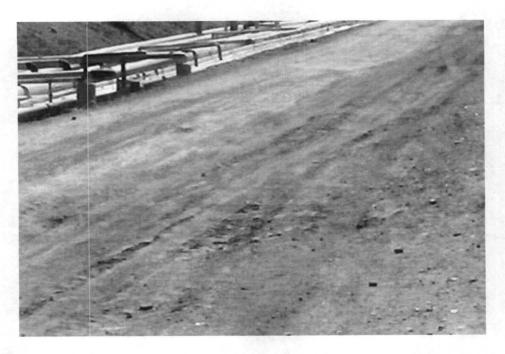


Figure 6: Preliminary clean-up of road which had experienced run-off of product.



Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan – Tank 116

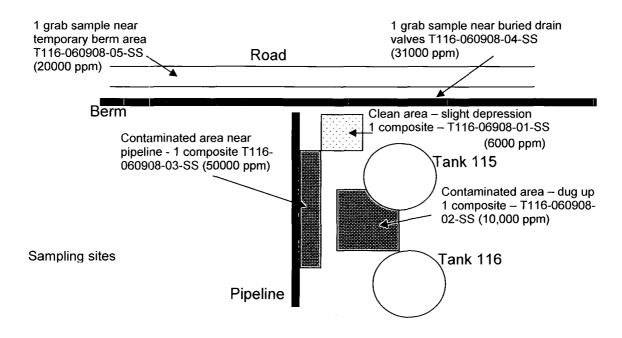


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan – Tank 116

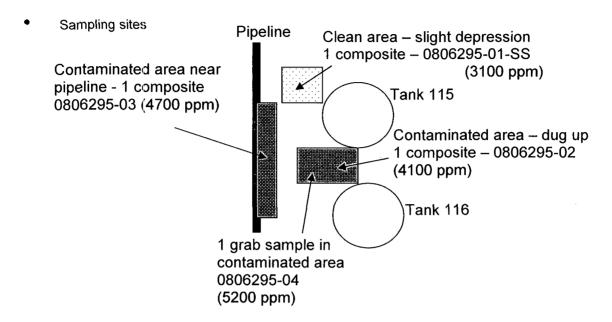


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 - 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

• We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1

foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours — this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

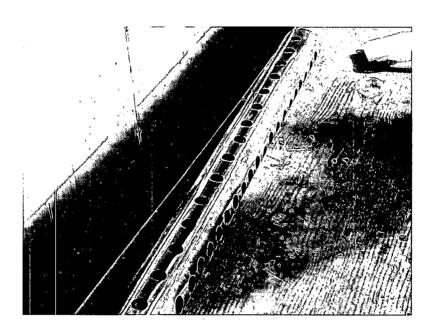


Figure 10: Perforated pipe that has been constructed

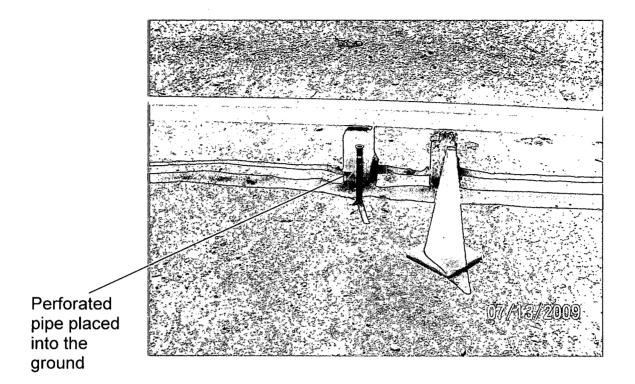


Figure 11: Photograph of emplaced pipe – the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. **This level is now 190 ppm**. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

1

Sampling Plan – Tank 116

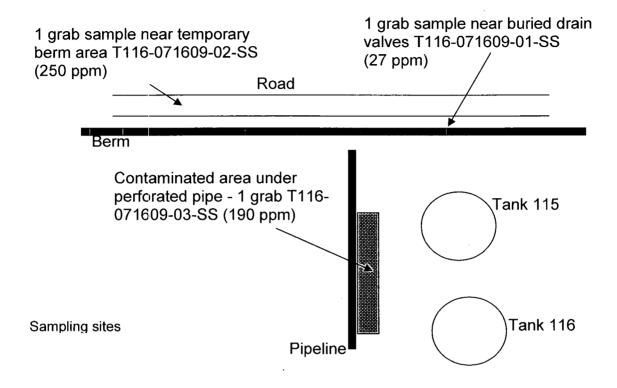


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 - 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

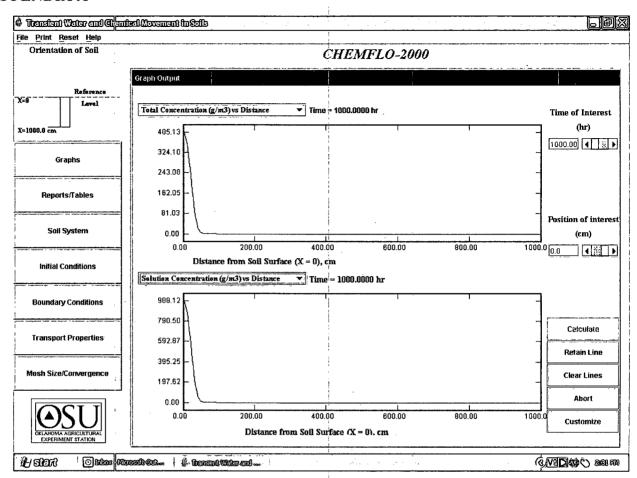


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

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	○ Sea	ni-infinite So	il		,		
	Angle o	f Inclination,	(degrees):	90			
****	Layer	Thickness (cm)	Conductivity Function	Water Characteristic Function	Organic Carbon (g/g)	Bulk Density (Mg/m3)	
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			K _S (cm/hr) = 1.31	$\theta_{s}(v/v) = 0.39$			=
	<u>:</u> :		$\alpha (1/cm) = 0.059$	$\theta_{\mathbf{r}}(\mathbf{v}/\mathbf{v}) = 0.1$			
			n = 1.48	a (1/cm) = 0.059			
				n = 1.49			

Figure A.2: Assumed soil parameters

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Transport Properties					!
Diffusion Coeffi	cient of Chemical in Water(cm2/hr)		0.03528	4	
Dispersivity (cm)		0.12	4 }	
Uniform Partition	Coefficient (m3/Mg soil)	-	0.095	4 	
Uniform 1st-Order	r Degradation Const. in Liquid (1/hr)	•	0.47	4 >	
Uniform 1st-Order	Degradation Const. on Solids (1/hr)	•	0.0004	4 III >	
Uniform Zero-Orde	er Production Constant (g/m3/hr)	-	0.0	4 II >	

Figure A.3: Assumed chemical transport properties



COVER LETTER

Friday, June 13, 2008

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank-116-Spill Site

Dear Gaurav Rajen:

Order No.: 0806136

Hall Environmental Analysis Laboratory, Inc. received 5 sample(s) on 6/10/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 13-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Lab Order:

0806136

CASE NARRATIVE

"S" flags denote that the surrogate was not recoverable, or elevated, due to sample dilution or matrix interferences.

Date: 13-Jun-08

	Western Refining South Fank-116-Spill Site	west, Gallup				La	b Order:	0806136
Lab ID:	0806136-01				Collecti	on Date:	6/9/2008	9:00:00 AM
Client Sample ID:	T-116-060908-01-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qua	Units		DF	Date Analyzed
EPA METHOD 801	5B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Organ	ics (DRO)	6000	500		mg/Kg		50	6/12/2008 7:15:26 PM
Motor Oil Range Org	janics (MRO)	ND	2500		mg/Kg		50	6/12/2008 7:15:26 PM
Surr. DNOP		0	61.7-135	S	%REC		50	6/12/2008 7:15:26 PM
Lab ID:	0806136-02				Collecti	on Date:	6/9/2008	9:05:00 AM
Client Sample ID:	T-116-060908-02-SS			•		Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 801	B: DIESEL RANGE OF	RGANICS		***	·			Analyst: SCC
Diesel Range Organ	ics (DRO)	10000	200		mg/Kg		20	6/12/2008 7:49:50 PM
Motor Oil Range Org	anics (MRO)	ND	1000		mg/Kg		20	6/12/2008 7:49:50 PM
Surr: DNOP		135	61.7-135	S	%REC		20	6/12/2008 7:49:50 PM
Lab ID:	0806136-03			mand op 2 february 1	Collecti	on Date:	6/9/2008	9:10:00 AM
Client Sample ID:	T-116-060908-03-SS					Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE OF	RGANICS						Analyst: SCC
Diesel Range Organi	cs (DRO)	50000	1000		mg/Kg		100	6/12/2008 8:24:14 PM
Motor Oil Range Org	anics (MRO)	ND	5000		mg/Kg		100	6/12/2008 8:24:14 PM
Surr: DNOP		0	61.7-135	S	%REC		100	6/12/2008 8:24:14 PM
Lab ID:	0806136-04		enese visero de Partigone	-greatesterner	Collection	on Date:	6/9/2008	9:15:00 AM
Ciient Sample ID:	T-116-060908-04-SS			•		Matrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE OR	GANICS						Analyst: SCC
Diesel Range Organi	cs (DRO)	31000	500		mg/Kg		50	6/12/2008 9:33:04 PM
Motor Oil Range Org	anics (MRO)	ND	2500		mg/Kg		50	6/12/2008 9:33:04 PM
Surr: DNOP		0						

Qual	flers:
------	--------

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit

Spike recovery outside accepted recovery limits

- Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 13-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Lab Order:

0806136

Lab ID:

0806136-05

Collection Date: 6/9/2008 9:20:00 AM

Client Sample ID: T-116-060908-05-SS

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	SE ORGANICS					Analyst: SCC
Diesel Range Organics (DRO)	20000	1000		mg/Kg	100	6/12/2008 10:07:28 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	6/12/2008 10:07:28 PM
Surr: DNOP	0	61.7-135	S	%REC	100	6/12/2008 10:07:28 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- Analyte detected below quantitation limits
- Not Detected at the Reporting Limit

3

- В Analyte detected in the associated Method Blank
- Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level

Reporting Limit

Date: 13-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank-116-Spill Site

Work Order:

0806136

Analyte	Result	Units	PQL	%Rec	LowLimit HighL	imit	%RPD RPI	DLimit Qual
Method: EPA Method 8015B: D Sample ID: MB-16175	iesel Range	Organics MBLK			Batch ID:	16175	Analysis Date:	6/12/2008 5:32:13 PM
Diesel Range Organics (DRO)	ND	mg/Kg	10		batch ib.	10170	Allaydio Date.	0/12/2000 0.02.10 1 W
Motor Oil Range Organics (MRO)	ND	mg/Kg	50					
Sample ID: LCS-16175		LCS			Batch ID:	16175	Analysis Date:	6/12/2008 6:06:34 PM
Diesel Range Organics (DRO)	38.04	mg/Kg	10	76.1	64.6 116			•
Sample ID: LCSD-16175		LCSD			Batch ID:	16175	Analysis Date:	6/12/2008 6:41:01 PM
Diesel Range Organics (DRO)	35.48	mg/Kg	10	71.0	64.6 116		6.98 17	.4

Qualiflers:

R RPD outside accepted recovery limits

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Page 1

E Value above quantitation range

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU				Date Receive	ed:		6/10/2008	
Work Order Number 0806136 Checklist completed by:	Mi	<u> </u>	Le // Date	Received by	r: ARS abels checked		Initiats	
Matrix:	Carrier name	Fed	<u>Ex</u>					
Shipping container/cooler in good condition?		Yes	V	No 🗌	Not Present			
Custody seals intact on shipping container/coole	er?	Yes	V	No 🗌	Not Present		Not Shipped	
Custody seals intact on sample bottles?		Yes	\checkmark	No 🗆	N/A			
Chain of custody present?		Yes	\checkmark	No 🗀				
Chain of custody signed when relinquished and	received?	Yes	V	No 🗌				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗀				
Samples in proper container/bottle?		Yes	\checkmark	No 🗀				
Sample containers intact?		Yes	\checkmark	No 🗔				
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗌				
All samples received within holding time?		Yes	\checkmark	No 🗌				
Water - VOA vials have zero headspace?	No VOA vials subm	itted	\checkmark	Yes 🗌	No 🗆			
Water - Preservation labels on bottle and cap m	atch?	Yes		No 🗌	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹			
Container/Temp Blank temperature?			1°	<6° C Acceptab				
COMMENTS:				If given sufficient	time to cool.			
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If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.



COVER LETTER

Wednesday, June 25, 2008

Gaurav Rajen

Western Refining Southwest, Gallup

Rt. 3 Box 7

Gallup, NM 87301

TEL: (505) 722-3833 FAX (505) 722-0210

RE: Tank 116 Spill Site

Dear Gaurav Rajen:

Order No.: 0806295

Hall Environmental Analysis Laboratory, Inc. received 4 sample(s) on 6/19/2008 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001



Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Lab Order:

0806295

CASE NARRATIVE

Analytical Comments for METHOD 8015DRO_S, SAMPLE 0806295-01A: DNOP not recovered due to dilution

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Client Sample ID: T-116-061708-01SS

Collection Date: 6/17/2008 1:30:00 PM

Tank 116 Spill Site Project:

Lab ID:

0806295-01

Date Received: 6/19/2008 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE	ORGANICS				**************************************	Analyst: SCC
Diesel Range Organics (DRO)	3100	200		m g/Kg	20	6/21/2008 10:51:57 AM
Motor Oil Range Organics (MRO)	ND	1000		mg/Kg	20	6/21/2008 10:51:57 AM
Surr: DNOP	0	61.7-135	S	%REC	20	6/21/2008 10:51:57 AM
EPA METHOD 8015B: GASOLINE RAN	IGE					Analyst: NSB
Gasoline Range Organics (GRO)	ND	100		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: BFB	90.5	84-138		%REC	20	6/25/2008 4:21:31 AM
EPA METHOD 8021B: VOLATILES						Analyst: NSB
Benzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Toluene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Ethylbenzene	ND	1.0		mg/Kg	20	6/25/2008 4:21:31 AM
Xylenes, Total	ND	2.0		mg/Kg	20	6/25/2008 4:21:31 AM
Surr: 4-Bromofluorobenzene	87.7	81.4-117		%REC	20	6/25/2008 4:21:31 AM

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- В Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Project:

Tank 116 Spill Site

Lab ID:

0806295-02

Client Sample ID: T-116-061708-02SS

Collection Date: 6/17/2008 1:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGI	ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	4100	100	mg/Kg	10	6/21/2008 11:26:21 AM
Motor Oil Range Organics (MRO)	ND	5 0 0	mg/Kg	10	6/21/2008 11:26:21 AM
Surr: DNOP	88.8	61.7-135	%REC	10	6/21/2008 11:26:21 AM
EPA METHOD 8015B: GASOLINE RAI	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 4:51:31 AM
Surr: BFB	93.5	84-138	%REC	20	6/25/2008 4:51:31 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Ethylbenzene	ND	1.0	mg/Kg	20	6/25/2008 4:51:31 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 4:51:31 AM
Surr: 4-Bromofluorobenzene	91.1	81.4-117	%REC	20	6/25/2008 4:51:31 AM

- Value exceeds Maximum Contaminant Level
- E . Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Tank 116 Spill Site

Project: Lab ID:

0806295-03

Client Sample ID: T-116-061708-03SS

Collection Date: 6/17/2008 1:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGI	ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	4700	200	mg/Kg	20	6/21/2008 12:00:45 PM
Motor Oil Range Organics (MRO)	ND	1000	mg/Kg	20	6/21/2008 12:00:45 PM
Surr: DNOP	120	61.7-135	%REC	20	6/21/2008 12:00:45 PM
EPA METHOD 8015B: GASOLINE RA	NGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	6/25/2008 5:21:35 AM
Surr. BFB	92.4	84-138	%REC	20	6/25/2008 5:21:35 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 5:21:35 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 5:21:35 AM
Ethylbenzene	ND	1.0	mg/Kg	20	6/25/2008 5:21:35 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 5:21:35 AM
Surr: 4-Bromofluorobenzene	89.0	81.4-117	%REC	20	6/25/2008 5:21:35 AM

- Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 25-Jun-08

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0806295

Project:

Tank 116 Spill Site

Lab ID:

0806295-04

Client Sample ID: T-116-061708-04SS

Collection Date: 6/17/2008 4:30:00 PM

Date Received: 6/19/2008

Matrix: SOIL

Analyses	Result	PQL	Qual Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANG	E ORGANICS				Analyst: SCC
Diesel Range Organics (DRO)	5200	200	mg/Kg	20	6/21/2008 1:09:31 PM
Motor Oil Range Organics (MRO)	ND	1000	mg/Kg	20	6/21/2008 1:09:31 PM
Surr: DNOP	96.8	61.7-135	%REC	20	6/21/2008 1:09:31 PM
EPA METHOD 8015B: GASOLINE RA	ANGE				Analyst: NSB
Gasoline Range Organics (GRO)	ND	100	mg/Kg	20	-6/25/2008 5:51:32 AM
Surr: BFB	102	84-138	%REC	20	6/25/2008 5:51:32 AM
EPA METHOD 8021B: VOLATILES					Analyst: NSB
Benzene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Toluene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Ethylbenzene	ND	1.0	mg/Kg	20	6/25/2008 5:51:32 AM
Xylenes, Total	ND	2.0	mg/Kg	20	6/25/2008 5:51:32 AM
Surr: 4-Bromofluorobenzene	101	81.4-117	%REC	20	6/25/2008 5:51:32 AM

Spike recovery outside accepted recovery limits

Reporting Limit

Page 4 of 4

Value exceeds Maximum Contaminant Level

E Value above quantitation range

Analyte detected below quantitation limits

ND Not Detected at the Reporting Limit

В Analyte detected in the associated Method Blank

H Holding times for preparation or analysis exceeded

MCL Maximum Contaminant Level

Date: 25-Jun-08

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

Tank 116 Spill Site

Work Order:

0806295

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD	RPDLimit Qual
Method: EPA Method 8015B: D	lesel Range	_			· B-4-1-1	ID. 40000	A livele De	0/00/0000 4.04.00 4.14
Sample ID: MB-16266		MBLK			Batch I	ID: 16266	Analysis Da	te: 6/20/2008 1:24:03 AM
Diesel Range Organics (DRO)	ND	mg/Kg	10					
Motor Oil Range Organics (MRO)	ND	mg/Kg	50					
Sample ID: LCS-16266		LCS			Batch I	D: 16266	Analysis Da	te: 6/20/2008 1:58;25 AM
Diesel Range Organics (DRO)	33.93	mg/Kg	10	67.9	64.6	116		
Sample ID: LCSD-16266		LCSD			Batch I	D: 16266	Analysis Da	te: 6/20/2008 2:32:46 AM
Diesel Range Organics (DRO)	33.99	mg/Kg	10	68.0	64.6	116	0.177	17.4
Method: EPA Method 8015B: G	asoline Ran	ge						•
Sample ID: MB-16271		MBLK			Batch l	D: 16271	Analysis Da	te: 6/25/2008 2:48:53 AM
Gasoline Range Organics (GRO)	ND	mg/Kg	5.0					
Sample ID: LCS-16271		LCS			-Batch I	D: 16271	Analysis Da	te: 6/25/2008 1:18:42 AM
Gasoline Range Organics (GRO)	24.56	mg/Kg	5.0	87.4	69.5	120		
Sample ID: LCSD-16271		LCSD			Batch I	D: 16271	Analysis Da	te: 6/25/2008 1:48:48 AM
Gasoline Range Organics (GRO)	25.01	mg/Kg	5.0	89.2	69.5	120	1.82	11.6
Method: EPA Method 8021B: Vo	olatiles							
Sample ID; MB-16271	,	MBLK			Batch I	D: 1627 1	Analysis Da	te: 6/25/2008 2:48:53 AM
Benzene	ND	mg/Kg	0.050					
Toluene	ND	mg/Kg	0.050					
Ethylbenzene	ND	mg/Kg	0.050					
Xylenes, Total	ND	mg/Kg	0.10					
Sample ID: LCS-16271		LCS			Batch I	D: 1627 1	Analysis Dai	te: 6/25/2008 1:18:42 AM
Benzene	0.2928	mg/Kg	0.050	105	78.8	132		,
Toluene	2.030	mg/Kg	0.050	101	78.9	112		
Ethylbenzene	0.4135	mg/Kg	0.050	103	69.3	125		
Xylenes, Total	2.465	mg/Kg	0.10	107	73	128		•
Sample ID: LCSD-16271		LCSD		·	Batch I	D: 16271	Analysis Dat	e: 6/25/2008 1:48:48 AM
Benzene	0.2963	mg/Kg	0.050	106	78.8	132	1.19	27
The table of the same of the s	2.037	mg/Kg	0.050	101	78.9	112	0.354	19
loluene								
Toluene Ethylbenzene	0.4119 2.470	mg/Kg mg/Kg	0.050 0.10	103	69.3 73	125	0.388	10

Qualifiers:

RPD outside accepted recovery limits

S Spike recovery outside accepted recovery limits

E Value above quantitation range

J Analyte detected below quantitation limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU				Date F	Received	l:		6/19/2008	
Work Order Number 0806295	Λ			Rece	ived by:	AT		10	M
Checklist completed by:	The	-	Ce [[\$amp	ple ID lai	bels checked	by:	Iniliata	•
Matrix:	Carrier name	Fed	Ex						
Shipping container/cooler in good condition?	•	Yes	V	No 🗆)	Not Present			
Custody seals intact on shipping container/coo	ler?	Yes		No 🗆	3	Not Present		Not Shipped	\mathbf{V}
Custody seals intact on sample bottles?		Yes		No 🗆	3	N/A	\checkmark		
Chain of custody present?		Yes	\checkmark	No C]				
Chain of custody signed when relinquished and	I received?	Yes	lacksquare	No 🗆]				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗆]				
Samples in proper container/bottle?		Yes	\checkmark	No 🗆]				
Sample containers intact?		Yes	\checkmark	No 🗆]				
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗆]				
All samples received within holding time?		Yes	\checkmark	No [
Water - VOA vials have zero headspace?	No VOA vials subm	nitted	\checkmark	Yes [<u></u>	No 🗌			
Water - Preservation labels on bottle and cap n	natch?	Yes		No 🗀]	N/A 🗹			
Water - pH acceptable upon receipt?		Yes		No □]	N/A 🗹			
Container/Temp Blank temperature?		1	6°	<6° C Ac					
COMMENTS:				If given su	ufficient (time to cool.			
Client contacted	Date contacted:				Perso	n contacted			
Contacted by:	Regarding:								
Comments:									
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COVER LETTER

Friday, July 31, 2009

Gaurav Rajen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0227 FAX (505) 722-0210

RE: T116

Dear Gaurav Rajen:

Order No.: 0907508

Hall Environmental Analysis Laboratory, Inc. received 3 sample(s) on 7/28/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Date: 31-Jul-09

	Vestern Refining South 116	nwest, Gallup				ab Order:	0907508
Lab ID:	0907508-01	· 		(Collection Date	: 7/16/2009	9 2:00:00 PM
Client Sample ID:	T1160716090155				Matrix	: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE C	RGANICS					Analyst: SCC
Diesel Range Organi	cs (DRO)	27	10		mg/Kg	1	7/31/2009
Motor Oil Range Org	anics (MRO)	120	50		mg/Kg	1	7/31/2009
Surr: DNOP		67.3	61.7-135		%REC	1	7/31/2009
EPA METHOD 8015	B: GASOLINE RANG	Ε					Analyst: NSB
Gasoline Range Orga	anics (GRO)	ND	5.0		mg/Kg	1	7/30/2009 2:41:54 PM
Surr: BFB		107	58.8-123		%REC	1	7/30/2009 2:41:54 PM
Lab ID:	0907508-02				Collection Date	: 7/16/2009	9 2:15:00 PM
Client Sample ID:	T1160716090255				Matrix	: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE C	RGANICS					Analyst: SCC
Diesel Range Organi	cs (DRO)	250	50		mg/Kg	5	7/30/2009
Motor Oil Range Org	anics (MRO)	250	250		mg/Kg	5	7/30/2009
Surr: DNOP		77.9	61.7-135		%REC	5	7/30/2009
EPA METHOD 8015	B: GASOLINE RANG	E					Analyst: NSB
Gasoline Range Orga	anics (GRO)	ND	5.0		mg/Kg	1	7/30/2009 3:12:28 PM
Surr: BFB		102	58.8-123		%REC	1	7/30/2009 3:12:28 PM
Lab ID:	0907508-03		-:-	(Collection Date	: 7/16/2009	9 2:25:00 PM
Client Sample ID:	T1160716090355				Matrix	: SOIL	
Analyses		Result	PQL	Qual	Units	DF	Date Analyzed
	B: DIESEL RANGE C	RGANICS		•			Analyst: SCC
Diesel Range Organi		190	10		mg/Kg		7/30/2009
Motor Oil Range Orga	anics (MRO)	ND	50		mg/Kg	1	7/30/2009
Surr: DNOP		83.5	61.7-135		%REC	1	7/30/2009
EPA METHOD 8015	B: GASOLINE RANG	E					Analyst: NSB
Gasoline Range Orga	anics (GRO)	ND	5.0 58.8-123		mg/Kg	1	7/30/2009 3:43:00 PM
Surr: BFB		97.6			%REC		7/30/2009 3:43:00 PM

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Date: 31-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

T116

Work Order:

0907508

Analyte	Result	Units	PQL	%Rec	LowLimit HighLimit	%RPD RPDI	Limit Qual
Method: EPA Method 8015B: Di Sample ID: MB-19724	iesel Range	Organics MBLK			Batch ID: 19724	Analysis Date:	7/29/2008
Diesel Range Organics (DRO)	ND	mg/Kg	10				
Motor Oil Range Organics (MRO) Sample ID: LCS-19724	ND	mg/Kg LCS	50		Batch ID: 19724	Analysis Date:	7/29/2009
Diesel Range Organics (DRO) Sample ID: LCSD-19724	35.49	mg/Kg LCSD	10	71.0	64.6 116 Batch ID: 1972 4	Analysis Date:	7/29/2009
Diesel Range Organics (DRO)	41.25	mg/Kg	10	82.5	64.6 116	15.0 17.4	ļ
Method: EPA Method 8015B: G Sample ID: MB-19740	asoline Ran	ige MBLK			Batch ID: 19740	Analysis Date:	7/30/2009 8:17:32 PM
Gasoline Range Organics (GRO) Sample ID: LCS-19740	ND	mg/Kg LCS	5.0		Batch ID: 19740	Analysis Date:	7/30/2009 7:16:37 PM
Gasoline Range Organics (GRO) Sample ID: LCSD-19740	30.59	mg/Kg LCSD	5.0	112	64.4 133 Batch ID: 19740	Analysis Date:	7/30/2009 7:47:11 PM
Gasoline Range Organics (GRO)	30.13	mg/Kg	5.0	110	69.5 120	1.52 11.6	1

Qualifiers:

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

E Estimated value

J Analyte detected below quantitation limits

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU		•		Date Receive	d:	7/28/2009	
Work Order Number 0907508				Received by		\mathcal{U}	
Checklist completed by:	n Si	7	Date	\$ample ID to 7/28/09	abels checked b	y:	
Matrix:	Carrier name	Client	drop-of	ţ.	· .		
Shipping container/cooler in good condition?		Yes	V	No 🔲	Not Present		
Custody seals intact on shipping container/cooler	?	Yes		No 🗌	Not Present	☐ Not Shipped	\checkmark
Custody seals intact on sample bottles?		Yes	V	No 🗀	N/A		
Chain of custody present?		Yes	\checkmark	No 🗆			
Chain of custody signed when relinquished and re	eceived?	Yes	\checkmark	No 🗆			
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗌			•
Samples in proper container/bottle?		Yes	V	No 🗌			
Sample containers intact?		Yes	V	No 🗀 .			
Sufficient sample volume for indicated test?		Yes	V	No 🗌			
All samples received within holding time?		Yes	V	No 🗌			of preserved
Water - VOA vials have zero headspace?	No VOA vials subr	mitted	V	Yes 🗌	No 🗌	bottles ci pH:	hecked for
Water - Preservation labels on bottle and cap ma	tch?	Yes		No 🗌	N/A 🗹		
Water - pH acceptable upon receipt?		Yes		No 🗌	N/A 🗹	<2 >12 ur below.	nless noted
Container/Temp Blank temperature?		8.6°)H	<6° C Acceptab		below.	
COMMENTS:				If given sufficien	t time to cool.		
							,
	=====		==:	=====		=====	
Client contacted	Date contacted:			Pers	son contacted		
Contacted by:	Regarding:						
Comments:							
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Corrective Action							<u></u>

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HALL ENVIRONMENTAL ANALYSIS LABORATORN www.hallenvironmental.com kins NE - Albuquerque, NM 87109 345-3975 Fax 505-345-4107 Analysis Request	I L LI (TAKO MKO PKO)	X	8	×		╁	├-	_							This serves as notice of this possibility. Any cultural part of the part of this possibility.
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District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Form C-141 Revised October 10, 2003

Oil Conservation Division 1220 South St. Francis Profill 28 AM 10 50 Santa Fe, NM 87505

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

			Kele	ase nounc	ation	and Co	rrective A	ction						
						OPERATOR								
Name of Co						Contact Gaurav Rajen								
		Jamestown,	<u>NM 8734</u>	. 7		Telephone No. 505-722-0227								
Facility Nan	ne Gallup	Refinery			1	Facility Typ	e Oil refinery							
Surface Own	ner Wester	rn Refining		Mineral O	wner V	Vestern Ref	ning		Lease N	0.				
				LOCA	TION	OF RE	LEASE.							
Unit Letter	Section 23&33	Township 15N	Range 15W	Feet from the		South Line	Feet from the	East/W	Vest Line	County McKinley				
Latitude 35°29'22" Longitude 108°25'24"														
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Source of Re	lease Overf	low from Tan	k 116				lour of Occurrence 2:00 am			Hour of Discovery 4/24/2008;				
Was Immedia	ate Notice (Yes [No Not Re	quired	If YES, To	Whom? Carl J. C			D, Oil Conservation Division; reau (via telephone)				
By Whom? C	aurav Raje	n and Cheryl	Johnson			Date and I	Iour 4/24/2008 (a	pproxim	ately) 11:0	0 am				
Was a Water	course Read		Yes 🗵	No		If YES, Volume Impacting the Watercourse. Not applicable								
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I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.										eases which may endanger eve the operator of liability , surface water, human health				
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Printed Name	: Mark B.	Turri				Approved by	District Supervise	or:						
Title: Refiner	y Manager	– Gallup		 		Approval Date:			Expiration Date:					
E-mail Addre	ss: <u>mark.tu</u>	rri@wnr.com			(Conditions of	Approval:			Attached				
Date: 8-20-20	009		I	Phone: 505-722-38	333									

C-141 Final Report - Tank 116 Spill

1.0 Description of Site and Incident

Tank 116 is located within the northern tank farm area of the Gallup Refinery. Figure 1 depicts an aerial view of the refinery – and Tank 116 is described in a detailed image extracted from this picture.

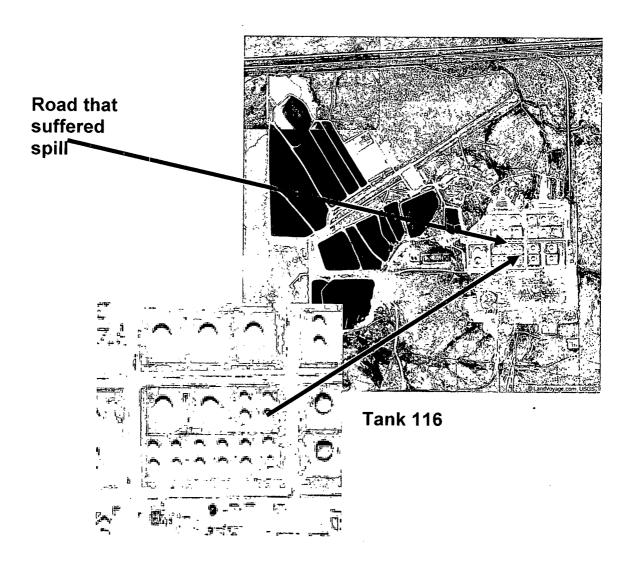
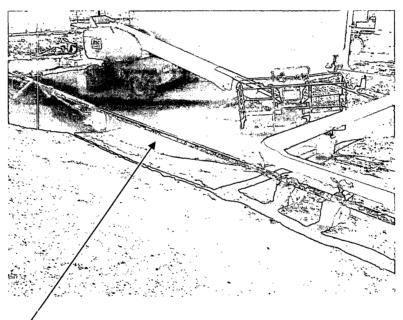


Figure 1: Location of Tank 116 within the Gallup Refinery

1.1 Nature of Spill Incident

At approximately 2:50 am on 4/24/2008, the Operations Shifter discovered Tank 116 running over. The Pump Operator was notified and a transfer was started into Tank 583. Tank 116 had run over and spilled Ultra Low Sulfur Diesel (ULSD) onto the soil within the area surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. This foam line is designed to provide foam into the tank to suppress fires in an emergency and has to be kept open. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a containment dike on this road outside the tank berm area, and the spill on the road was blocked from further migration. Figure 2 depicts the spill around the tank within the area of the berm. The photograph presented in Figure 3 depicts the spill emanating from the buried drain valve that migrated along the service road.



Area around Tank 116, Tank 115, and within the berm affected by the ULSD spill

Figure 2: Photograph depicting contaminated areas within the berm adjacent to Tank 116 – Tank 116 is off the picture; much of the product flowed and collected next to Tank 115 which can be seen. At this time, maintenance work was ongoing on Tank 115 which is why heavy equipment is seen in the area.

Expanded view of dike along road

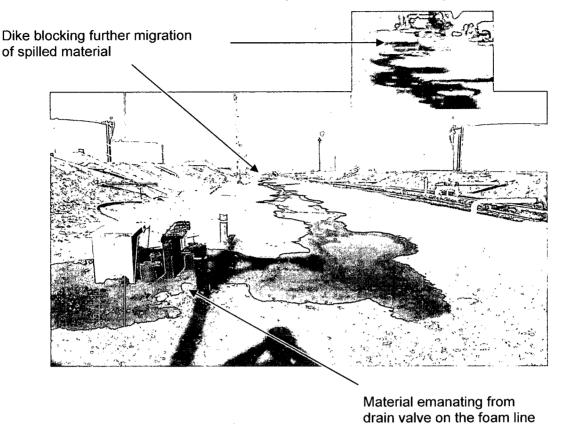


Figure 3: Photograph depicting spilled material along a service road adjacent to Tank 116.

2.0 Remediation Actions

Almost immediately following the spill, a vacuum truck was used to pick up free product (as much as possible), and absorbent material was placed on affected areas to soak up product remaining on the surface. Later, contaminated soil was excavated and stored on plastic in a staging area for later disposal in a permitted landfill. Figures 4-7 depict photographs of various stages of the excavation and subsequent clean-up of the area.

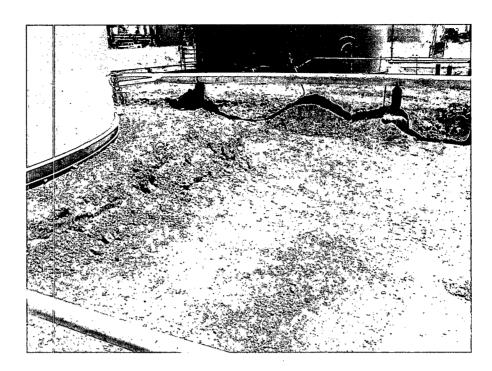


Figure 4: Excavation of contaminated soil in the area described in Figure 2. Note active pipeline towards the rear.

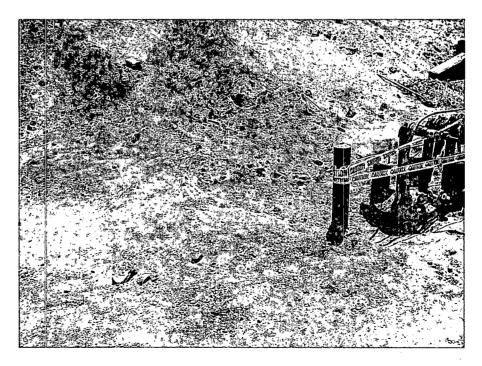


Figure 5: Preliminary excavation of contaminated soils near the drain pipes where product flowed out from the open foam line within the tank



Figure 6: Preliminary clean-up of road which had experienced run-off of product.

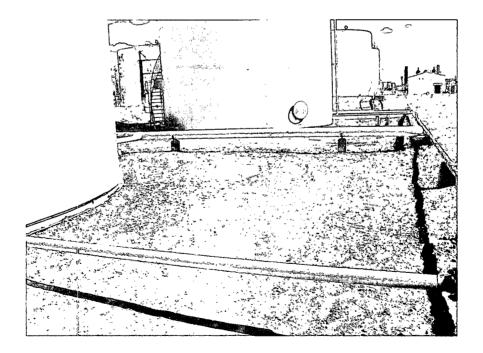


Figure 7: Final clean-up of affected area near Tank 116

After all free product had been removed and contaminated soil (from visual observation) excavated, we prepared a sampling plan and collected soil samples that were sent to Hall Environmental Analytical Laboratories for testing. The sampling locations and preliminary results for Diesel Range Organics (DRO) in red font are described in Figure 8. Appendix A presents details of the laboratory results. The composite samples were biased to locations where we could observe soil staining.

Sampling Plan - Tank 116

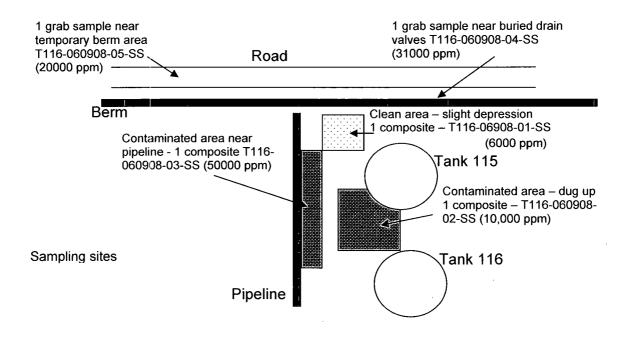


Figure 8: Preliminary sampling locations and results for DRO

These data showed levels of DRO from 6000 ppm to 50,000 ppm. The samples were also analyzed for Gasoline Range Organics (GRO) and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) using EPA-approved and OCD-recommended methods. GRO and BTEX were at non-detect levels. Based on these data, subsequent excavations were undertaken and the sites were sampled again. Figure 9 presents results from this second set of samples.

These tanks are an active work site. While waiting to receive the second set of laboratory results we were compelled to cover the excavated areas for safety reasons as depressions and excavations represent a safety hazard for personnel who continuously work around these tanks.

Sampling Plan – Tank 116

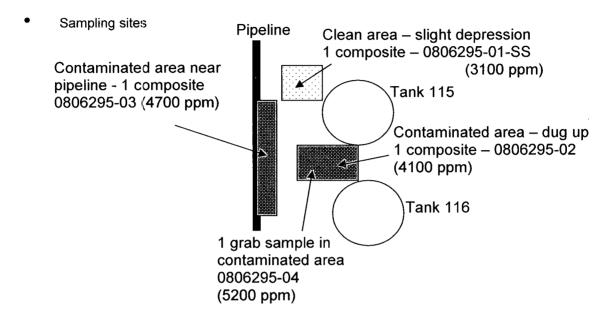


Figure 9: Second set of results after excavation had occurred.

Laboratory data for these samples are also presented in Appendix A. These results show levels of DRO of the order of 4000 - 5000 ppm that were found at the bottom of the excavated area even after 2 feet of contaminated dirt had been removed.

We have assessed the potential for contaminants from this current spill to migrate into the subsurface as being much less than 2 feet. We have excavated soils to this level and disposed off these soils at a permitted landfill. We believe that the levels of DRO being found below this level are probably from previous historical occurrences. Also, near the active pipelines located within the spill area that bring product in and out of the tanks it is not possible for us to excavate deeper without prejudice to the safety of these pipelines. We have reduced the levels of contamination by a factor greater than 10. However, there is some contamination at the level of approximately 4000 - 5000 ppm of DRO existing at the site.

3.0 Abatement Options

What can be done about possible past spills now that the site is covered?

Our approach has been the following:

• We have modeled the likely spread of contaminants into the subsurface using an EPA-approved model called CHEMFLO. We assumed a loamy-clay soil with 1

foot of ponded liquids on top. No contamination was predicted to travel deeper than about 1-2 feet even if the liquids stayed at a 1 foot depth on the surface for over 1000 hours – this was not the case in practice as product was picked up within a few hours after the spill. Details are provided in Appendix A. This lends support to the conclusion that contaminated soils below two feet is probably from previous activities.

• We have carried out a test of passive venting at the site, using a perforated pipe emplaced in to the soil above an area of contamination and started collecting measurements of vapor concentrations within this pipe. Figure 10 depicts a photograph of the perforated pipe we constructed, and Figure 11 shows it in place near a pipeline where it is difficult to excavate.

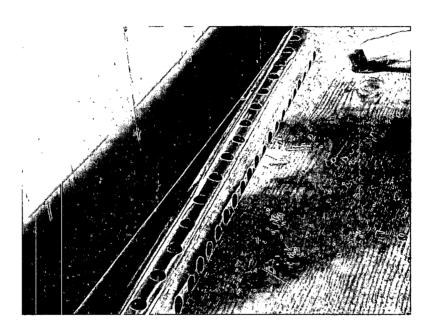


Figure 10: Perforated pipe that has been constructed

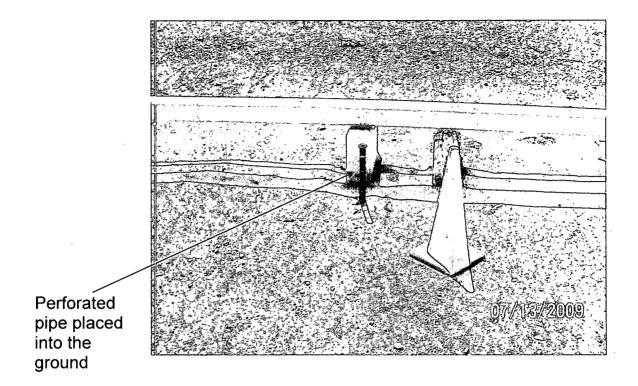


Figure 11: Photograph of emplaced pipe – the section with holes is inside the ground

Over time, vapor concentrations found within the pipe varied considerably. To monitor these concentrations we used a sensitive hydrocarbon vapor detection system based on a flame ionization detector. The concentrations could have been varying because microbial activity within the ground was being enhanced by virtue of the perforated pipe allowing increased air to breathe into the soil. These changing levels could also be from diurnal variations in the flow of soil gases as the ground heats and cools. We monitored these levels for a period of 12 months. Then, we collected a soil sample from this location which was previously known to be at 4700 ppm of DRO. This level is now 190 ppm. Details of this set of samples are provided in Figure 12. (We were confident that the entire road surface and buried valve area had been entirely cleaned up – however, as confirmatory samples had not been taken we have collected these and results are also provided.) We will now place more such pipes with OCD's concurrence to reduce contamination that is known to exist within the ground. We also seek OCD's concurrence to postpone further excavation until an opportune time arises in the future, and/or the area is taken out of service.

Sampling Plan – Tank 116

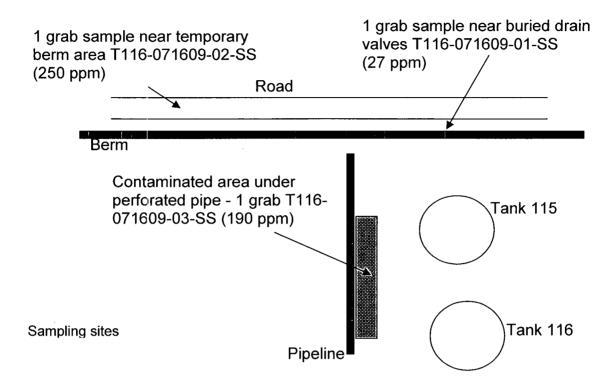


Figure 12: Last set of data from a third sampling event

4.0 Conclusions

As the spill site is an active work area, and because of the close proximity of functioning pipelines, we have been compelled to fill in the excavated areas (excavated to 2 feet) after having removed known contaminated dirt. We request the Oil Conservation Division (OCD) to allow us to add more perforated pipes at the location and continue to reduce the DRO levels that were found to exist at the site (of the order of 4000 - 5000 ppm). When this area is removed from service, we will clean up all contaminated soils to required levels if any are found.

APPENDIX A

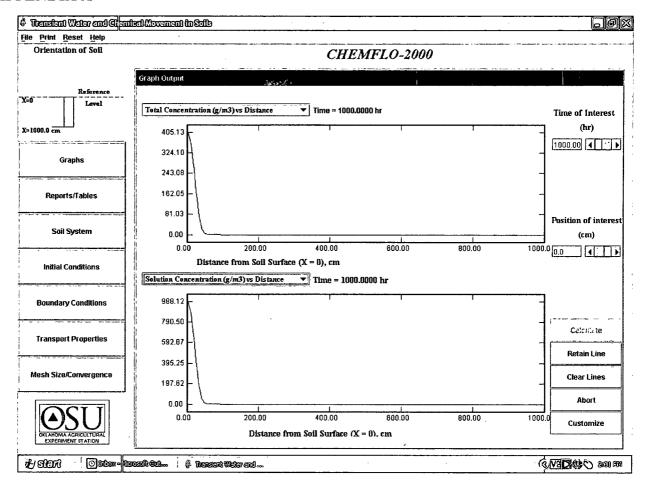


Figure A.1: Likely migration of contaminants into the subsurface – as can be seen, even after 1000 hours, no contamination is expected deeper than about 50 cm (1.6 feet). Therefore, it is extremely likely that contamination found deeper than 2 feet was from previous spills.

Assumptions in the model -

Figure A.2 presents details of the soil parameters built into the model. We assumed a sandy clay loam. Figure A.3 presents assumed chemical transport parameters.

Figure A.2: Assumed soil parameters

Diffusion Coefficient of Chemical in Water(cm2/hr) Dispersivity (cm) Uniform Partition Coefficient (m3/Mg soil) Uniform 1st-Order Degradation Const. in Liquid (1/hr) Uniform 1st-Order Production Const. on Solids (1/hr) Uniform 2etro-Order Production Constant (g/m3/hr)

Figure A.3: Assumed chemical transport properties

Hall Environmental Analysis Laboratory, Inc.

Date: 13-Jun-08

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Motor Oil Range Org	anics (MRO)	ND	2500		mg/Kg		50	6/12/2008 9:33:04 PM

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Hall Environmental Analysis Laboratory, Inc.

Date: 31-Jul-09

	Vestern Refining Sout 1116	nwest, Gallup				La	b Order:	0907508
Lab ID:	0907508-01			-	Collection	Date:	7/16/200	9 2:00:00 PM
Client Sample ID:	T1160716090155				N	latrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
EPA METHOD 8016	B: DIESEL RANGE C	RGANICS						Analyst: SCC
Diesel Range Organ	ics (DRO)	27	10	,	mg/Kg		1	7/31/2009
Motor Oil Range Org	anics (MRO)	120	50		mg/Kg		1	7/31/2009
Surr: DNOP	, ,	67.3	61.7-135		%REC		1	7/31/2009
EPA METHOD 8015	B: GASOLINE RANG	iE						Analyst: NSB
Gasoline Range Org	anics (GRO)	ND	. 5.0		mg/Kg		1	7/30/2009 2:41:54 PM
Surr: BFB		107	58.8-123		%REC	-	1	7/30/2009 2:41:54 PM
Lab ID:	0907508-02				Collection	Date:	7/16/200	9 2:15:00 PM
Client Sample ID:	T1160716090255				M	latrix:	SOIL	
Analyses		Result	PQL	Qual	Units	•	DF	Date Analyzed
EPA METHOD 8015	B: DIESEL RANGE C	RGANICS						Analyst: SCC
Diesel Range Organi	ics (DRO)	250	50		mg/Kg		5	7/30/2009
Motor Oil Range Org	anics (MRO)	250	250		mg/Kg		5	7/30/2009
Surr: DNOP		77.9	61.7-135		%REC		5	7/30/2009
EPA METHOD 8015	B: GASOLINE RANG	E						Analyst: NSB
Gasoline Range Org	anics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 3:12:28 PM
Surr: BFB		102	58.8-123		%REC		1	7/30/2009 3:12:28 PM
Lab ID:	0907508-03	· · · · · · · · · · · · · · · · · · ·			Collection	Date:	7/16/2009	9 2:25:00 PM
Client Sample ID:	T1160716090355				M	Iatrix:	SOIL	
Analyses		Result	PQL	Qual	Units		DF	Date Analyzed
	B: DIESEL RANGE C	RGANICS						Analyst: SCC
Diesel Range Organi		190	10		mg/Kg		1.	7/30/2009
Motor Oil Range Org	anics (MRO)	ND	50		mg/ Kg		1	7/30/2009
Surr: DNOP		83.5	61.7-135		%REC		1	7/30/2009
EPA METHOD 8015	B: GASOLINE RANG	E						Analyst: NSB
Gasoline Range Orga	anics (GRO)	ND	5.0		mg/Kg		1	7/30/2009 3:43:00 PM
Surr: BFB		97.6	58.8-123		%REC		1	7/30/2009 3:43:00 PM

Out	lifiers	

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING GALLUM				Date Received	d:	7/28/	2009	
Work Order Number 0907508				Received by	: AT	!	Ω	
Checklist completed by:		1			ibels checked t		12	*
Checklist completed by: Signature		_	Date	1/28/09		Initials		
Matrix:	Carrier name	Clier	nt drop-of	f	•			
	 			-				
Shipping container/cooler in good condition?		Yes	\checkmark	No 🔲	Not Present			
Custody seals intact on shipping container/cooler?		Yes		No 🗆	Not Present	☐ Not	Shipped	\checkmark
Custody seals intact on sample bottles?		Yes	\checkmark	No 🗌	N/A			
Chain of custody present?		Yes	\checkmark	No 🗌		•		
Chain of custody signed when relinquished and receive	d?	Yes	V	No 🗆				
Chain of custody agrees with sample labels?		Yes	\checkmark	No 🗌				
Samples in proper container/bottle?		Yes	\checkmark	No 🗌				
Sample containers intact?		Yes	V	No 🗆 .				•
Sufficient sample volume for indicated test?		Yes	\checkmark	No 🗌				
All samples received within holding time?		Yes	V	No 🗌				f preserved
Water - VOA vials have zero headspace? No V	/OA vials subr	nitted	V	Yes 🗌	No 🗆		potties chi pH:	ecked for
Water - Preservation labels on bottle and cap match?		Yes		No 🗌	N/A 🗹	•	_	
Water - pH acceptable upon receipt?		Yes		No 🗆	N/A 🗹		? >12 uni low.	less noted
Container/Temp Blank temperature?		8.6	0"	<6° C Acceptable		ρθ	IOVV.	
COMMENTS:				If given sufficient	time to cool.			
	_ = = = =		===				===	_ = = = =
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Client contacted Date c	ontacted:			Pers	on contacted			
Contacted by: Regard	ding:							
Comments:						, <u> </u>		
								
								
	19							
Corrective Action								
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	HALL ENVIRONMENTAL	www hallenvironmental com	4901 Hawkins NE - Albuquerque, NM 87109	Analysis Request		PO4,50	(1.1) (1.1) (1.1) (1.1) (1.1) (1.1)	d 504 d 504 d 826 d tho (Metho (PNA o (PNA o	EDB EDC EDB	×	**	*									
Turn-Around Time:	W Standard	1	(6	07/609		G. RAJEN S (8021			Preservative HFAI No.	ВТЕХ	<u></u>	1x 802 NON E						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Received by: 128 (ORemarks	Received by	
Chain-of-Custody Record	T) り こ り		Phone # 509728 8832	email or Fax#:	DA/QC Package: Standard Level 4 (Full Validation)		L EUU (19pe)	Date Time Sample Request ID		7/16 2-20 TI16 0716 07 0155	16 2:15 MILEONIBON 0255	1/16 2:25 171607160903551						Time: Relinquished by:	hate: Time: Relinduished by:	

GALLUP EFINERY

CERTIFIED MAIL: 7008 2810 0000 4726 1048

RECEIVED

June 22, 2009

2009 JUL 23 PM 1 05

New Mexico Environmental Department Hazardous Waste Bureau (HWB) 2905 Rodeo Park Drive East, Building 1 Santa Fe, NM 87505-6303

Attention: Mr. John E. Keiling, Program Manager

Permits Management Program Hazardous Waste Bureau

Reference: REQUEST FOR "CONTAINED-IN" DETERMINATION FOR PETROLEUM

CONTAMINATED SOILS RESULTING FROM API SEPARATOR OVERFLOW ON

JUNE 10, 2009;

WESTERN REFINING-SOUTHWEST (GALLUP REFINERY)(previously known as:

Giant Refining Co.)

EPA ID#: NMD000333211

Dear Mr. Keiling,

In accordance with the regulation established under 20.4.1.800 NMAC and 40CFR268.7 (e) for excavated petroleum contaminated soils, Western Refining-Southwest (Gallup Refinery) is requesting a "Contained-In" Determination for Petroleum Contaminated Soil from an overflow of the New API Separator (NPAIS) that occurred on June 10, 2009 due to an excessive rain event. Western Refining is also graciously asking for the Agency to provide an expeditious ruling on this determination if at all possible based on the supplied information.

On Wednesday, June 10, 2009 at approximately 0230 hrs, Western Refining-Southwest (Gallup Refinery) had a moderate rain event due to storms passing through the area. The new API began overflowing from the top onto the ground. At the time, only the West bay of the New API (NAPI) was operational because the east Bay was down for repairs. An above ground Baker Frac Tank located in the vicinity of or near the new API is used for overflow during upset or excessive rain conditions. Oily water from Process Sewers comingles with stormwater from area slabs flow directly to the new APIS. Under normal conditions when both bays are operational, the API can handle such an event. However, during this rain event, the API began to fill to an overflow condition because the East Bay was down for repairs. A small portion began to seep out of the top of the API as well, primarily water. Most of API overflow went along the backside of the API toward and slightly past the Baker Tank. (Refer to API and Lagoon Diagram and API Area Enlarged Area Diagram) The overflow from the Baker Tank was all contained in a berm surrounding the tank. There was not any oil or oily sheen observed to be in the area where the API overflowed from its top or in the Frac Tank containment berm. It continued raining from about 0430 hrs to 0630 hrs (about 1 ½ to 2 hrs). The

total amount of rainfall was about 0.76 inches during this time frame. At approximately 0500 hrs on Wednesday, June 10, 2009, the API (Off-site) Relief Supervisor notified Facility Management personnel. The Environmental Department was notified at approximately 0524 hrs. Environmental personnel arrived at the facility at approximately 0609 hrs, June 10, 2009. A site determination and evaluation was conducted immediately. Assessment and cleanup operations were immediately initiated by Maintenance and Contract personnel.

Cleanup operations were initiated. An Outside Contract Vacuum Truck Service (Veolia Environmental Services) was deployed to the facility to begin vacuuming up any liquids from the API overflow areas. After the vacuum operation concluded, Veolia removed approximately 31,700 gallons (754.76 bbls) of oily/water mixture. The amount of oil recovered from this operation was calculated to be approximately 11.79 gallons (0.28 bbls) based on information supplied by Veolia and best engineering methodology. Maintenance and Contract personnel began removing or remediating in and around the API and associated areas by removing approximately 1 to 2 inches contaminated top soils, any contaminated vegetation, and rock with a back-hoe or shovels. Cleanup crews removed soils along the backside of API extending north alongside the Baker Frac Tank as well as removing material where the API flowed over the road depression to Aeration Lagoon #1. Also, a cleanup crew was deployed to remove contaminated soil within the Baker Frac Tank containment dike area. Remedial activities terminated on or about June 24, 2009. After completion of remedial activities, a composite sample of the excavated material was collected by the Environmental Department, and submitted to Hall Environmental Laboratories for analysis. The sample was submitted to Hall Laboratory to be analyzed for the following parameters: RCI, TCLP Metals/1311, TCLP Voas/1311, Hexavalent Chromium (Cr+6), TCLP Semi-voas/1311, and Total Petroleum Hydrocarbon (TPH). The analysis from Hall Environmental Laboratory (date of collection: 6/25/2009) for these parameters indicated non-hazardous for all parameters. (Refer to API Overflow Sampling Analysis) Under normal conditions the API overflow material normally would be declared as a hazardous waste (F037/F038) and properly disposed accordingly; however, based on the analytical data and the small quantity of material generated, Western Refining (Southwest) is thereby asking from the New Mexico Environmental Department-Hazardous Waste Bureau for a "Request for Contained-in Determination for Petroleum Contaminated Soils from the API Overflow of June 10, 2009" in order to allow proper off-site disposal of this material as a non-hazardous waste stream. (Reference to 20.4.1.800 NMED and 40CFR268.7 (e)) The quantity excavated has been estimated to be approximately 20 to 30 yd^3 (cubic yards)or (1 to 1 ½ roll-off boxes). (Refer to API & Aeration Lagoon Area and API Area Enlarged Area Diagrams)

All remedial activities and modifications to API and surrounding areas have been completed. A complete description of the overflow will be described in the following inclusions. Please find included a copy of the OCD "Release Notification and Corrective Action Forms (C-141)(Initial and Final) Reports, the API & Aeration Lagoon Area Diagram, the API Area Enlarged Diagram, the NMED Correspondence (e-mail) of June 22, 2009, and API Sample Analysis from Hall Environmental Laboratories, June 25, 2009.

Once again, Western Refining is graciously asking for the Agency to provide an expeditious ruling on this determination if at all possible based on the supplied information. If you require additional information, please contact me at (505) 722-0258.

Sincerely

Beck Larsen, CHMM, REM Environmental Engineer

Western Refining-Southwest (Gallup Refinery)

Enc: API & Aeration Lagoon Area Diagram

API Area Enlarged Diagram

NMED Correspondence (e-mail) of June 22, 2009

OCD (Release Notification and Corrective Action, C-141 (Initial) Report OCD (Release Notification and Corrective Action, C-141 (Final) Report

API Overflow Sampling Analysis (Hall Environmental Laboratories), 6/25/2009

Cc: Ms Hope Monzeglio, New Mexico Environmental Department- Hazardous Waste Bureau

Mr. Carl J. Chavez, New Mexico Oil Conservation Division (NMOCD) Mr. Mark Turri, Western Refining (Southwest), Refinery Manager

Mr. Ed Riege, Western Refining (Southwest), Environmental Manager)

File

Larsen, Thurman

From: Monzeglio, Hope, NMENV [hope.monzeglio@state.nm.us]

Sent: Monday, June 22, 2009 9:18 AM

To: Larsen, Thurman; Riege, Ed

Cc: Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; Dougherty.Joel@epamail.epa.gov

Subject: RE: API separator overflows

I spoke with Beck this morning and there was a miscommunication on my part; there was only one API separator overflow that occurred on June 10th. An overflow did not occur on the 16. Beck with still complete a write up on the event. Let me know if anyone has questions.

Thanks Hope

From: Monzeglio, Hope, NMENV

Sent: Thursday, June 18, 2009 9:53 AM **To:** 'Thurman B. Larsen'; 'Riege, Ed'

Cc: Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; 'Dougherty.Joel@epamail.epa.gov'

Subject: API separator overflows

Beck

For the API separator overflows that occurred on June 10 and June 16, 2009, please send NMED a letter that describes the sources of the overflows, where the discharges went, identify the reasons for the overflows (why are the overflows occurring during rain events) and describe Western's remedial actions to cleanup the overflows (include actions to be taken to prevent this from happening in the future). The letter must have an attached site plan that shows the source of the overflows and where the discharges went. Please have this information to NMED on or before July 27, 2009.

Let me know if you have additional questions.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 476-6045; Main No.: (505)-476-6000
Fax: (505)-476-6060
hope.monzeglio@state.nm.us

Websites:

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Attached []

Release Notification and Corrective Action **OPERATOR Initial Report** Final Report Name of Company Western Refining-Southwest Contact Beck Larsen Address I-40/Exit 39, Jamestown, NM 87347 Telephone No.(505) 722-0258 Facility Type Refinery Facility Name Gallup Refinery Mineral Owner Lease No. Surface Owner LOCATION OF RELEASE Feet from the North/South Line Feet from the East/West Line County Unit Letter Section Township Range 15N 15W McKinley **Latitude** 35° 29′030′′ **Longitude** 108° 24′040′′

NATURE OF RELEASE Volume Recovered Type of Release Volume of Release API Overflow < 2.0 bbls (oil)1.3 bbls (oil) (estimated) Source of Release API Date and Hour of Occurrence Date and Hour of Discovery 6/10/2009: 0500 hrs. 6/10/2009: 0500 Was Immediate Notice Given? If YES, To Whom? OCD & NMED By Whom? Beck Larsen Date and Hour 6/10/2009; 1045 hrs AM Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* At approximately 0230 hrs, Wednesday, June 10, 2009, a heavy rain and thunderstorms passed over the facility. During this storm event, the API overflowed. A description of the incident was previously provided to the Agency on the initial C-141. Describe Area Affected and Cleanup Action Taken.* Cleanup efforts began on June 10, 2009. Maintenance and Contract personnel began cleaning up the any aqueous/oily portion of overflow contamination and any contaminated soil and rock debris surrounding the API area. Personnel conduct cleanup of areas such as depressions or other conveyances adjacent to the API area that any contamination may or did spread. After immediate cleanup efforts were completed. All contaminated material were put into a roll-off box to be tested (analyzed by an outside lab), prior to shipment off site for disposal to an approved facility. Contract personnel delivered and spread new gravel and rock material around the API area. Final cleanup of this area was completed on or about June 26, 2009. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Beck Larsen Title: Environmental Engineer Approval Date: **Expiration Date:**

Conditions of Approval:

Phone: (505) 722-0258

api-c141 rpt form061009.doc

Date: 7/21/2009

E-mail Address: Thurman.larsen@wnr.com

District I'
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
District IV

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe. NM 87505 Form C-141 Revised October 10, 2003

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

1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, NM 87505 **Release Notification and Corrective Action OPERATOR** Initial Report Final Report Contact Beck Larsen Name of Company Western Refining-Southwest Telephone No.(505) 722-0258 Address I-40/Exit 39, Jamestown, NM 87347 Facility Name Gallup Refinery Facility Type Refinery Mineral Owner Lease No. Surface Owner LOCATION OF RELEASE Feet from the North/South Line Feet from the East/West Line County Unit Letter Section Township Range 15W McKinley 28 15N **Latitude** 35° 29′030′′ **Longitude** 108° 24′040′′ NATURE OF RELEASE Type of Release Volume of Release Volume Recovered < 2.0 bbls (oil) 1.3 bbls (oil) (estimated) API Overflow Date and Hour of Occurrence Date and Hour of Discovery Source of Release API 6/10/2009: 0500 hrs 6/10/2009: 0500 If YES, To Whom? Was Immediate Notice Given? OCD & NMED Date and Hour 6/10/2009; 1045 hrs AM By Whom? Beck Larsen If YES, Volume Impacting the Watercourse. Was a Watercourse Reached? ☐ Yes 🛛 No If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* At approximately 0230 hrs, Wednesday, June 10, 2009, a heavy rain and thunderstorms passed over the facility. As soon as it started raining, the Wastewater Operators and Supervisors started pumping water from new API to the old API in order to reduce the level in the new API. They also started up a "yellow" trash pump in front of the new API going to the old API.. The Baker Tank started filling up until it overflowed. The API Operators blocked in the Baker Tank At approximately 0330 hrs, the new API began overflowing from the top onto the ground. Only the West Bay is operational since the East Bay of the API is down for repairs. The overflow lasted for about 30 minutes. However, the overflow from the Baker Tank was contained in the berm area surrounding the tank. At approximately 0430 hrs, the old API began draining into Aeration Lagoon #1 due to excessive stormwater, thus by-passing the Benzene Strippers. It continued raining from about 0430 to 0630 hrs. (about 1 ½ to 2 hrs). At 0630 hrs, flow stopped from the old API in to Lagoon #1. The amount of rainfall was about 0.76 inches during this time period. During this rain event, the old API sump was being pumped continuously to Tank (T-107) in order to control the level in the old API. At approximately 0500 hrs on Wednesday, June 10, 2009, the Process Shift Superintendent, initially notified Richard Schmitt that the API was overflowing. Then, Mr. Schmitt notified Mr. Mark Turri, Joel Quinones, James Geer, and the Environmental Department about the incident. The Environmental Department was officially notified on Wednesday, 6/10/2009 at approximately 0524 hrs. Environmental personnel arrived at 0609 hrs, Wednesday, June 10, 2009. A site determination and evaluation proceeded during daylight hours. The actual quantity of oil released is difficult to measure with any accuracy. Once daylight arrived, assessment began. Maintenance and Offsite personnel immediately began cleanup. Final quantification was determined to be approximately < 2.0 bbls of oil discharged, a crude estimation. All recoverable liquid in areas (oil/water mixtures) around the API and Baker Tank

Describe Area Affected and Cleanup Action Taken.*

Once daylight arrived, assessment began. Maintenance and Offsite personnel immediately began cleanup. All recoverable liquids in areas (oil/water mixture) around the API and the Baker Tank were immediately vacuumed and brought to one of the process drains for further processing by the API. Soil and area remediation around API and Baker Tanks is in progress.

were immediately vacuumed and brought to one of the process drains for further processing by the API.

I hereby certify that the information given above is true and complete t regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remed or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	e notifications and perform corrective the NMOCD marked as "Final Reportiate contamination that pose a threat t	actions for releases which may endanger rt" does not relieve the operator of liability to ground water, surface water, human health				
Signature: Printed Name: Beck Larsen	OIL CONSEI Approved by District Supervisor:	RVATION DIVISION				
Title: Environmental Engineer	Approval Date:	Expiration Date:				
E-mail Address: Thurman.larsen@wnr.com	Conditions of Approval:					
Date: 6/22/2009 Phone: (505) 722-0258	:					

^{*} Attach Additional Sheets If Necessary



COVER LETTER

Friday, July 10, 2009

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: API Overflow Sampling

Dear Thurman B. Larsen:

Order No.: 0906532

 $\widehat{\ }$

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 6/25/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Hall Environmental Analysis Laboratory, Inc.

Date: 10-Jul-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order: Project:

0906532

API Overflow Sampling

Lab ID:

0906532-01

Client Sample ID: API Overflow

Collection Date: 6/24/2009 10:30:00 AM

Date Received: 6/25/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
MERCURY, TCLP				· .		Analyst: MMS
Mercury	ND	0.020		mg/L	1	6/26/2009 5:50:15 PM
EPA METHOD 6010B: TCLP METALS			•			Analyst: SNV
Arsenic	ND	5.0		mg/L	1	7/10/2009 8:06:43 AM
Barium	ND	100		mg/L	1	7/10/2009 7:09:28 AM
Cadmium	ND	1.0		mg/L	1	7/10/2009 7:09:28 AM
Chromium	ND	5.0		mg/L	. 1	7/10/2009 7:09:28 AM
Lead	ND	5.0		mg/L	1	7/10/2009 7:09:28 AM
Selenium	ND	1.0		mg/L	1	7/10/2009 7:09:28 AM
Silver	ND	5.0		mg/L	1	7/10/2009 7:09:28 AM
EPA METHOD 8270C TCLP						Analyst: JDC
2,4-Dinitrotoluene	ND	0.13		mg/L	1	6/29/2009
Hexachlorobenzene	ND	0.13		mg/L	1	6/29/2009
Hexachlorobutadiene	ND	0.50		mg/L	1	6/29/2009
Hexachloroethane	ND	3.0		mg/L	1	6/29/2009
Nitrobenzene	ND	2.0		mg/L	1	6/29/2009
Pentachlorophenol	ND	100		mg/L	1	6/29/2009
Pyridine	ND	5.0		mg/L	1	6/29/2009
2,4,5-Trichlorophenol	ND	400		mg/L	1	6/29/2009
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	6/29/2009
Cresols, Total	ND	200		mg/L	1	6/29/2009
Surr: 2,4,6-Tribromophenol	73.8	20.9-128		%REC	1	6/29/2009
Surr: 2-Fluorobiphenyl	60.4	18.3-119		%REC	1	6/29/2009
Surr: 2-Fluorophenol	52.0	16.6-101		%REC	1	6/29/2009
Surr: 4-Terphenyl-d14	65.0	32.3-135		%REC	1	6/29/2009
Surr: Nitrobenzene-d5	65.8	22.6-117		%REC	1	6/29/2009
Surr: Phenol-d5	41.0	8-77.9		%REC	1	6/29/2009
VOLATILES BY 8260B/1311					•	Analyst: NSB
Benzene	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
2-Butanone	ND	10	· .	mg/L	1	7/4/2009 5:24:59 PM
Carbon Tetrachloride	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
Chlorobenzene	ND	100	•	mg/L	1	7/4/2009 5:24:59 PM
Chloroform	ND	6.0		mg/L	1	7/4/2009 5:24:59 PM
1,4-Dichlorobenzene	ND	7.5		mg/L	. 1	7/4/2009 5:24:59 PM
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
1,1-Dichloroethene	. ND	0.70		mg/L	1	7/4/2009 5:24:59 PM
Hexachlorobutadiene	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
Tetrachloroethene (PCE)	ND	. 0.70		mg/L	1	7/4/2009 5:24:59 PM
Trichloroethene (TCE)	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
Vinyl chloride	ND	0.20		mg/L	1	7/4/2009 5:24:59 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 2

Hall Environmental Analysis Laboratory, Inc.

Date: 10-Jul-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order:

0906532

Project:

API Overflow Sampling

Lab ID:

0906532-01

Client Sample ID: API Overflow

Collection Date: 6/24/2009 10:30:00 AM

Date Received: 6/25/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
VOLATILES BY 8260B/1311		·	· · · · · · · · · · · · · · · · · · ·		Analyst: NSB
Surr: 1,2-Dichloroethane-d4	100	69.9-130	%REC	1	7/4/2009 5:24:59 PM
Surr: 4-Bromofluorobenzene	98.2	71.2-123	%REC	1	7/4/2009 5:24:59 PM
Surr: Dibromofluoromethane	102	73.9-134	%REC	1	7/4/2009 5:24:59 PM
Surr: Toluene-d8	98.7	81.9-122	%REC	1	7/4/2009 5:24:59 PM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	3900	400	mg/Kg	20	6/26/2009

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 2 of 2



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

June 29, 2009

ESC Sample # :

L409538-01

Date Received

26, 2009

Description

June 0906532

Site ID :

Sample ID

API OVERFLOW

Project # : 0906532

Collected By

06/24/09 10:30 Collection Date :

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Corrosivity	Non-Corrosive	•		9040C	06/27/09	1 .
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/27/09	1
Ignitability	See Footnote		Deg. F	D93/1010A	06/29/09	1
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/kg	9012B	06/29/09	1
Reactive Sulf.(SW846 7.3.4.1)	BDL	25.	mg/kg	903 4/ 9030B	06/28/09	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/29/09 16:27 Printed: 06/29/09 16:27 L409538-01 (IGNITABILITY) - Did Not Ignite @ 170F

Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
					······
L409538-01	WG428532	SAMP	Chromium, Hexavalent	R795546	J6



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Est. 1970

Hall Environmental Analysis Laboratory Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report Level II

L409538

June 29, 2009

Analyte	Result	Labor. Unit	atory Blank		Limit	Batch Date	e Analyzed
Chromium, Hexavalent	√.<.2×3.18	mg/ko		V4065577		###WG428532%06/	27/09/13:26
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	2.80 < 25	mg/ko				WG428517 06/ WG428681 06/	
Analyte	Units	Result	iplicateu Duplicate	RPD	Limit	Ref Samp	Batch
Chromium, Hexavalent,	, mg/kg	a. 0.00 24.0	% 0.00 Te	ME 05.00	203	L409428-01	WG428532
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	mg/kg	0.00	0.00	0.00	10 20	L409010-01 L409538-01	WG428517 WG428681
Reactive CN/(SW846.77.3.3.2)	j mg√kg⊈	0,00	0.000	0.00	20/2/2	L409538-01	WG428683
Ignitability	Deg. F	0.00	0.00	0.00	10	L409538-01	WG428687
Analyte	Units	Laborator Known Va	//Control:Samp	ult.	% Rec	Limit	Batch
Chromium Hexavalent	mg7,kg		1		80.9		WG428532
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	mg/kg	9.04 100	8 - 5 82 . 0		98.5 82.0	97.4-102.6 70-130	WG428517 WG428681
Ignitability. West of the second	Dêg. F	82 4	# 82. (100: 1	96-104	WG428687
Analyte		aboratory Con Result Re			Limit	RPD Limit	Batch
Chromium, Hexavalent	.mg/kg	81.9	2.75 4.3.5.80.0		50-1431 0	(07,730) \$ (20 ·)	WG428532
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	mg/kg		3.90 98.0 2.0 82.0		97.4-102.6 70-130	0.00 10	WG428517 WG428681
Ignitability at 1 %	Deg≇F.	82.0	2.0% 4 100		96-104		₩G428687
Analyte	Units		rix Spike : ef Res TV	% Rec	Limit	Ref Samp	Batch
Chromium, Hexavalent	mg/kg	13:73	0.00 2.20	.%.68.5 *	80-120	% L409538-01%	WG428532

^{*} Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



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Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report Level II

June 29, 2009

L409538

Batch number /Run number / Sample number cross reference

WG428532: R795546: L409538-01 WG428517: R796588: L409538-01 WG428681: R796589: L409538-01 WG428683: R796746: L409538-01 WG428687: R797027: L409538-01

^{* *} Calculations are performed prior to rounding of reported values .

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Date: 10-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sampling

Work Order:

0906532

Analyte	Result	Units	PQL	%Rec	LowLimit	HighL	_imit	%RPD	RPDL	imit Qual
Method: EPA Method 418.1: T	трн			•						
Sample ID: MB-19472		MBLK			Batch	ID:	19472	Analysis Da	te:	6/26/2009
Petroleum Hydrocarbons, TR	ND	mg/Kg	20							
Sample ID: LCS-19472		LCS			Batch	ID:	19472	Analysis Da	te:	6/26/2009
Petroleum Hydrocarbons, TR	85.50	mg/Kg	20	85.5	82	114				
Sample ID: LCSD-19472		LCSD ·	•		Batch	ID:	19472	Analysis Da	te:	6/26/2009
Petroleum Hydrocarbons, TR	95.42	mg/Kg	20	. 95.4	82	114		11.0	20	
Method: Volatiles by 8260B/1	311									
Sample ID: mb-19468		MBLK			Batch	ID:	19468	Analysis Da	te:	7/4/2009 4:00:13 PM
Benzene	ND	mg/L	0.50							
?-Butanone	ND	mg/L	10							
Carbon Tetrachloride	ND	mg/L	0.50							
Chlorobenzene	ND	mg/L	100							
Chloroform	ND	mg/L	6.0							
1,4-Dichlorobenzene	ND	mg/L	7.5							
1,2-Dichloroethane (EDC)	ND	mg/L	0.50							
1,1-Dichloroethene	ND	mg/L	0.70	•						
dexachlorobutadiene	ND	mg/L	0.50							ř
Tetrachloroethene (PCE)	ND	mg/L	0.70							
Trichloroethene (TCE)	ND	mg/L	0.50							
Vinyl chloride	ND	mg/L	0.20							
Sample ID: lcs-19468		LCS			Batch	ID:	19468	Analysis Da	te:	7/4/2009 3:31:53 PM
Benzene	0.1367	mg/L	0.010	34.2	51.1	171				S
Chlorobenzene	0.06556	mg/L	0.010	16.4	36.1	191				s ·
1,1-Dichloroethene	0.09015	mg/L	0.010	22.5	49.1	162				S
Trichloroethene (TCE)	0.05354	mg/L	0.010	13.4	41.2	166				S

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v	чa	TI T		

E Estimated value

R RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 1

J Analyte detected below quantitation limits

Date: 10-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sampling

Work Order:

0906532

Sample ID: mb-19499	Analyte	Result	Units	PQL	%Rec	LowLimit	HighLin	nit	%RPD	RPDLimit	Qual
A-Dinitrotoluene		CLP									
Hexachlorobenzene ND mg/L 0.13 ND mg/L 0.50	Sample ID: mb-19499		MBLK			Batch I	D: 19	499	Analysis [Date:	6/29/2009
Hexachlorobutadiene	2,4-Dinitrotoluene	ND	mg/L	0.13							
Petachloroethane	Hexachlorobenzene	ND	mg/L	0.13							
No mg/L 2.0 mg/L 100	Hexachlorobutadiene	ND	mg/L	0.50							
Pentachlorophenol ND mg/L 100 ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Sample ID: LeS-19499 LCS Mg/L 2.0 Mg/L	Hexachloroethane	ND	mg/L	3.0					•		
Pyridine ND mg/L 5.0 ND mg/L 2.4,6-Trichlorophenol ND mg/L 2.0 Cresols, Total ND mg/L 2.4 Cresols, Total ND mg/L 2.4 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 3.0 Cresol	Nitrobenzene	ND	mg/L	2.0							,
2.4,5-Trichlorophenol ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 2.0 Cresols, Total ND mg/L 0.010 77.9 24.8 102	Pentachlorophenol	ŅD	mg/L	100							
2,4,6-Trichlorophenol ND mg/L 2.0 Cresols, Total ND mg/L 200 Sample ID: Ics-19499 LCS Batch ID: 19499 Analysis Date: 6/29/200° 2,4-Dinitrotoluene 0.07790 mg/L 0.010 77.9 24.8 102 Hexachlorobutadiene 0.05940 mg/L 0.010 59.4 20.2 72.5 Hexachlorobutadiene 0.06098 mg/L 0.010 61.0 20.1 100 Hexachlorobutadiene 0.06236 mg/L 0.010 61.0 20.1 100 Nitrobenzene 0.07112 mg/L 0.010 71.1 34.4 94.7 Pentachlorophenol 0.05852 mg/L 0.010 58.5 8.63 96.2 Pyridine 0.04090 mg/L 0.010 66.3 16.7 98 2,4.5-Trichlorophenol 0.05820 mg/L 0.010 55.1 12.6 88.1 Cresols, Total 0.1552 mg/L 0.010 55.1 12.6 88.1 Sample ID: Iosd-19499 LCSD	Pyridine	ND	mg/L	5.0	•						
Cresols, Total ND	2,4,5-Trichlorophenol	ND	mg/L	400							
Batch ID: 1949 Analysis Date: 6/29/2001 6/29	2,4,6-Trichlorophenol	ND	mg/L	2.0							
24-Dinitrotoluene	Cresols, Total	ND	mg/L	200							
Hexachlorobenzene	Sample ID: Ics-19499		LCS			Batch I	D: 19	499	Analysis [Date:	6/29/2009
Hexachlorobenzene	2,4-Dinitrotoluene	0.07790	mg/L	0.010	77.9	24.8	102				
Hexachloroethane	Hexachlorobenzene	0.05940	=	0.010	59.4	20.2	72.5				
Hexachloroethane 0.06236 mg/L 0.010 62.4 29.2 95 Nitrobenzene 0.07112 mg/L 0.010 71.1 34.4 94.7 Pentachlorophenol 0.05852 mg/L 0.010 40.9 12.5 64.7 Pyridine 0.04090 mg/L 0.010 66.3 16.7 98 2,4,5-Trichlorophenol 0.05820 mg/L 0.010 58.2 20.9 93.5 Cresols, Total 0.1652 mg/L 0.010 55.1 12.6 88.1 Sample ID: Icsd-19499 LCSD Batch ID: 19499 Analysis Date: 6/29/200 2,4-Dinitrotoluene 0.07390 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachlorobutadiene 0.05928 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachlorobutadiene 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 68.4 34.4 94.7 16.2 44.7 Pyridine 0.03872 mg/L 0.010 88.7 12.5 64.7 5.48 77.5 Pyridine 0.03872 mg/L 0.010 88.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.065864 mg/L 0.010 88.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 88.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 88.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06424 mg/L 0.010 88.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06484 mg/L 0.010 88.8 1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 Analysis Date: 6/26/2009 5:37:54 PM	Hexachlorobutadiene	0.06098	mg/L	0.010	61.0	20.1	100				
Nitrobenzene 0.07112 mg/L 0.010 71.1 34.4 94.7 Pentachlorophenol 0.05852 mg/L 0.010 58.5 8.63 96.2 Pyridine 0.04090 mg/L 0.010 40.9 12.5 64.7 2,4,6-Trichlorophenol 0.05820 mg/L 0.010 58.2 20.9 93.5 Cresols, Total 0.1652 mg/L 0.010 55.1 12.6 88.1 Sample ID: losd-19499 LCSD Batch ID: 19499 Analysis Date: 6/29/200 2,4-Dinitrotoluene 0.05346 mg/L 0.010 54.5 20.2 72.5 8.68 36.1 Hexachlorobenzene 0.05946 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachlorotethane 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03877 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03878 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03878 mg/L 0.010 54.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Method: MERCURY, TCLP Sample ID: MB-19479 MBLK MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 Mercury ND mg/L 0.020 Sample ID: LCS-19479 Analysis Date: 6/26/2009 5:37:54 PM	Hexachloroethane	0.06236		0.010	62.4	29.2	95				
Pentachlorophenol 0.05852 mg/L 0.010 58.5 8.63 96.2	Nitrobenzene	0.07112		0.010	71.1	34.4	94.7				
Pyridine	Pentachlorophenol	0.05852			58.5	8.63	96.2				
2,4,5-Trichlorophenol	Pyridine	0.04090					64.7				
2,4,6-Trichlorophenol 0.05820 mg/L 0.010 58.2 20.9 93.5 Cresols, Total 0.1652 mg/L 0.010 55.1 12.6 88.1 Sample ID: Icsd-19499 LCSD Batch ID: 19499 Analysis Date: 6/29/200 6/29/200 2,4-Dinitrotoluene 0.07390 mg/L 0.010 73.9 24.8 102 5.27 27.8 Hexachlorobenzene 0.05446 mg/L 0.010 54.5 20.2 72.5 8.68 36.1 Hexachlorobutadiene 0.05928 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachloroethane 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 60.4 34.4 94.7 16.2 44.7 Pertachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5	2,4,5-Trichlorophenol	0.06626		0.010	66.3	16.7	98				
Cresols, Total 0.1652 mg/L 0.010 55.1 12.6 88.1 Sample ID: Icsd-19499 LCSD Batch ID: 19499 Analysis Date: 6/29/200 2,4-Dinitrotoluene 0.07390 mg/L 0.010 73.9 24.8 102 5.27 27.8 Hexachlorobenzene 0.05446 mg/L 0.010 54.5 20.2 72.5 8.68 36.1 Hexachlorobutadiene 0.05928 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachloroethane 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 60.4 34.4 94.7 16.2 44.7 Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Tri	2,4,6-Trichlorophenol	0.05820		0.010	58.2	20.9	93,5				
Batch ID: 1949 Analysis Date: 6/29/200	Cresols, Total	0.1652	mg/L	0.010	55.1	12.6	88.1				
Hexachlorobenzene 0.05446 mg/L 0.010 54.5 20.2 72.5 8.68 36.1 Hexachlorobutadiene 0.05928 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachlorobutadiene 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 60.4 34.4 94.7 16.2 44.7 Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP S	Sample ID: lcsd-19499					Batch I	D: 19	499	Analysis E	Date:	6/29/2009
Hexachlorobenzene 0.05446 mg/L 0.010 54.5 20.2 72.5 8.68 36.1 Hexachlorobutadiene 0.05928 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachlorobutadiene 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 60.4 34.4 94.7 16.2 44.7 Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP S	2,4-Dinitrotoluene	0.07390	mg/L	0.010	73.9	24.8	102		5.27	27.8	
Hexachlorobutadiene 0.05928 mg/L 0.010 59.3 20.1 100 2.83 39.1 Hexachloroethane 0.05714 mg/L 0.010 57.1 29.2 95 8.74 57.2 Nitrobenzene 0.06044 mg/L 0.010 60.4 34.4 94.7 16.2 44.7 Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: LCS-19479 ND mg/L 0.	Hexachlorobenzene	0.05446		0.010	54.5	20.2	72.5		8.68	36.1	
Hexachloroethane	Hexachlorobutadiene	0.05928		0.010	59.3	20.1	100				
Nitrobenzene 0.06044 mg/L 0.010 60.4 34.4 94.7 16.2 44.7 Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	Hexachloroethane	0.05714		0.010	57.1	29.2	95		8.74	57.2	
Pentachlorophenol 0.05836 mg/L 0.010 58.4 8.63 96.2 0.274 24.7 Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	Nitrobenzene	0.06044		0.010	60.4	34.4	94.7		16.2	44.7	
Pyridine 0.03872 mg/L 0.010 38.7 12.5 64.7 5.48 77.5 2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	Pentachlorophenol	0.05836		0.010	58.4	8.63	96.2		0.274		
2,4,5-Trichlorophenol 0.06422 mg/L 0.010 64.2 16.7 98 3.13 34.6 2,4,6-Trichlorophenol 0.05684 mg/L 0.010 56.8 20.9 93.5 2.36 32.8 Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PN Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PN	Pyridine	0.03872		0.010	38.7	12.5	64.7		5.48	77.5	
Cresols, Total 0.1444 mg/L 0.010 48.1 12.6 88.1 13.4 46.3 Method: MERCURY, TCLP Sample ID: MB-19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	2,4,5-Trichlorophenol	0.06422	-	0.010			98		3.13		
Method: MERCURY, TCLP Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	2,4,6-Trichlorophenol	0.05684	mg/L	0.010	56.8	20.9	93.5		2.36	32.8	
Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	Cresols, Total	0.1444	mg/L	0.010	48.1	12.6	88.1		13.4	46.3	
Sample ID: MB-19479 MBLK Batch ID: 19479 Analysis Date: 6/26/2009 5:36:11 PM Mercury ND mg/L 0.020 Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	Method: MERCURY TOLP										
Sample ID: LCS-19479 LCS Batch ID: 19479 Analysis Date: 6/26/2009 5:37:54 PM	Sample ID: MB-19479		MBLK			Batch I	D: 1,9	479	Analysis (Date: 6/26/	/2009 5:36:11 PM
	Mercury	ND	mg/L	0.020							
Mercury ND mg/L 0.020 97.0 80 120	Sample ID: LCS-19479		LCS			Batch I	D: 19	479	Analysis [Date: 6/26/	/2009 5:37:54 PM
	Mercury	ND	mg/L	0.020	97.0	80	120				

Qu	ali	fie	rs

E Estimated value

Page 2

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Date: 10-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sampling

Work Order:

0906532

	PA Method 6010B:	··								
		TCLP Metals								
Cadmium	906532-01AMSD		MSD			Batch I	D:	19523	Analysis Date:	7/10/2009 7:14:37 AN
		ND	mg/L	1.0	101	75	12	5	0 2	0 .
Chromium		ND	mg/L	5.0	92.6	75	12	5	0 2	0
Lead		ND	mg/L	5.0	89.9	75	12	5	0 2	0
Selenium		ND ·	mg/L	1.0	111	75	12	5	. 0 2	0
Silver		ND	mg/L	5.0	104	75	12	5	0 2	0 .
Sample ID: 09	906532-01AMSD		MSD			Batch I	D:	19523	Analysis Date:	7/10/2009 7:22:20 AM
Barium		ND	mg/L	100	97.5	75	12	5	0 2	0
	906532-01AMSD		MSD			Batch I		19523	Analysis Date:	7/10/2009 8:13:31 AN
Arsenic		ND	mg/L	5.0	99.7	75	12		0 2	n
Sample ID: M	ND 10522	NO	MBLK	5.0	33.1	Batch I		19523	Analysis Date:	o. 7/10/2009 7:02:39 AN
•	10-19020					Daton	υ.	13023	Analysis Date.	1110/2003 1:02:33 /4/
Arsenic		ND	mg/L 	5.0						
Barium		ND	mg/L	100					•	
Cadmium		ND	mg/L	1.0						
Chromium		ND	mg/L	5.0						
Lead		ND	mg/L	5.0						
Selenium		ND	mg/L	1.0						
Silver		ND	mg/L	5.0						
Sample ID: M	1B-19523		MBLK			Batch I	D:	19523	Analysis Date:	7/10/2009 8:01:39 AM
Arsenic		ND	mg/L	5.0						•
Sample ID: LO	CS-19523		LCS			Batch I	D:	19523	Analysis Date:	7/10/2009 7:06:54 AN
Arsenic		ND	mg/L	5.0	110	80	120) ·		
Barium		ND	mg/L	100	99.1	80	120			
Cadmium		ND	mg/L	1.0	106	80	120			
Chromium		ND	mg/L	5.0	99.8	80	120			
Lead		ND	mg/L	5.0	97.0	80	120			
Selenium		ND	mg/L	1.0	107	80	120			
Silver		ND	mg/L	5.0	104	80	120			
Sample ID: L0	CS-19523	.,,	LCS	0.0	10.	Batch I		19523	Analysis Date:	7/10/2009 8:04:10 AN
		ND		5.0	444				, maryolo outo.	77 1072000 0.0 1.7 9 7 111
Arsenic	000500 044840	. ND	mg/L	5.0	114	80 Batch I	120		Anchinia Datai	7/10/2009 7:12:04 AN
•	906532-01AMS		'MS					19523	Analysis Date:	7/10/2009 7.12.04 AN
Cadmium		ND	mg/L	1.0	105	75	125		*	
Chromium		ND	mg/L	5.0	95.9	75 .	125			
_ead	•	ND	mg/L	5.0	93.6	75	.125			
Selenium		ND	mg/L	1.0	113	75 .	125			
Silver		ND	mg/L	5.0	105	75	125		•	
Sample ID: 09	906532-01AMS		MS			Batch II	D:	19523	Analysis Date:	7/10/2009 7:19:45 AM
Barium		ND	mg/L	100	103	75	125	5		
Sample ID: 09	906532-01AMS		MS	•		Batch II		19523	Analysis Date:	7/10/2009 8:09:15 AN
Arsenic		ND	mg/L	5.0	98.6	75	125		-	•

Oug	lifiers	
Vua	шцега	١

E Estimated value

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

Page 3

J - Analyte detected below quantitation limits

R RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory, Inc.

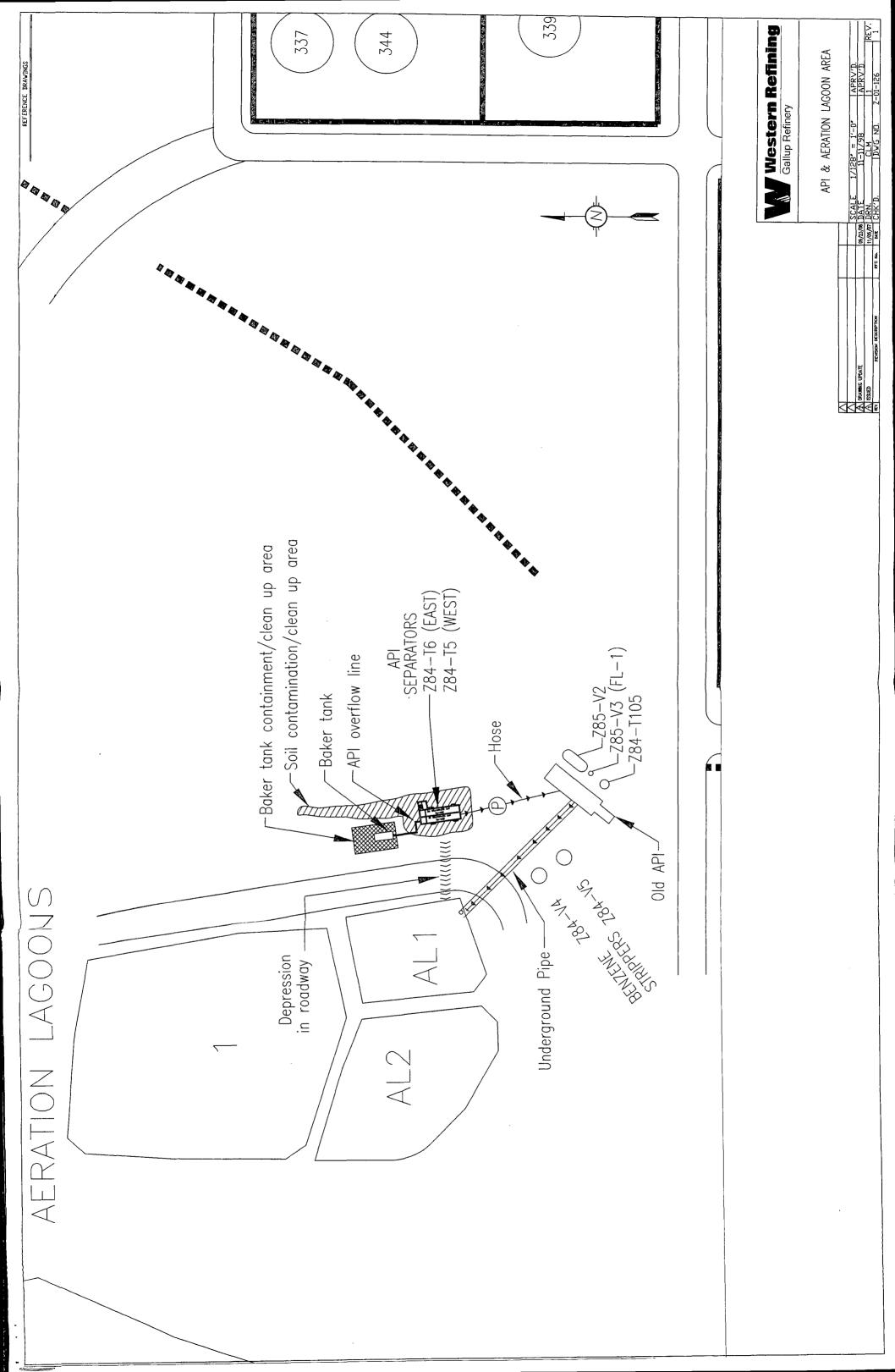
Sample Receipt Checklist

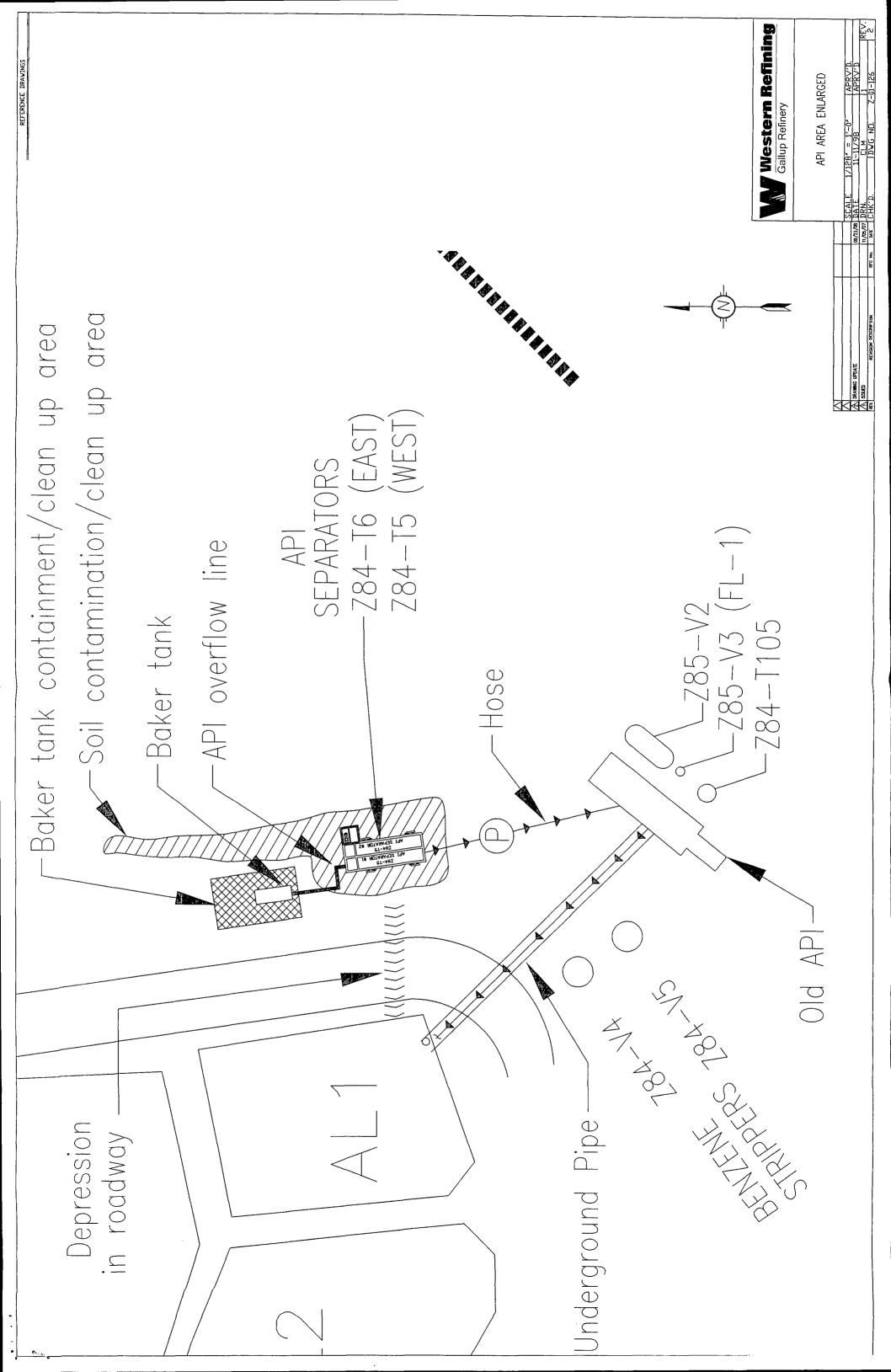
Client Name WESTERN REFINING GALLU	,	,	Date Received		6/25/2009
Work Order Number 0906532	\triangle		Received by:	TLS	
			.,	pels checked by:	A-
Checklist completed by: Signature		Da	6/25/69		Initials
Matrix:	Carrier name	<u>UPS</u>			
Shipping container/cooler in good condition?		Yes 🗹	No 🗀	Not Present	
Custody seals intact on shipping container/coole	r?	Yes 🗹	No 🗌	Not Present	Not Shipped
Custody seals intact on sample bottles?		Yes 🗌	No 🗀	N/A ✓	
Chain of custody present?		Yes 🗹	No 🗌		
Chain of custody signed when relinquished and r	received?	Yes 🗹	No 🗌		
Chain of custody agrees with sample labels?		Yes 🗹	No 🗌		
Samples in proper container/bottle?		Yes 🗹	No 🗌		
Sample containers intact?		Yes 🗹	No 🗌		•
Sufficient sample volume for indicated test?		Yes 🗹	No 🗌		
All samples received within holding time?		Yes 🗹	No 🗌		Number of preserved
Water - VOA vials have zero headspace?	No VOA vials subm	nitted 🗹	Yes	No 🔲	bottles checked for pH:
Water - Preservation labels on bottle and cap ma	atch?	Yes 🗌	No 🗌	N/A 🗹	
Water - pH acceptable upon receipt?		Yes 🗌	No 🗌	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?		3.1°	<6° C Acceptable		below.
COMMENTS:			If given sufficient	time to cool.	•
		-			
Client contacted	Date contacted:		Perso	on contacted	
Contacted by:	Regarding:		·		
Comments:					
:					
·					

Corrective Action					

		www.hallenvironmental.com	4901 Hawkins NE - Albuquerque, NM 87109	Tel. 505-345-3975 Fax 505-345-4107	Analysis Request	(10 m) (1	Gas o as/Die PCB's PCB's	311) 1005 1007 1005 1007 1005 1007 1007 1007	17 + 17 + 18 18 18 18 18 18 18 18	1 64 64 64 64 64 64 64 64 64 64 64 64 64	X + MT Method (Method) (Method) (PNA) (PNA) (PNA) (PNA) (Postid) (PO)	ВТЕ ТРН 8310 8270 8270 8270 8270 8281 8281 8281 8281 8281 8281 8281 828	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX						Remarks: O	ションコ	500000 X000 DOX 101020	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
Turn-Around Time:	□ Standard XRush	Name:	API OVERFIOW SAMPLING	Project #:		Project Manager:	Thurmau Larsel	Sampler:	On Ice: - Ves Second	Sample Temperature:	Pre	Type and # Type 0)901/552	GT-2						Received by: Date Time	(50 to 250)	Received by: Time	intracted to other accredited laboratories. This serves as notice of this
Chain-of-Custody Record	Client: WESTERN - Re FINIUS	Rolling Ro FINGER	15	Gallop NM 87301	Phone #: 505 7272 3833	email or Fax#: 505 727 0210	QA/QC Package:		□ EDD (Type)		Date Time Matrix Sample Request ID	# Slo	API OVETFIOLD							1 120V	Date: Time: Relinquished by:	If necessary, samples submitted to Hall Environmental may be subco

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GALLUP REFINERY

CERTIFIED MAIL: 7008 0000 4726 1055

RECEIVED 2008 JUL 23 PM 1 00

July 23, 2009

New Mexico Environmental Department (NMED)
Hazardous Waste Bureau (HWB)
2905 Rodeo Park Drive East, Building 1
Santa Fe, New Mexico 87505
Attention: Ms Hope Monzeglio

New Mexico Energy Minerals and Natural Resources Department New Mexico Oil Conservation Division (NMOCD) 1220 South Street-Francis Drive Santa Fe, New Mexico 87505 Attn: Mr. Carl J. Chavez

Reference: API OVERFLOW on JUNE 10, 2009

Dear Ms Monzeglio and Mr. Chavez;

Please accept the following letter is in response to an e-mail (June 18, 2009) from Ms Hope Monzeglio of the New Mexico Environmental Department (NMED) - Hazardous Waste Bureau (HWB). This e-mail references two separate events, one on June10, the other on June 16, 2009. Once again it should be clarified that the API overflowed only once, June 10, 2009. A verbal communication was made between Western Refining and NMED (HWB) to correct and clarify this information on June 22, 2009.

The following information shall address by describing the nature of the event leading to and causes of the overflow event, remedial actions that were taken, and corrective action made to the API area in order to prevent future occurrence. Diagrams have been included in order to provide a visual reference of the API area, extent of contamination, and to aid in a better understanding of the event. Also enclosed are e-mails and Release Notification Forms (C-141) (Initial and Final) Reports for your reference.

DESCRIPTION AND CAUSES OF OVERFLOW EVENT: (Refer to API & AERATION LAGOON and API AREA ENLARGED DIAGRAMS)

On Wednesday, June 10, 2009 at approximately 0230 hrs, Western Refining-Southwest (Gallup Refinery) had a moderate rain event due to storms passing through the area. At approximately 0330 hrs, the new API began overflowing from the top onto the ground. At the time, only the West bay of the New API (NAPI) was operational because the east Bay was down for repairs. An above ground Baker Frac Tank located in the vicinity of or near the new API is used for overflow during upset or excessive rain conditions. Oily water from Process Sewers comingles with stormwater from area slabs flow directly to the new APIS. Under normal conditions when both bays are operational, the API can handle such an event. However, during this rain event, the

API began to fill to an overflow condition because of the East Bay was down for repairs. A small portion began to seep out of the top of the API as well, primarily water. A small amount of seepage from the API overflow went across the roadway into Aeration Lagoon #1 due to a depression contour in the roadway (roadway erosion) between the New API (West Bay) and Aeration Lagoon #1. Also, some API overflow went along the backside of the API toward and slightly past the Baker Tank. When the API (West Bay) reached the overflow level, it began to flow into the Baker Frac Tank. The Baker Tank started filling up until it overflowed at the top of the tank. However, the overflow from the Baker Tank was all contained in a berm surrounding the tank. There was not any oil or oily sheen observed to be in the area where the API overflowed from its top or in the Frac Tank containment berm. The API Operator began pumping from the new API to the old API. At or approximately 0430 hrs, the old API reached an overfill level that drains directly into the Aeration Lagoon #1 due to excessive stormwater, thus bypassing the Benzene Strippers. (Refer to API & Aeration Lagoon Area and API Area Enlarged Area Diagrams) It continued raining from about 0430 hrs to 0630 hrs (about 1 ½ to 2 hrs). The total amount of rainfall was about 0.76 inches during this time frame. At approximately 0500 hrs on Wednesday, June 10, 2009, the API (Off-site) Relief Supervisor notified Facility Management personnel. The Environmental Department was notified at approximately 0524 hrs. Environmental personnel arrived at the facility at approximately 0609 hrs, June 10, 2009. A site determination and evaluation was conducted immediately. Assessment and cleanup operations were immediately initiated by Maintenance and Contract personnel.

The road leading to and along side of the API and Lagoon Areas are close to grade. During moderate to heavy rain events, road conditions are nearly prohibitive for equipment and large vacuum truck due to the heavy clay in this area. Therefore, entry for vehicular traffic is extremely dangerous due to possibilities of sliding into the Aeration Lagoons. Due to these conditions, the vacuum truck could not reach the API and Baker Frac Tank Area in order to pump out the Frac Tank.

REMEDIAL ACTIVITIES/ CLEANUP OPERATIONS: (Refer to API & AERATION LAGOON and API AREA ENLARGED DIAGRAMS)

Cleanup operations were initiated. An Outside Contract Vacuum Truck Service (Veolia Environmental Services) was deployed to the facility to begin vacuuming up any liquids from the API overflow areas. After the vacuum operation concluded, Veolia removed approximately 31,700 gallons (754.76 bbls) of oily/water mixture. The amount of oil recovered from this operation was calculated to be 11.79 gallons (0.28 bbls) based on information supplied by Veolia and best engineering methodology. Maintenance and Contract personnel began removing or remediating in and around the API and associated areas by removing approximately 1 to 2 inches contaminated top soils, any contaminated vegetation, and rock with a back-hoe or shovels. Cleanup crews removed soils along the backside of API extending north alongside the Baker Frac Tank as well as removing material where the API flowed over the road depression to Aeration Lagoon #1. Also, a cleanup crew was deployed to remove contaminated soil within the Baker Frac Tank containment dike area. Remedial activities terminated on or about June 24, 2009. After completion of remedial activities, a composite sample of the excavated material was collected by the Environmental Department, and submitted to Hall Environmental Laboratories for analysis. The sample was submitted to Hall Laboratory to be analyzed for the following

parameters: RCI, TCLP Metals/1311, TCLP Voas/1311, Hexavalent Chromium (Cr+6), TCLP Semi-voas/1311, and Total Petroleum Hydrocarbon (TPH). The analysis from Hall Environmental Laboratory (date of collection: 6/25/2009) for these parameters indicated non-hazardous for all parameters. (Refer to API Overflow Sampling Analysis) Under normal conditions the API overflow material normally would be declared as a hazardous waste (F037/F038) and properly disposed accordingly; however, based on the analytical data and the small quantity of material generated, a "Request for Contained-in Determination for Petroleum Contaminated Soils" has recently been submitted to the New Mexico Environmental Department- Hazardous Waste Bureau (Certified Mail: 7008 2810 0000 1048) requesting disposal of this material as a non-hazardous waste stream.(Reference to 20.4.1.800 NMED and 40CFR268.7 (e)) The quantity excavated has been estimated to be approximately 20 to 30 yd^3 (cubic yards) or about 1 to 1 ½ roll-off boxes. (Refer to API & Aeration Lagoon Area and API Area Enlarged Area Diagrams)

CORRECTIVE ACTIONS / IMPROVEMENTS FOR API AREA

After completion of the remedial project, Western began working on improvements in order to prevent a similar occurrence in the future. Several modification or upgrades to the API area have been completed. These modifications include the following items:

- 1. API Repair / Maintenance of East Bay-The East Bay of the API has been repaired and put back in to service. A stainless steel liner extension was added to the existing liner of the East Bay of the API in order to prevent future overflow leakage.
- 2. Road between the API (West Bay) and Aeration Lagoon #1- The road between Aeration Lagoon #1 and the API Separator was raised to approximately 8 to 10 inches by Sky West Construction (formerly Fuhs Trucking). This increase in road height provides a natural berm between the API and the Aeration Lagoon #1. The berm will act as a barrier to prevent any further discharge from any API overflows to reach the Aeration Lagoon #1. Also, the newly constructed road will allow vacuum trucks more accessibility to the API area during excessive rain events. The road way was compacted with a base of course clay-rock mixture in order to allow a firmer surface. The course clay-rock mixture was placed on the road for better traction. Previously, vacuum trucks would not be able to access this area during heavy rain due to the possibility of sliding in Aeration Lagoon #1 or getting stuck in that area.
- 3. Roadway from Flare to API area- The roadway from the flare to the API roadway was also increased 8 to 10 inches, using a course clay-rock mixture in order to allow for better accessibility by vehicular traffic to the API area.
- 4. Inlet Valve (6 inches) change- A 6 inch butterfly valve was changed to a 6 inch gate valve in order to prevent trash buildup within the valve. This modification will allow more volume to flow into the API.
- 5. Weir Box Screen Addition- A weir box screen was added to the weir box in order to prevent trash build-up going into the API, thus by improving operations. Also, by

placement of a screen into the weir box, it will prevent trash build-up into the Benzene Strippers and thereby improve stripping efficiency.

All modification and upgrades to the API and the ancillary equipment have been completed. Both bays to the API have been put back in service and are now fully operational.

If you require additional information concerning this matter, please contact me at (505) 722-0258.

Sincerely,

Beck Larsen-CHMM, REM Environmental Engineer

Western Refining (Southwest)(Gallup Refinery)

Enc: NMED Agency, Letter of Request for "Contained-In Determination for Petroleum Contaminated Soil" from API Separator Overflow on June 10, 2009

API & Aeration Lagoon Area Diagram

API Area Enlarged Diagram

NMED Correspondence (e-mail) of June 22, 2009

OCD (Release Notification and Corrective Action, C-141 (Initial) Report OCD (Release Notification and Corrective Action, C-141 (Final) Report

API Overflow Sampling Analysis (Hall Environmental Laboratories), 6/25/2009

Cc: Mr. Mark Turri, Western Refining (Southwest), Refinery Manager Mr. Ed Riege, Western Refining (Southwest), Environmental Manager)

File

GALLUP REFINERY

CERTIFIED MAIL: 7008 2810 0000 4726 1048

June 22, 2009

New Mexico Environmental Department Hazardous Waste Bureau (HWB) 2905 Rodeo Park Drive East, Building 1 Santa Fe, NM 87505-6303

Attention: Mr. John E. Keiling, Program Manager

Permits Management Program Hazardous Waste Bureau

Reference: REQUEST FOR "CONTAINED-IN" DETERMINATION FOR PETROLEUM

CONTAMINATED SOILS RESULTING FROM API SEPARATOR OVERFLOW ON

JUNE 10, 2009;

WESTERN REFINING-SOUTHWEST (GALLUP REFINERY)(previously known as:

Giant Refining Co.)

EPA ID#: NMD000333211

Dear Mr. Keiling,

In accordance with the regulation established under 20.4.1.800 NMAC and 40CFR268.7 (e) for excavated petroleum contaminated soils, Western Refining-Southwest (Gallup Refinery) is requesting a "Contained-In" Determination for Petroleum Contaminated Soil from an overflow of the New API Separator (NPAIS) that occurred on June 10, 2009 due to an excessive rain event. Western Refining is also graciously asking for the Agency to provide an expeditious ruling on this determination if at all possible based on the supplied information.

On Wednesday, June 10, 2009 at approximately 0230 hrs, Western Refining-Southwest (Gallup Refinery) had a moderate rain event due to storms passing through the area. The new API began overflowing from the top onto the ground. At the time, only the West bay of the New API (NAPI) was operational because the east Bay was down for repairs. An above ground Baker Frac Tank located in the vicinity of or near the new API is used for overflow during upset or excessive rain conditions. Oily water from Process Sewers comingles with stormwater from area slabs flow directly to the new APIS. Under normal conditions when both bays are operational, the API can handle such an event. However, during this rain event, the API began to fill to an overflow condition because the East Bay was down for repairs. A small portion began to seep out of the top of the API as well, primarily water. Most of API overflow went along the backside of the API toward and slightly past the Baker Tank. (Refer to API and Lagoon Diagram and API Area Enlarged Area Diagram) The overflow from the Baker Tank was all contained in a berm surrounding the tank. There was not any oil or oily sheen observed to be in the area where the API overflowed from its top or in the Frac Tank containment berm. It continued raining from about 0430 hrs to 0630 hrs (about 1 ½ to 2 hrs). The

total amount of rainfall was about 0.76 inches during this time frame. At approximately 0500 hrs on Wednesday, June 10, 2009, the API (Off-site) Relief Supervisor notified Facility Management personnel. The Environmental Department was notified at approximately 0524 hrs. Environmental personnel arrived at the facility at approximately 0609 hrs, June 10, 2009. A site determination and evaluation was conducted immediately. Assessment and cleanup operations were immediately initiated by Maintenance and Contract personnel.

Cleanup operations were initiated. An Outside Contract Vacuum Truck Service (Veolia Environmental Services) was deployed to the facility to begin vacuuming up any liquids from the API overflow areas. After the vacuum operation concluded, Veolia removed approximately 31,700 gallons (754.76 bbls) of oily/water mixture. The amount of oil recovered from this operation was calculated to be approximately 11.79 gallons (0.28 bbls) based on information supplied by Veolia and best engineering methodology. Maintenance and Contract personnel began removing or remediating in and around the API and associated areas by removing approximately 1 to 2 inches contaminated top soils, any contaminated vegetation, and rock with a back-hoe or shovels. Cleanup crews removed soils along the backside of API extending north alongside the Baker Frac Tank as well as removing material where the API flowed over the road depression to Aeration Lagoon #1. Also, a cleanup crew was deployed to remove contaminated soil within the Baker Frac Tank containment dike area. Remedial activities terminated on or about June 24, 2009. After completion of remedial activities, a composite sample of the excavated material was collected by the Environmental Department, and submitted to Hall Environmental Laboratories for analysis. The sample was submitted to Hall Laboratory to be analyzed for the following parameters: RCI, TCLP Metals/1311, TCLP Voas/1311, Hexavalent Chromium (Cr+6), TCLP Semi-voas/1311, and Total Petroleum Hydrocarbon (TPH). The analysis from Hall Environmental Laboratory (date of collection: 6/25/2009) for these parameters indicated non-hazardous for all parameters. (Refer to API Overflow Sampling Analysis) Under normal conditions the API overflow material normally would be declared as a hazardous waste (F037/F038) and properly disposed accordingly; however, based on the analytical data and the small quantity of material generated, Western Refining (Southwest) is thereby asking from the New Mexico Environmental Department-Hazardous Waste Bureau for a "Request for Contained-in Determination for Petroleum Contaminated Soils from the API Overflow of June 10, 2009" in order to allow proper off-site disposal of this material as a non-hazardous waste stream. (Reference to 20.4.1.800 NMED and 40CFR268.7 (e)) The quantity excavated has been estimated to be approximately 20 to 30 yd^3 (cubic yards)or (1 to 1 ½ roll-off boxes). (Refer to API & Aeration Lagoon Area and API Area Enlarged Area Diagrams)

All remedial activities and modifications to API and surrounding areas have been completed. A complete description of the overflow will be described in the following inclusions. Please find included a copy of the OCD "Release Notification and Corrective Action Forms (C-141)(Initial and Final) Reports, the API & Aeration Lagoon Area Diagram, the API Area Enlarged Diagram, the NMED Correspondence (e-mail) of June 22, 2009, and API Sample Analysis from Hall Environmental Laboratories, June 25, 2009.

Once again, Western Refining is graciously asking for the Agency to provide an expeditious ruling on this determination if at all possible based on the supplied information. If you require additional information, please contact me at (505) 722-0258.

Sincerely

Beck Larsen, CHMM, REM Environmental Engineer

Western Refining-Southwest (Gallup Refinery)

Enc: API & Aeration Lagoon Area Diagram

API Area Enlarged Diagram

NMED Correspondence (e-mail) of June 22, 2009

OCD (Release Notification and Corrective Action, C-141 (Initial) Report OCD (Release Notification and Corrective Action, C-141 (Final) Report

API Overflow Sampling Analysis (Hall Environmental Laboratories), 6/25/2009

Cc: Ms Hope Monzeglio, New Mexico Environmental Department- Hazardous Waste Bureau

Mr. Carl J. Chavez, New Mexico Oil Conservation Division (NMOCD)

Mr. Mark Turri, Western Refining (Southwest), Refinery Manager

Mr. Ed Riege, Western Refining (Southwest), Environmental Manager)

File

Larsen, Thurman

From: Monzeglio, Hope, NMENV [hope.monzeglio@state.nm.us]

Sent: Monday, June 22, 2009 9:18 AM

To: Larsen, Thurman; Riege, Ed

Cc: Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; Dougherty Joel@epamail.epa.gov

Subject: RE: API separator overflows

I spoke with Beck this morning and there was a miscommunication on my part; there was only one API separator overflow that occurred on June 10th. An overflow did not occur on the 16. Beck with still complete a write up on the event. Let me know if anyone has questions.

Thanks Hope

From: Monzeglio, Hope, NMENV

Sent: Thursday, June 18, 2009 9:53 AM **To:** 'Thurman B. Larsen'; 'Riege, Ed'

Cc: Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; 'Dougherty.Joel@epamail.epa.gov'

Subject: API separator overflows

Beck

For the API separator overflows that occurred on June 10 and June 16, 2009, please send NMED a letter that describes the sources of the overflows, where the discharges went, identify the reasons for the overflows (why are the overflows occurring during rain events) and describe Western's remedial actions to cleanup the overflows (include actions to be taken to prevent this from happening in the future). The letter must have an attached site plan that shows the source of the overflows and where the discharges went. Please have this information to NMED on or before July 27, 2009.

Let me know if you have additional questions.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
Phone: (505) 476-6045; Main No.: (505)-476-6000
Fax: (505)-476-6060

Websites:

New Mexico Environment Department Hazardous Waste Bureau

hope.monzeglio@state.nm.us

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

Name of Company Western Refining-Southwest Contact Beck Larsen	
A 11	
Address I-40/Exit 39, Jamestown, NM 87347 Telephone No.(505) 722-0258	
Facility Name Gallup Refinery Facility Type Refinery	
Surface Owner Mineral Owner Lease No.	·-··
LOCATION OF RELEASE	
Unit Letter Section Township Range Feet from the North/South Line Feet from the East/West Line County McKinley	
Zo 1510 15 W	
Latitude 35° 29′030′′ Longitude 108° 24′040′′	-
NATURE OF RELEASE	
Type of Release Volume of Release Volume Recovered	
API Overflow < 2.0 bbls (oil) 1.3 bbls (oil) (estimated) Source of Release API Date and Hour of Occurrence Date and Hour of Discovery	
6/10/2009; 0500 hrs 6/10/2009; 0500	
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required OCD & NMED	
By Whom? Beck Larsen Date and Hour 6/10/2009; 1045 hrs AM	
Was a Watercourse Reached? If YES, Volume Impacting the Watercourse.	
☐ Yes ⊠ No	
If a Watercourse was Impacted, Describe Fully.*	
Describe Cause of Problem and Remedial Action Taken.*	
At approximately 0230 hrs, Wednesday, June 10, 2009, a heavy rain and thunderstorms passed over the facility. During the	nis storm
event, the API overflowed. A description of the incident was previously provided to the Agency on the initial C-141.	
Describe Area Affected and Cleanup Action Taken.*	
Cleanup efforts began on June 10, 2009. Maintenance and Contract personnel began cleaning up the any aqueous/oily por	
of overflow contamination and any contaminated soil and rock debris surrounding the API area. Personnel conduct cleanu	ıp of
areas such as depressions or other conveyances adjacent to the API area that any contamination may or did spread. After	
immediate cleanup efforts were completed, All contaminated material were put into a roll-off box to be tested (analyzed by	
outside lab), prior to shipment off site for disposal to an approved facility. Contract personnel delivered and spread new grock material around the API area. Final cleanup of this area was completed on or about June 26, 2009.	ravel and
Took material around the Art area. I mai cleanup of this area was completed on of about June 20, 2007.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules	
regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may enda public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of lia	
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human	
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any of	
federal, state, or local laws and/or regulations.	
OIL CONSERVATION DIVISION	
Signature:	•
Approved by District Supervisor:	
Printed Name: Beck Larsen	
Title: Environmental Engineer Approval Date: Expiration Date:	
E-mail Address: Thurman.larsen@wnr.com Conditions of Approval: Attached	
Date: 7/21/2009 Phone: (505) 722-0258	

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

	-			•	(OPERAT	OR		🛚 Initia	al Report		Final Re	eport
Name of Co	mpany W	estern Refini	ng-South	west		Contact Beck Larsen							
		Jamestown,	NM 8734	17			No.(505) 722-02	:58					
Facility Nar	ne Gallup	Refinery	·.		I	Facility Type Refinery							
Surface Ow	ner			Mineral O	wner			Lease N	lo.				
				LOCA	TION	OF REI	LEASE						
Unit Letter	Section 28	Township 15N	Range 15W	Feet from the	North/	South Line	Feet from the	East/V	Vest Line	County McKinley			
			Lat	itude35° 29′(030′′	_ Longitud	l e 108° 24′040)´´_					
				NAT	URE	OF RELI	EASE						
Type of Relea	ase			11		Volume of			Volume F				
Source of Re	I A DI	API Ov	erflow			Data and H	< 2.0 bbls (lour of Occurrence)			oil) (estimate			
Source of Re	iease API					6/10/2009;		.e	6/10/2009	Hour of Disc 9; 0500	overy		
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Require						If YES, To OCD & NI							
By Whom? Beck Larsen							lour 6/10/2009; 1						
Was a Watercourse Reached? ☐ Yes ☒ No						If YES, Volume Impacting the Watercourse.							
Des	scribe Caus		and Reme	dial Action Taken esday, June 10, 2		heavy rain a	and thunderstori	ns pass	sed over th	ne facility.	———	on as it	
sta the Tal beg rep sur sto hrs this app AP abo En day beg <2.	rted raining level in the level	g, the Waste ne new API. filling up un owing from toverflow last the tank. At a chus by-passi oped from the tank, the old AFI by 0500 hrs or flowing. The ident. The El al personnel rs. The actual tenance and Coil discharge ately vacuum	water Op They also til it over he top or ed for ab approxim ng the Bo e old API Y sump v n Wedne en, Mr. S nvironme arrived a l quantity Offsite pe d, a crude ned and b	serators and Suppostanted up a "yoflowed. The AP ato the ground. Cout 30 minutes. ately 0430 hrs, tenzene Strippers in to Lagoon # was being pumposday, June 10, 2 chmitt notified intal Department to 6609 hrs, Wed of oil released estimation. All prought to one of	ervisors ellow" of I Opera Dolly the Howev the old at It continues to the American I. The at was of nesday, is difficately be recove	s started pur trash pump ttors blocked west Bay er, the over API began of tinued raining mount of raining mount of raining mount of raining the Process SI rk Turri, Jos fficially noting June 10, 20 cult to measu egan cleanup	nping water from in front of the not in the Baker To is operational siflow from the Born about 0 the frame of the front of	m new ew AP ank At nee the aker Ta ration I 430 to t 0.76 i order t ent, initiates Georgian (alternation variety). Cation vater mix	API to the I going to approxim East Bay ank was control to control tially notinger, and the I 10/2009 are on and evaluated once dayl was deterranced are on are control tially notinger, and the I 10/2009 are once dayl was deterranced are once dayl was deterranced are on a second are once dayl was deterranced are once dayl was deterranced are once on a second are once dayl was deterranced are once on a second are on a second are	e old API in the old AP ately 0330 of the API ontained in due to exc (about 1 ½ ing this tim the level in fied Richard Environment approximation prolight arrived mined to be and the AP	order I The hrs, th is dow the be essive to 2 h e perio d Schr ental I ately 0 ceede d, asse appro	to reduce Baker ne new A wn for erm area constitution of the A to	630 ng At the ent
Once daylig	ght arrived iixture) ard	ound the API	began. Nand the	en.* Aaintenance and Baker Tank wer liation around A	e imme	diately vacu	numed and brou						

I hereby certify that the information given above is true and complete to regulations all operators are required to report and/or file certain release public health or the environment. The acceptance of a C-141 report by should their operations have failed to adequately investigate and remedi or the environment. In addition, NMOCD acceptance of a C-141 report federal, state, or local laws and/or regulations.	notifications and perform corrective at the NMOCD marked as "Final Report ate contamination that pose a threat to	actions for releases which may endanger "does not relieve the operator of liability ground water, surface water, human health				
130	OIL CONSERVATION DIVISION					
Printed Name: Beck Larsen	Approved by District Supervisor:					
Title: Environmental Engineer	Approval Date:	Expiration Date:				
E-mail Address: Thurman.larsen@wnr.com	Conditions of Approval:	Attached				
Date: 6/22/2009 Phone: (505) 722-0258						
Arrach Addition of the Control of th						

^{*} Attach Additional Sheets If Necessary



COVER LETTER

Friday, July 10, 2009

Thurman B. Larsen Western Refining Southwest, Gallup Rt. 3 Box 7 Gallup, NM 87301

TEL: (505) 722-0258 FAX (505) 722-0210

RE: API Overflow Sampling

Dear Thurman B. Larsen:

Order No.: 0906532

Hall Environmental Analysis Laboratory, Inc. received 1 sample(s) on 6/25/2009 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. Below is a list of our accreditations. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman, Business Manager

Nancy McDuffie, Laboratory Manager

NM Lab # NM9425 AZ license # AZ0682 ORELAP Lab # NM100001 Texas Lab# T104704424-08-TX



Hall Environmental Analysis Laboratory, Inc.

Date: 10-Jul-09

CLIENT:

Western Refining Southwest, Gallup

Lab Order: Project: 0906532

API Overflow Sampling

Lab ID:

0906532-01

Client Sample ID: API Overflow

Collection Date: 6/24/2009 10:30:00 AM

Date Received: 6/25/2009

Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
MERCURY, TCLP	· · · · · · · · · · · · · · · · · · ·					Analyst: MMS
Mercury	ND	0.020		mg/L	1	6/26/2009 5:50:15 PM
						•
EPA METHOD 6010B: TCLP METALS						Analyst: SNV
Arsenic	ND	5.0		mg/L	1	7/10/2009 8:06:43 AM
Barium	ND	100		mg/L	1	7/10/2009 7:09:28 AM
Cadmium	ND	1.0		mg/L	1	7/10/2009 7:09:28 AM
Chromium	ND	5.0		mg/L	1	7/10/2009 7:09:28 AM
Lead	ND	5.0	1	mg/L	1	7/10/2009 7:09:28 AM
Selenium	ND	1.0		mg/L	1	7/10/2009 7:09:28 AM
Silver	ND	5.0		mg/L	1	7/10/2009 7:09:28 AM
EPA METHOD 8270C TCLP						Analyst: JDC
2,4-Dinitrotoluene	ND	0.13	I	mg/L	1	6/29/2009
Hexachlorobenzene	ND	0.13		mg/L	1	6/29/2009
Hexachlorobutadiene	ND	0.50		mg/L	1	6/29/2009
Hexachloroethane	ND	3.0	1	mg/L	1	6/29/2009
Nitrobenzene	ND	2.0		mg/L	1	6/29/2009
Pentachlorophenol	ND	100		mg/L	1	6/29/2009
Pyridine	ND	5.0		mg/L	1	6/29/2009
2,4,5-Trichlorophenol	ND	400		mg/L	1	6/29/2009
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	6/29/2009
Cresols, Total	ND	200		mg/L	1	6/29/2009
Surr: 2,4,6-Tribromophenol	73.8	20.9-128		%REC	1	6/29/2009
Surr: 2-Fluorobiphenyl	60.4	18.3-119		%REC	1	6/29/2009
Surr: 2-Fluorophenol	52.0	16.6-101		%REC	1	6/29/2009
Surr: 4-Terphenyl-d14	65.0	32.3-135		%REC	1	6/29/2009
Surr: Nitrobenzene-d5	65.8	22.6-117		%REC	1	6/29/2009
Surr: Phenol-d5	41.0	8-77.9		%REC	1	6/29/2009
VOLATILES BY 8260B/1311						Analyst: NSB
Benzene	ND	0.50	i	mg/L	· 1	7/4/2009 5:24:59 PM
2-Butanone	ND	. 10		mg/L	1	7/4/2009 5:24:59 PM
Carbon Tetrachloride	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
Chlorobenzene	ND	100	,	mg/L	1	7/4/2009 5:24:59 PM
Chloroform	ND	6.0		mg/L	1	7/4/2009 5:24:59 PM
1,4-Dichlorobenzene	ND	7.5		mg/L	1	7/4/2009 5:24:59 PM
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
1,1-Dichloroethene	ND	0.70		mg/L	1	7/4/2009 5:24:59 PM
Hexachlorobutadiene	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
Tetrachloroethene (PCE)	ND	0.70		mg/L	1	7/4/2009 5:24:59 PM
Trichloroethene (TCE)	ND	0.50		mg/L	1	7/4/2009 5:24:59 PM
Vinyl chloride	ND	0.20		mg/L	1	7/4/2009 5:24:59 PM

Qualifiers:

- Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Page 1 of 2

Hall Environmental Analysis Laboratory, Inc.

Date: 10-Jul-09

CLIENT: Lab Order: Western Refining Southwest, Gallup

0906532

API Overflow Sampling

Project: Lab ID:

0906532-01

Client Sample ID: API Overflow

Collection Date: 6/24/2009 10:30:00 AM

Date Received: 6/25/2009

Matrix: SOIL

Analyses	Result	PQL Q	ual Units	DF	Date Analyzed
VOLATILES BY 8260B/1311	· · · · · · · · · · · · · · · · · · ·	· ·			Analyst: NSB
Surr: 1,2-Dichloroethane-d4	100	69.9-130	%REC	1	7/4/2009 5:24:59 PM
Surr: 4-Bromofluorobenzene	98.2	71.2-123	%REC	1	7/4/2009 5:24:59 PM
Surr: Dibromofluoromethane	102	73.9-134	%REC	1	7/4/2009 5:24:59 PM
Surr: Toluene-d8	98.7	81.9-122	%REC	1	7/4/2009 5:24:59 PM
EPA METHOD 418.1: TPH					Analyst: LRW
Petroleum Hydrocarbons, TR	3900	400	mg/Kg	20	6/26/2009

Ω	lifiers	,
Oua	mers	i

- Value exceeds Maximum Contaminant Level
- Ε Estimated value
- J Analyte detected below quantitation limits
- Not Detected at the Reporting Limit
- Spike recovery outside accepted recovery limits
- Analyte detected in the associated Method Blank
- Н Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- Reporting Limit

Page 2 of 2



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Anne Thorne Hall Environmental Analysis Laborat 4901 Hawkins NE Albuquerque, NM 87109

June 29, 2009

Date Received

June

26, 2009

Description

0906532

Sample ID

API OVERFLOW

Collected By : Collection Date :

06/24/09 10:30

L409538-01 ESC Sample #

Site ID :

Project # :

0906532

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Corrosivity	Non-Corrosive			9040C	06/27/09	1
Chromium, Hexavalent	BDL	2.0	mg/kg	3060A/7196A	06/27/09	1
Ignitability	See Footnote		Deg. F	D93/1010A	06/29/09	1
Reactive CN (SW846 7.3.3.2)	BDL	0.125	mg/kg	9012B	06/29/09	1
Reactive Sulf.(SW846 7.3.4.1)	BDL	25.	mg/kg	9034/9030B	06/28/09	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

The reported analytical results relate only to the sample submitted. This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 06/29/09 16:27 Printed: 06/29/09 16:27 L409538-01 (IGNITABILITY) - Did Not Ignite @ 170F

Attachment A List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L409538-01	WG428532	SAMP	Chromium, Hexavalent	R795546	J6



12065 Lebanon Rd. Mt. Júliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

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Hall Environmental Analysis Laboratory Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report Level II

L409538

June 29, 2009

Analyte	Result	Labora Units	tory Blank Re	с	Limit	Batch Da	nte Analyzed
Chromium/Hexavalent	%<2	mg/kc					5/27/09 13:26
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	2.80 < 25	mg/kg					5/27/09 11:10 5/28/09 17:00
Analyte	Units	Result	plicate Duplicate	RPD	Limit	Ref Samp	Batch
Chromium, Hexavalent	y₁mg/kg	0.00	0.00	0.00	20 👫 🧦	% L409428-01	WG428532
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	mg/kg	0.00	0.00	0.00	10 20	L409010-01 L409538-01	
Reactive CN (SW846,7/3,3.2)	mg/kg	0,00	0.00	0.00	5.0% 20	£409538=01	WG428683
Ignitability	Deg. F	0.00	0.00	0.00	10	L409538-01	WG428687
Analyte	Units	Laboratory Known Val	Control Sam Re	ple sult	% Rec	Limit	Batch
Chromium, Hexavalent	mg7kg	102	82.	5)	*D80.9*	50-143	WG428532
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	mg/kg	9.04	8. 82.	an aleman.	98.5 82.0	97.4-102.6 70-130	WG428517 WG428681
Ignitability :	Deg. F	82 %	82.	0,432,53	*100.	96-104	₩Ğ4 28687
Analyte		aboratory Cont Result Ref			Limit	RPD Limit	Batch
Chromium, Hexavalent	mg/kg i	81.9 4 44 82	5.4		50-143	, 0.730 . 20	₩G428532
Corrosivity Reactive Sulf.(SW846 7.3.4.1)	mg/kg		.90 98.0 .0 82.0		97.4-102.6 70-130	0.00 10	WG428517 WG428681
Ignitability ##	"Deg. F.	82.0 82	.0 > 100.	1986 BR 18	96-104%	0:00 2 20	<u></u>
Analyte	Units		ix Spike : f Res TV	% Rec	Limit	Ref Samp	Batch
Chromium, Hexavalent	mg/kg	1377.	0.00 + 20.	\$\&68°.5 *	80-120	L409538-01	WG428532

^{*} Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'



12065 Lebanon Rd. Mt. Juliet, TN 37122 (615) 758-5858 1-800-767-5859 Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Hall Environmental Analysis Laboratory Anne Thorne 4901 Hawkins NE

Albuquerque, NM 87109

Quality Assurance Report Level II

L409538

June 29, 2009

Analyte Units MSD Ref %Rec Limit RPD Limit Ref Samp Batch
Chromium; Hexavalent mg/kg 14.22 13.77 71 80-120 3.58 20 1409598-01 W MG428532

Batch number /Run number / Sample number cross reference

WG428532: R795546: L409538-01 WG428517: R796588: L409538-01 WG428681: R796589: L409538-01 WG428683: R796746: L409538-01 WG428687: R797027: L409538-01

^{* *} Calculations are performed prior to rounding of reported values .

* Performance of this Analyte is outside of established criteria.

For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

Date: 10-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sampling

Work Order:

0906532

Analyte	Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RP	DLimit Qual
Method: EPA Method 418.1: T	РН				· · · · · · · · · · · · · · · · · · ·			
Sample ID: MB-19472		MBLK			Batch	ID: 19472	Analysis Date:	6/26/2009
Petroleum Hydrocarbons, TR	ND	mg/Kg	20					
Sample ID: LCS-19472		LCS			Batch	ID: 19472	Analysis Date:	6/26/2009
Petroleum Hydrocarbons, TR	85.50	mg/Kg	20	85.5	82	114		
Sample ID: LCSD-19472		LCSD			Batch	ID: 19472	Analysis Date:	6/26/2009
Petroleum Hydrocarbons, TR	95.42	mg/Kg	20	95.4	82	114	11.0 2	0 .
Method: Volatiles by 8260B/13	311							
Sample ID: mb-19468		MBLK			Batch	ID: 19468	Analysis Date:	7/4/2009 4:00:13 PM
Benzene	ND	mg/L	0.50					
2-Butanone	ND	mg/L	10					
Carbon Tetrachloride	ND	mg/L	0.50					
Chlorobenzene	ND	mg/L	100					
Chloroform	ND	mg/L	6.0					
1,4-Dichlorobenzene	ND	mg/L	7.5					
1,2-Dichloroethane (EDC)	ND	mg/L	0.50					
1,1-Dichloroethene	ND	mg/L	0.70					:
Hexachlorobutadiene	ND	mg/L	0.50					•
Tetrachloroethene (PCE)	ND	mg/L	0.70					
Trichloroethene (TCE)	ND	mg/L	0.50					
Vinyl chloride	ND	mg/L	0.20					
Sample ID: lcs-19468		LCS			Batch	ID: 19468	Analysis Date:	7/4/2009 3:31:53 PM
Benzene	0.1367	mg/L	0.010	34.2	51.1	171		S
Chlorobenzene	0.06556	mg/L	0.010	16.4	36.1	191		S
1,1-Dichloroethene	0.09015	mg/L	0.010	22.5	49.1	162		S
Trichloroethene (TCE)	0.05354	mg/L	0.010	13.4	41.2	166		S

Qua	lifie	rs:
-----	-------	-----

E Estimated value

RPD outside accepted recovery limits

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
 - S Spike recovery outside accepted recovery limits

Page 1

Analyte detected below quantitation limits

Date: 10-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sampling

Work Order:

0906532

Analyte	Result	Units	PQL	%Rec	LowLimit	High	Limit	%RPD	RPDL	imit Qual	
Method: EPA Method 8270C TO	CLP		<u></u>								
Sample ID: mb-19499		MBLK			Batch I	D:	19499	Analysis D	ate:	1	6/29/2009
2,4-Dinitrotoluene	ND	mg/L	0.13							,	
Hexachlorobenzene	ND	mg/L	0.13						,	``	
Hexachlorobutadiene	ND	mg/L	0.50								
Hexachloroethane	ND	mg/L	3.0					•		٠.	-
Nitrobenzene	ND	mg/L	2.0					•			
Pentachlorophenol	ND ·	mg/L	100								
Pyridine	ND	mg/L	5.0	•							
2,4,5-Trichlorophenol	ND	mg/L	400								
2,4,6-Trichlorophenol	ND	mg/L	2.0								
Cresols, Total	ND	mg/L	200								
Sample ID: Ics-19499		LCS	,		Batch I	D:	19499	Analysis D	ate:	4	6/29/2009
2,4-Dinitrotoluene	0.07790	mg/L	0.010	77.9	24.8	10	2				
Hexachlorobenzene	0.05940	mg/L	0.010	59.4	20.2	72.	.5				
Hexachlorobutadiene	0.06098	mg/L	0.010	61.0	20.1	10	0				
Hexachloroethane	0.06236	mg/L	0.010	62.4	29.2	95	5				
Nitrobenzene	0.07112	mg/L	0.010	71.1	34.4	94.	.7				
Pentachlorophenol	0.05852	mg/L	0.010	58.5	8.63	96	2				•
Pyridine	0.04090	mg/L	0.010	40.9	12.5	64.	.7				
2,4,5-Trichlorophenol	0.06626	mg/L	0.010	66.3	16.7	98	3				
2,4,6-Trichlorophenol	0.05820	mg/L	0.010	58.2	20.9	93.	.5				
Cresols, Total	0.1652	mg/L	0.010	55.1	12.6	88	.1				
Sample ID: lcsd-19499		LCSD			Batch I	D:	19499	Analysis D	ate:		6/29/2009
2,4-Dinitrotoluene	0.07390	mg/L	0.010	73.9	24.8	10	2	5.27	27.8	•	
Hexachlorobenzene	0.05446	mg/L	0.010	54.5	20.2	72	.5	8.68	36.1	•	
Hexachlorobutadiene	0.05928	mg/L	0.010	59.3	20.1	10	0	2.83	39.1		
Hexachloroethane	0.05714	mg/L	0.010	57.1	29.2	95		8.74	57.2		
Nitrobenzene	0.06044	mg/L	0.010	60.4	34.4	94.	.7	16.2	44.7		
Pentachlorophenol	0.05836	mg/L	0.010	58.4	8.63	96.	.2	0.274	24.7	٠	
Pyridine	0.03872	mg/L	0.010	38.7	12.5	64.	.7	5.48	77.5		
2,4,5-Trichlorophenol	0.06422	mg/L	0.010	64.2	16.7	98		3.13	34.6		
2,4,6-Trichlorophenol	0.05684	mg/L	0.010	56.8	20.9	93.		2.36	32.8	•	•
Cresols, Total	0.1444	mg/L	0.010	48.1	12.6	88.	.1	13.4	46.3		
Method: MERCURY, TCLP					,					,	
Sample ID: MB-19479		MBLK			Batch I	D.	19479	Analysis D	ate:	6/26/2009 5:	36:11 DM
•	ND				חשומיו	J.	13413	. Allaiysis U	alG.	U12U12UU9 3.	JU. I I FIVI
Mercury	ND	mg/L	0.020		.	_		=		0/00/0000	
Sample ID: LCS-19479		LCS			Batch I	U:	19479	Analysis D	ate:	6/26/2009 5:	37:54 PM
Mercury	ND	mg/L	0.020	97.0	80	. 12	0				
					•						

E Estimated value

Page 2

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

S Spike recovery outside accepted recovery limits

Date: 10-Jul-09

QA/QC SUMMARY REPORT

Client:

Western Refining Southwest, Gallup

Project:

API Overflow Sampling

Work Order:

0906532

Analyte		Result	Units	PQL	%Rec	LowLimit	HighLimit	%RPD RP	DLimit Qual
Method: i	EPA Method 6010B:	TCLP Metals							
Sample ID:	0906532-01AMSD		MSD			Batch	D: 1952 3	Analysis Date:	7/10/2009 7:14:37 AM
Cadmium		ND	mg/L	1.0	101	75	125	0 2	20 °
Chromium		ND	mg/L	5.0	92.6	75	125	0 2	20
Lead		ND	mg/L	5.0	89.9	75	125	0 2	20
Selenium		ND	mg/L.	1.0	111	75	125	0 2	20
Silver		ND	mg/L	5.0	104	75	125	0 2	.0
Sample ID:	0906532-01AMSD		MSD			Batch	D: 1952 3	Analysis Date:	7/10/2009 7:22:20 AM
Barium		ND	mg/L	100	97.5	75	125	0 2	20
Sample ID:	0906532-01AMSD		MSD			Batch	D: 1952 3	Analysis Date:	7/10/2009 8:13:31 AM
Arsenic		ND	mg/L	5.0	99.7	75	125	0 2	20.
Sample ID:	MB-19523		MBLK			Batch	D: 1952 3	Analysis Date:	7/10/2009 7:02:39 AM
Arsenic		ND	mg/L	5.0				·	
Barium		ND	mg/L	100					
Cadmium		ND	mg/L	1.0					
Chromium		ND	mg/L	5.0					
Lead		ND	mg/L	5.0					
Selenium		ND	mg/L	1.0					•
Silver		ND	mg/L	5.0					
Sample ID:	MB-19523		MBLK	3.2		Batch I	D: 19523	Analysis Date:	7/10/2009 8:01:39 AM
Arsenic		ND	mg/L	5.0					
	LCS-19523	140	LCS	5.0		Batch	D: 19523	Analysis Date:	7/10/2009 7:06:54 AM
Arsenic	. 200 10020;	ND		5.0	110	80	120	, maryono batto.	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Barium		ND	mg/L	100	99.1	80	120		
Cadmium		ND	mg/L	1.0	106	80	120		
Chromium		ND ND	mg/L	5.0	99.8	80	120		
Lead		ND ND	mg/L mg/L	5.0 5.0	99.6 97.0	80	120		
Selenium		ND	mg/L	1.0	107	80	120		•
Silver		ND	_	5.0	107	80	120		
Sample ID:	I CS-19523	ND	mg/L LCS	5.0	104	Batch I		Analysis Date:	7/10/2009 8:04:10 AM
•	LOG-19025	NID		. 0	444			ritalysis Date.	1710/2009 0:04:10 AW
Arsenic	0006522 04 6 M S	ND	mg/L. <i>M</i> S	5.0	114	80 Batch I	120 D: 10522	Analysis Data:	7/10/2009 7:12:04 AM
	0906532-01AMS							Analysis Date:	771072009 7.12.04 AM
Cadmium		ND	mg/L	1.0	105	75	125		
Chromium		ND	mg/L	5.0	95.9	.75	125		
Lead		ND	mg/L	5.0	93.6	75	125		
Selenium		. ND	mg/L	1.0	113	75 75	125		
Silver	000000000000	ND	mg/L	5.0	105	75 Detab 1	125	Amelian's Det	7/40/0000 7 40 45 ***
· •	0906532-01AMS		MS			Batch I		Analysis Date:	7/10/2009 7:19:45 AM
Barium		ND	mg/L	100	103	75	125		
Sample ID:	0906532-01AMS	.*	MS			Batch I	D: 19523	Analysis Date:	-7/10/2009 8:09:15 AM
Arsenic		ND	mg/L	5.0	98.6	.75	125	•	

Qua		

E Estimated value

Page 3

J Analyte detected below quantitation limits

R RPD outside accepted recovery limits

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

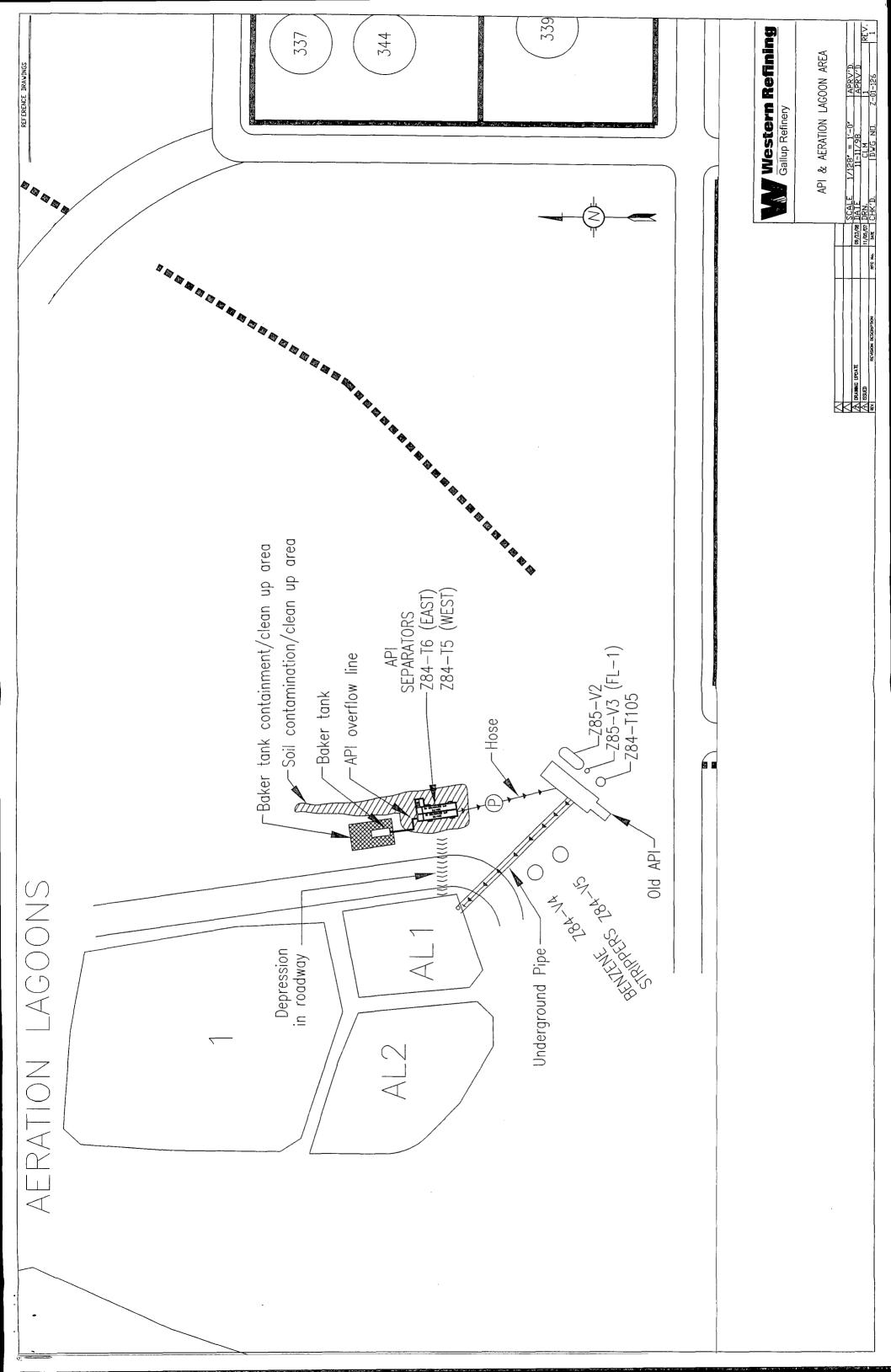
S Spike recovery outside accepted recovery limits

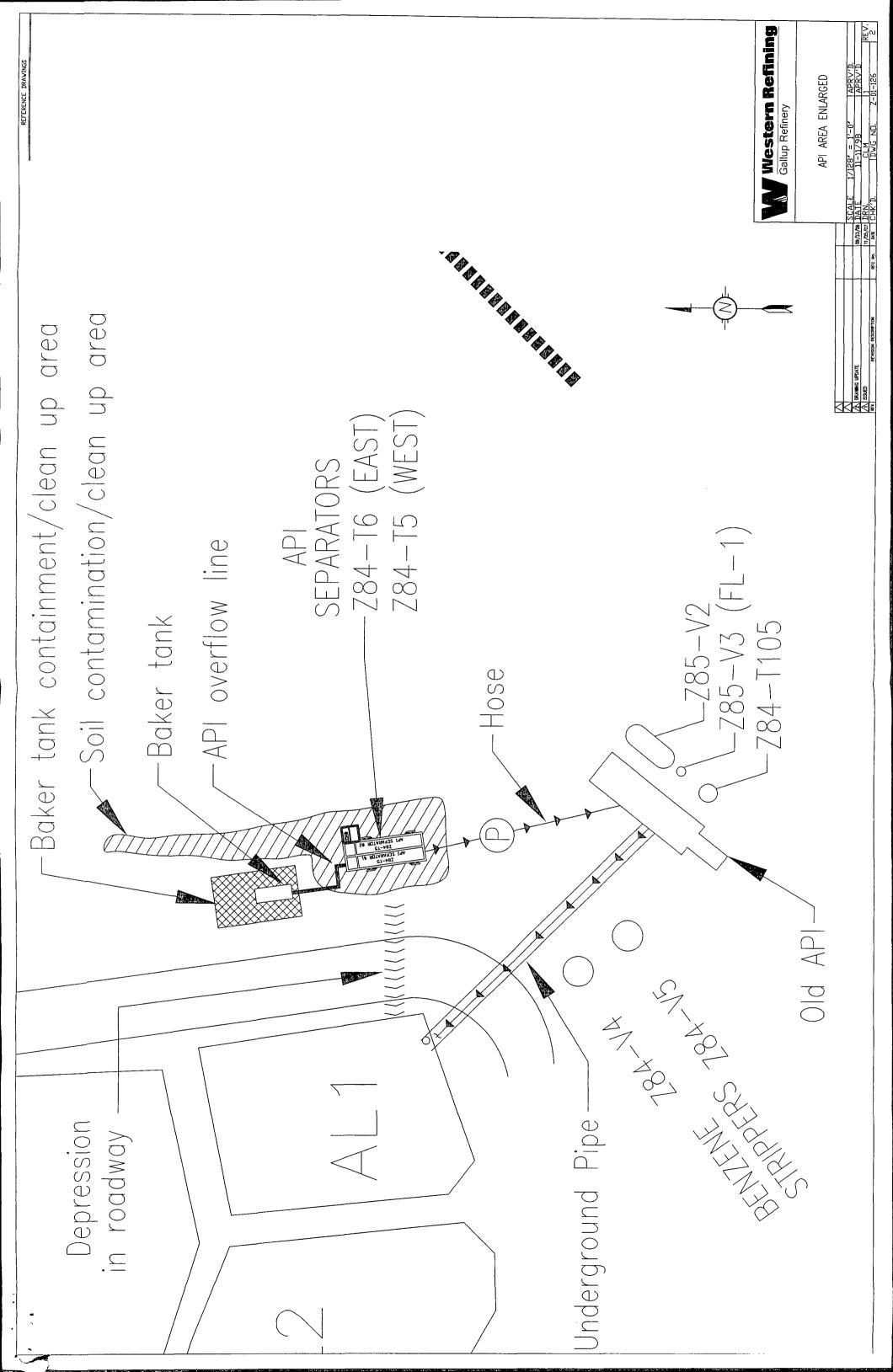
Hall Environmental Analysis Laboratory, Inc.

Sample Receipt Checklist

Client Name WESTERN REFINING GALLU			Date Received	i :	6/25/2009
Work Order Number 0906532	$\mathcal{L}_{\mathcal{L}}$	•	Received by:	TLS	
Checklist completed by:	i K	Dat	6/25/19	bels checked by:	Initials
Matrix:	Carrier name	<u>UPS</u>		•	
Shipping container/cooler in good condition?		Yes 🗹	No 🗌	Not Present	
Custody seals intact on shipping container/cod	oler?	Yes 🗸	No 🗌	Not Present	Not Shipped
Custody seals intact on sample bottles?		Yes 🗌	No 🗌	N/A ✓	
Chain of custody present?		Yes 🗹	No 🗌		
Chain of custody signed when relinquished an	d received?	Yes 🗹	No 🗌		
Chain of custody agrees with sample labels?		Yes 🗹	No 🗌		
Samples in proper container/bottle?		Yes 🗹	No 🗌		
Sample containers intact?		Yes 🗸	No 🗌		•
Sufficient sample volume for indicated test?		Yes 🗹	No 🗌	,	
All samples received within holding time?		Yes 🗹	No 🗌	,	Number of preserved
Water - VOA vials have zero headspace?	No VOA vials subi	mitted 🗹	Yes 🗌	No 🗆	bottles checked for pH:
Water - Preservation labels on bottle and cap	match?	Yes 🗌	No 🗌	N/A 🔽	
Water - pH acceptable upon receipt?		Yes 🗌	No 🗌	N/A 🗹	<2 >12 unless noted below.
Container/Temp Blank temperature?		3.1°	<6° C Acceptable		below.
COMMENTS:			If given sufficient	time to cool.	,
Client contacted	Date contacted:		Pers	on contacted	
Contacted by:	Regarding:			,	
Comments:					
· · · · · · · · · · · · · · · · · · ·					
					
Corrective Action					

Chain-of-Custody Record	Turn-Around Time:		hall environmental
WESTERN-REFINING	☐ Standard XRush	ANALYSIS	SIS LABORATORY
SAIN O REFINERY	Project Name:	www.hallenv	www.hallenvironmental.com
[F	API OVERFIOW SAMPLING	4901 Hawkins NE - Alt	Albuquerque, NM 87109
Gallup NM 87301	Project #:	Tel. 505-345-3975	Fax 505-345-4107
Phone #: 505 707 3833		Anal	/sis Request
email or Fax#: 505 702 02(0	Project Manager:	(ʎju	-t (word
QÁ∕QC Package: □ Standard □ Level 4 (Full Validation)	Thurman Larsen	o seð)	1311 1311
□ Other		H9T (5.8) (1.8)	(808) (1310) (1181) (1181)
L EUD (19pe)	Sample Temperature: $\mathcal{Z}_{()}$	9801 99 418 99 401 90 504	(/ səbi AOV- 1
Date Time Matrix Sample Request ID	Container Preservative HEAL No. 32.	BTEX + MT TPH (Method TPH (Method B310 (PNA) RCRA 8 Me	Anions (F,C 8081 Pestio 8250B (VOA 8270 (Semi RC1,TC1P 7C1P SCM TC1P SCM TC1P SCM
24-09 1030 501 API OVETRION	QT-7	X	XXX
Date: Time: Relinquished by: 1200 COL	Received by: Date Time	Nehe	
Date: Time: Relinquished by:	Received by: Date Time) XOA	04050
If necessary, samples submitted to Hall Environmental may be sut	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report	oossibility. Any sub-contracted data will be	clearly notated on the analytical report.





Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Monday, June 22, 2009 10:28 AM

To:

Monzeglio, Hope, NMENV Chavez, Carl J, EMNRD

Cc: Subject:

Initial C-141 Form- API Overflow on June 10, 2009

Attachments:

API- C141 RPT FORM061009.pdf

Hope and Carl,

The attached is a copy of the Initial (C-141 Form) for your records. I will be following up the initial with a Final (C-141 Report) and a summary letter that will be due on July 27, 2009 as previously discussed. Hope, I also will be faxing you a copy as a backup for your records as well.

Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company- Gallup Refinery Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210

Office Cell: (505) 862-1749 thurman.larsen@wnr.com

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

State of New Mexico Energy Minerals and Natural Resources

Revised October 10, 2003

Form C-141

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

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

			Rele	ease Notific	eation	i and Co	orrective A	ction				
						OPERAT	OR		N Initia	al Report	☐ F	inal Report
Name of Co	mpany W	estern Refin	ing-South	ıwest		Contact Beck Larsen						
		Jamestown,	NM 873	17		Telephone No.(505) 722-0258						
Facility Na	ne Gallup	Refinery				Facility Typ	e Refinery					
Surface Ow	ner			Mineral C)wner				Lease N	No.		
				LOCA	ATION	N OF RE	LEASE					
Unit Letter	Section 28	Township 15N	Range 15W	Feet from the	North/	South Line	Feet from the	East/V	Vest Line	County McKinley		
			Lat	itude35° 29′				0′′				
Type of Rele	0.00			NAI	UKE	OF REL			Valuma I	Recovered		
Type of Kele	ase	API Ov	erflow			volume of	< 2.0 bbls	(oil)		cecoverea oil) (estimated	D	i
Source of Re	lease API		<u> </u>			Date and F 6/10/2009;	lour of Occurrence			Hour of Disco		
Was Immedi	ate Notice (Yes [No Not Re	equired	If YES, To OCD & N						
By Whom? I	Beck Larsen						lour 6/10/2009; 1					
Was a Watercourse Reached? ☐ Yes ☑ No					If YES, Volume Impacting the Watercourse.							
At sta sta the Ta beg rep sur sto hrs thi app AF aborder day beg <2	approximated raining level in the started agan overflow rounding to the started agan overflow rounding to the started agan water, to a flow stops rain even or oximately a was over out the incivironmental rounding the started agan. Mainto 0 bbls of control of the started agan.	ately 0230 high, the Waste the new API. filling up un owing from the toverflow last the tank. At a thus by-passi oped from the theold AF of the old AF old AF of the old AF old A	rs, Wedne water Op They also til it over the top on the top on the top on the top on the Be old API sump von Wedne en, Mr. Sonvironme arrived a l quantity Offsite ped, a crude	dial Action Taken esday, June 10, 2 erators and Sup o started up a "y flowed. The AP to the ground. Cout 30 minutes. ately 0430 hrs, renzene Strippers in to Lagoon # was being pumpersday, June 10, 2 chmitt notified ntal Department 0609 hrs, Wed of oil released ersonnel immedia estimation. All prought to one o	2009, a ervisors ellow" ellow" ellow" ellow ello	s started pur trash pump trors blocked e West Bay er, the over API began of tinued raining amount of raining mount of raining transport of e Process Shrk Turri, Jou fficially noting, June 10, 20 tult to measure egan cleanup	nping water from in front of the notate that in the Baker This operational signature of the Baker This operational signature of the Baker This operational into Aeroga from about 0 winfall was about Tank (T-107) in the Superintendel Quinones, Janfied on Wednes 1009. A site determine with any according to the signature of the sig	m new and mee APJ ank At nee the taker Taration I 430 to to to 100 and to 100	API to the going to approxim East Bay approxim 2630 hrs. nches dur o control tially notinger, and the 10/2009 approximate appr	e old API in a the old API. In a tely 0330 h of the API is ontained in the due to exce. (about 1 ½ to ing this time the level in the distribution process adjustion process and the API in the API in the a telephone to be a found the API.	order to. The Ers, the s down ne bern ssive to 2 hrs, period he old. Schmittal Detely 052 peeded assess approxi	o reduce Baker new API for n area O At 0630 I During API At tt that the epartment 24 hrs. during ment imately
Once dayli	ght arrived		began. N	en.* Maintenance and Baker Tank wer								
				iation around A						•		,

public health or the environment. The a should their operations have failed to ad or the environment. In addition, NMOC federal, state, or local laws and/or regular	cceptance of a C-141 report by equately investigate and remed D acceptance of a C-141 report	the NMOCD marked as "Final Rediate contamination that pose a three	eport" does not relie eat to ground water	eve the operator of liability , surface water, human health
Signature: Printed Name: Beck Larsen		OIL CONS Approved by District Supervisor	SERVATION or:	<u>DIVISION</u>
Title: Environmental Engineer		Approval Date:	Expiration I	Date:
E-mail Address: Thurman.larsen@wnr.c	om	Conditions of Approval:		Attached
Date: 6/22/2009	Phone: (505) 722-0258			
Attach Additional Sheets If Necessar	3/			

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and

* Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

Raj

From: Sent: To: Subject:	Jones, Brad A., EMNRD Thursday, May 21, 2009 12:54 PM Chavez, Carl J, EMNRD FW: Pilot Trave Center Sanitary Plugged Line NOTIFICATION (Follow-up)- FINAL REPORT
Sent: Thursday, May 21, 2 To: Jones, Brad A., EMNRD Cc: Riege, Ed Subject: FW: Pilot Trave C Dear Mr. Jones, The following is Report is fi	
and all repairs were comple	eted as required. All flows are draining as normal. Please contact me if you have any additional matter at the number listed below.
Beck Larsen; CHMM, REN Environmental Engineer	I, RPG
Western Refining Company Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210 Office Cell: (505) 862-1749 thurman.larsen@wnr.com	
From: Rajen, Gaurav Sent: Tuesday, May 19, 20 To: Larsen, Thurman Cc: Riege, Ed Subject: FW: Pilot Trave 0	O09 6:19 AM Center Sanitary Plugged Line NOTIFICATION (Follow-up)
Dear Beck:	
I didn't have a chance to fo	llow up on this – I was busy working on our NPDES permit.
	and he said his understanding was that there could be back-up on Pilot land; and that our be brought in so we can repair the plugged line.
Best,	

From: Riege, Ed

Sent: Monday, May 18, 2009 8:48 AM

To: Rajen, Gaurav

Subject: FW: Pilot Trave Center Sanitary Plugged Line NOTIFICATION (Follow-up)

You may need to update this with OCD re weekend activities, since Beck is off today.

Ed Riege

Environmental Manager

Western Refining Gallup Refinery Route 3 Box 7 Gallup, NM 87301 (505) 722-0217 ed.riege@wnr.com

From: Larsen, Thurman

Sent: Friday, May 15, 2009 2:41 PM

To: brad.a.jones@state.nm.us

Cc: Riege, Ed

Subject: Pilot Trave Center Sanitary Plugged Line NOTIFICATION (Follow-up)

Reference: OCD Permit GW-032; Pilot Travel Center Plugged Line

Dear Mr. Jones:

A verbal attempt was made about 1:30 PM (1330 hrs) today, May 15, 2009, to contact you in regards to the Pilot Travel Center Sanitary release due to a plugged line; however, you were not available. This letter is to provide a confirmation follow-up in regards to the Pilot Travel Center Sanitary release due to a plugged line.

Pilot Sanitary liquids drain through a main four (4) inch line from the Pilot Travel Center to Western Refining facility. After reaching the Western Refining facility, the line splits into two (2) directions via two (2) four (4") valves. One valve allows liquids to go to the API Pit, the other allows liquids to go to Pond #9. A third valve in on the main line that regulates the main flow.

Pilot Contractors were attempting to trouble shoot a potential plugged sewer line. At about 1145, contractors intentionally opened a valve going to Pond #9 in order to determine to approximate location of the plugged line. Liquid flowed from this line indicating that the line from Pond #9 to the Pilot Travel Center was not plugged. This indicated that the plugged line was from the main valve to the API Pit. The Contractors contacted Western Refining personnel who told them to close this valve immediately. The time of discharge was estimated to be about 5 minutes or less. It was estimate that less than 30 gallons of water was discharged to Pond #9 during this time frame. Building and Grounds personnel added chlorination at the discharge end of the pipe going into Pond #9 in order to provide proper chlorination and to minimize any environmental effects of this release.

If you should have any questions regarding this release, please contact me at the information provided below or Mr. Ed Riege (Environmental Manager) at (505) 722-0217.

Sincerely.

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210 Office Cell: (505) 862-1749

thurman.larsen@wnr.com

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<u>District III</u>
1000 Rio Brazos Road, Aztec, NM 87410
<u>District IV</u>
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action

						OPERA	ГOR		☐ Initi	al Report		Final Repor
Name of Co		Navajo Refi			Contact Darrell Moore							
Address		ain Artesia	NM 882	11		Telephone No. 575-746-5281						
Facility Nar	ne Arte	sia Plant				Facility Type Petroleum Refinery						
Surface Ow	ner			Mineral C)wner	Lease No.						
				LOCA	ATIO	N OF REI	LEASE					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/V	Vest Line	County		
			La	titude		Longitud	e			h		
NATURE OF RELEASE												
Type of Rele							Release NA			Recovered	NA	
Source of Re	lease AC	GO Pump				Date and H 5/21/09 5:3	Hour of Dis	covery				
Was Immedi	ate Notice (Yes [No Not Re	equired	If YES, To						
By Whom?				 	- 	Date and H	our					
Was a Water	course Read						lume Impacting t	the Wate	ercourse.			
			Yes 🗌] No								
AGO Pump i	Describe Cause of Problem and Remedial Action Taken.* AGO Pump in the South Crude Unit had a seal failure and the resulting loss of product ignited. There was a flash and then some scaffolding above the pump caught fire. It was immediately extinguished. The only damage was some minor charring of the scaffolding boards. Describe Area Affected and Cleanup Action Taken.*											
regulations a public health should their or or the environ	I operators or the envi operations had need a	are required to ronment. The nave failed to a	o report ar acceptane adequately OCD accep	e is true and comp nd/or file certain r ce of a C-141 report investigate and r otance of a C-141	release nort by the concediate	otifications a e NMOCD m e contaminati	nd perform correct arked as "Final R on that pose a thr	ctive act Report" d reat to gi	ions for rel loes not rel round wate	eases which ieve the oper r, surface wa	may er rator of ater, hu	ndanger f liability man health
Signature: Paul Mary						OIL CONSERVATION DIVISION						
Printed Nam	: Darrell	Moore				Approved by	District Supervis	sor:				
Title: Env M	gr for Wate	er and Waste				Approval Dat	e:		Expiration	Date:		
E-mail Addre	ess: Darrell	l.moore@holl	corp.com	1		Conditions of Approval:			Augustic 3	_		
Date: 5/21/	09			Phone: 575-746-	-					Attached	Ш	
Attach Addi	tional She	ets If Necess	21°V									

Chavez, Carl J, EMNRD

From:

Larsen, Thurman [Thurman.Larsen@wnr.com]

Sent:

Wednesday, May 27, 2009 9:43 AM

To:

Jones, Brad A., EMNRD

Cc:

Cobrain, Dave, NMENV; Connolly, Stephen, NMENV; Chavez, Carl J, EMNRD; Riege, Ed;

Monzeglio, Hope, NMENV

Subject:

T-108 SPILL FINAL NOTIFICATION

Attachments:

T-108 Final Notification.pdf

Dear Mr. Jones,

The following is the Final Notification to OCD and NMED for the Tank 108 Spill that occurred on May 23, 2009. If you should require additional information on this matter, please feel free to contact me at the number listed below. Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210

Office Cell: (505) 862-1749 thurman.larsen@wnr.com

From: Monzeglio, Hope, NMENV [mailto:hope.monzeglio@state.nm.us]

Sent: Tuesday, May 26, 2009 4:15 PM

To: Larsen, Thurman

Cc: Cobrain, Dave, NMENV; Connolly, Stephen, NMENV; Chavez, Carl J, EMNRD; Jones, Brad A., EMNRD; Riege, Ed

Subject: May 23 spill

Beck

Steve Connolly informed me about the spill at Gallup on May 23 from Tank 108. Make sure all contaminated soil is cleaned up from within the berm. I assume you have contacted OCD and will be filling out a C-141 form. Please make sure I am cc on the C-141 form. Feel free to contact me with any questions.

Thanks

Hope

Hope Monzeglio Environmental Specialist New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, BLDG 1

Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

lew <u>Mexico Environment Department</u> lazardous Waste Bureau
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State of New Mexico Energy Minerals and Natural Resources

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

Revised October 10, 2003 Submit 2 Copies to appropriate District Office in accordance

with Rule 116 on back side of form

Form C-141

Release Notification and Corrective Action **OPERATOR** Final Report Initial Report Name of Company Western Refining-Southwest Contact Beck Larsen Address I-40/Exit 39, Jamestown, NM 87347 Telephone No.(505) 722-0258 Facility Name Gallup Refinery Facility Type Refinery Mineral Owner Surface Owner Lease No. LOCATION OF RELEASE Feet from the North/South Line Feet from the East/West Line Unit Letter Section Township Range County 15N McKinley 28 **Latitude** 35° 29′030′′ **Longitude** 108° 24′040′′ NATURE OF RELEASE

Type of Release Spill (T-108 Overfill) Volume of Release 10 bbls Volume Recovered 6-8 bbls Source of Release T-108 Date and Hour of Occurrence Date and Hour of Discovery Was Immediate Notice Given? If YES, To Whom? OCD, NMED By Whom? Beck Larsen Date and Hour 5/23/2009; 1500 hrs Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. ☐ Yes ☒ No If a Watercourse was Impacted, Describe Fully.* No Describe Cause of Problem and Remedial Action Taken.* At approximately 1500 hrs (5/23/2009), a Maintenance employee was making rounds and saw T-108 (Alkylation Tank) running over. The on-site Fire Department was immediately notified. The rundown was immediately switched out of the tank. Safety and the Off-Site Manager was notified of the incident. The Alkylation Tank (T-108) is located within a Tank Farm Berm. The on-site Fire Department personnel put foam over the affected area as a precaution. Vcolia Environmental Vacuum Services was called out to cleanup the material. The estimated recovery was approximately 6 to 8 bbls. Describe Area Affected and Cleanup Action Taken.* The Alkylation Tank (T-108) is located within a Tank Farm Berm area. The affected area was approximately 225 sq ft. Cleanup operations of the soil are underway for analytical testing and shipment off-site for disposal. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: Beck Larsen Title: Environmental Engineer Approval Date: Expiration Date: E-mail Address: Thurman.larsen@wnr.com Conditions of Approval: Attached [Phone: (505) 722-0258 Date: 5/28/2009

^{*} Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From:

VonGonten, Glenn, EMNRD

Sent:

Tuesday, May 26, 2009 9:59 AM

To:

Chavez, Carl J, EMNRD

Subject:

FW: SPILL NOTIFICATION- T-108 (Alkylate Spill) for May 23, 2009

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Tuesday, May 26, 2009 8:52 AM

To: VonGonten, Glenn, EMNRD

Cc: Jones, Brad A., EMNRD; Riege, Ed

Subject: SPILL NOTIFICATION- T-108 (Alkylate Spill) for May 23, 2009

Dear Mr. Von Gonten,

This e-mail confirms a formal initial spill notification as required by OCD in regards to an incident that occurred over the weekend. An attempt was made to both Mr. Jones and you at approximately, 0815 hours, today, May 26, 2009. Also, on May 26, 2009, a verbal attempt to notify Mr. Steve Conley (NMED, HWB) was done as required. The following is a summary of the spill event.

Date of Incident:

May 23, 2009

Time of Incident:

~ 1500 hrs

Product:

Alkylate

Quantity:

6 to 12 bbls (estimated)

Containment:

Yes

At approximately 1500 hrs on Saturday, May 23, 2009, T-108 overflowed containing Alkylate. The quantity that spilled on to the ground was about 6 to 12 bbls as estimated.

The material was in a contained area of the tankfarm. All liquid was immediately vacuumed up. Soil cleanup is underway. If you require additional information, please contact me at the following:

Sincerey,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company

Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258

Fax: (505) 722-0210

Office Cell: (505) 862-1749 thurman.larsen@wnr.com

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Chavez, Carl J, EMNRD

From:

Jones, Brad A., EMNRD

Sent:

Monday, May 18, 2009 7:25 AM

To:

Chavez, Carl J, EMNRD

Subject:

FW: Pilot Trave Center Sanitary Plugged Line NOTIFICATION (Follow-up)

From: Larsen, Thurman [mailto:Thurman.Larsen@wnr.com]

Sent: Friday, May 15, 2009 2:41 PM

To: Jones, Brad A., EMNRD

Cc: Riege, Ed

Subject: Pilot Trave Center Sanitary Plugged Line NOTIFICATION (Follow-up)

Reference: OCD Permit GW-032; Pilot Travel Center Plugged Line

Dear Mr. Jones;

A verbal attempt was made about 1:30 PM (1330 hrs) today, May 15, 2009, to contact you in regards to the Pilot Travel Center Sanitary release due to a plugged line; however, you were not available. This letter is to provide a confirmation follow-up in regards to the Pilot Travel Center Sanitary release due to a plugged line.

Pilot Sanitary liquids drain through a main four (4) inch line from the Pilot Travel Center to Western Refining facility. After reaching the Western Refining facility, the line splits into two (2) directions via two (2) four (4") valves. One valve allows liquids to go to the API Pit, the other allows liquids to go to Pond #9. A third valve in on the main line that regulates the main flow.

Pilot Contractors were attempting to trouble shoot a potential plugged sewer line. At about 1145, contractors intentionally opened a valve going to Pond #9 in order to determine to approximate location of the plugged line. Liquid flowed from this line indicating that the line from Pond #9 to the Pilot Travel Center was not plugged. This indicated that the plugged line was from the main valve to the API Pit. The Contractors contacted Western Refining personnel who told them to close this valve immediately. The time of discharge was estimated to be about 5 minutes or less. It was estimate that less than 30 gallons of water was discharged to Pond #9 during this time frame. Building and Grounds personnel added chlorination at the discharge end of the pipe going into Pond #9 in order to provide proper chlorination and to minimize any environmental effects of this release.

If you should have any questions regarding this release, please contact me at the information provided below or Mr. Ed Riege (Environmental Manager) at (505) 722-0217.

Sincerely,

Beck Larsen; CHMM, REM, RPG Environmental Engineer

Western Refining Company Route 3, Box 7 Gallup, NM 87301 Office:(505) 722-0258 Fax: (505) 722-0210 Office Cell: (505) 862-1749

Office Cell: (505) 862-1749 thurman.larsen@wnr.com

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Gannett Fleming West, Inc.

2155 Louisiana Boulevard, NE Suite 7000 Albuquerque, New Mexico 87110

Office (505) 265-8468 Facsimile (505) 881-2513

April 16, 2009

Mr. Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr. Santa Fe, NM 87505 MI APR 20 PM 12'

RE: Facility #5081434 Product Line Site Assessment Report

Dear Mr. Chavez

At the request of Chevron EMC, Gannett Fleming West, Inc. (GFW) is submitting the enclosed site assessment report for the Techron release at the Gallup Refinery. It is our understanding that Chevron filed the appropriate C-141 Form for the release, and the purpose of our site investigation was to assess the need for additional remedial action at the site of the release. Based on the results of our site assessment, GFW requests a finding of No Further Action on behalf of Chevron EMC.

Should you have any questions or wish to discuss the contents of this report, you may contact me at (505) 265-8468 or Mr. David Gardner of Chevron EMC at (713) 432-2632.

Sincerely,

GANNETT FLEMING WEST, INC.

Let Bayee

Mike E. Brazie, P.E.

Vice President

cc: David Gardner, Chevron EMC

Ed Riege, Western Refining Co.

Ron Weaver, Western Albuquerque Terminal

Technical Report

Facility # 5081434 Product Line Site Assessment

Gannett Fleming West, Inc. Project No. 50206

Submitted to

Chevron EMC 4800 Fournace Place Bellaire, Texas 77401

November 7, 2008



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Acronyms

bbl

barrels

cm/s

centimeters per second

DI

deionized

EDB EDC ethylene dibromide 1,2-dichloroethane

ft

feet

ft/ft

feet per foot

gpm

gallons per minute

GRO/DRO

gasoline range organics / diesel range organics

mg/kg

milligrams per kilogram

MEK

methyl ethyl ketone

mmhos/cm

micromhos per centimeters

MTBE

methyl tertiary butyl ether

NFA

No Further Action

OSE

Office of the State Engineer

ppm

parts per million

TPH

Total Petroleum Hydrocarbons

TMB

trimethyl benzenes

VOC

volatile organic compounds

1.0 BACKGROUND

Chevron Products Company has a product additive (Techron) tank and product line at the Western Refining Company's Ciniza Refinery. The refinery is located on the north side of Interstate 40, approximately 17 miles east of Gallup, New Mexico (Figure 1). Within the refinery, the product tank is located just west of the truck loading rack (Figure 2). On or about August 6, 2008, Chevron Products Company discovered a possible product release of less than 5 barrels (bbl) based on an inventory discrepancy and a verbal report from operators that the product was observed coming from a nearby electrical junction box.

Site Description

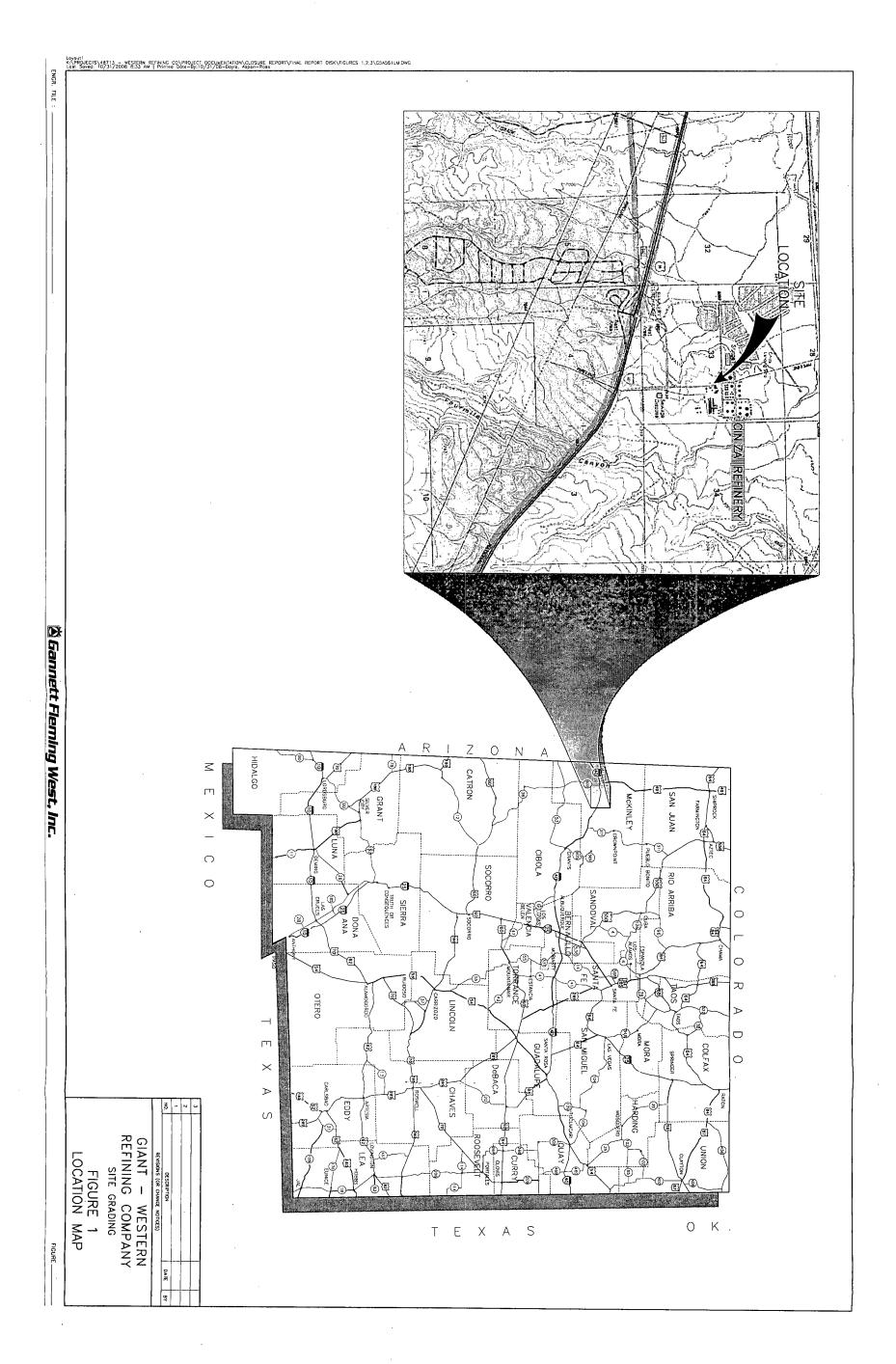
The 10,000 gallon Techron tank is located at the west side of the truck loading rack at the Ciniza Refinery. The additive is contained within a steel above ground tank which is within a concrete secondary containment area. The additive is delivered to the loading rack by means of an underground product line that runs from the additive tank to the rack. Between the tank and the rack is an asphalt access road, under which the product line is located. This system was reportedly constructed 30 to 40 years ago, and no construction or as-built drawings were found to show the exact location of the underground additive line.

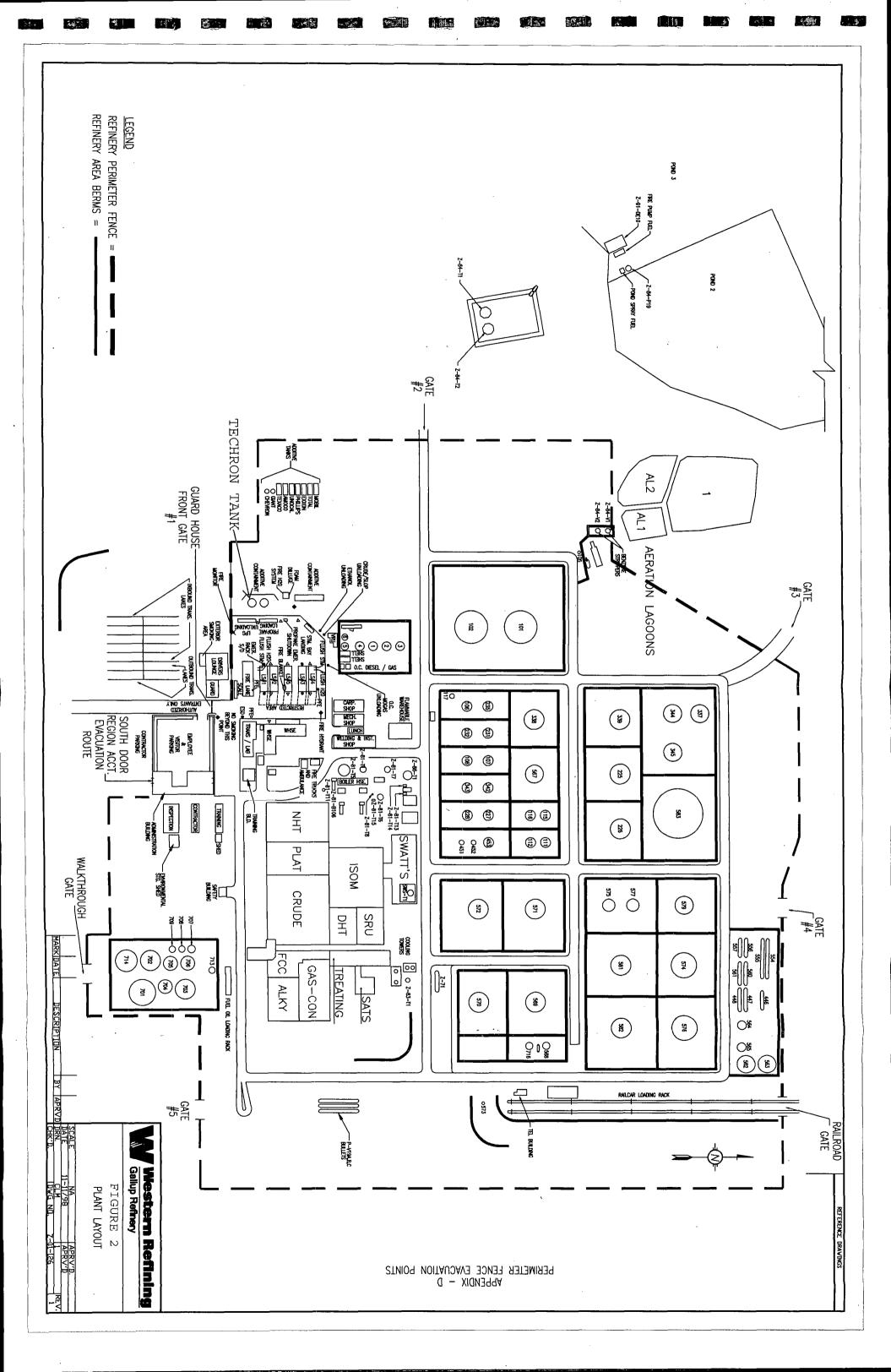
Site Soils

The native soil beneath the refinery is the Rehobeth silty clay loam, which has formed in flood plains and on valley floors. It is naturally saline, with salinity up to about 8 mmhos/cm and organic matter content up to about 1 percent. Soil pH ranges from 8 to 9. According to the 2001 No Further Action (NFA) Report for the refinery, the soil at the site is bentonite clay and silt with a hydraulic conductivity of less than 10^{-7} cm/sec.

Site Geology

The refinery is located along the southwestern margin of the San Juan Basin in the Colorado Plateau Physiographic Province. The site lies on the western side of the Zuni Uplift. Surficial geology at the site consists of Quaternary alluvial deposits. The alluvium is underlain by the late Triassic Chinle Formation, which consists primarily of interbedded claystone and siltstone with minor amounts of sandstone and limestone. The Chinle Formation has a total thickness of about 1,600 feet in this area, and is generally not water-bearing, although water has been encountered in some of the minor interbedded sandstone lenses. Generally, the Chinle Formation acts as an aquitard.





Surface Water

The site is located within the Rio Puerco valley, north of the Zuni Uplift. Surface water flow off the site is generally northwest by overland flow to the tributaries of the Rio Puerco north of the site. The Rio Puerco is a principal tributary of the Rio Grande, which is east of the site.

Groundwater

The primary aquifer in the region is within the San Andres Limestone and Glorieta Sandstone formations, designated as part of the C multiple-aquifer system. The top of the San Andres Formation is at a depth of about 1,670 feet. Based on information on record at the Office of the State Engineer (OSE), groundwater in the area of the site ranges in depth from about 1,700 to 2,000 feet below ground surface, with the aquifer under artesian head. Groundwater has also been found at shallow depths, up to about 300 feet in localized areas within the region. These wells report a very low yield, on the order of less than 10 gallons per minute (gpm). Recent groundwater monitoring (Gannett Fleming West, 2008) found depth to groundwater between 21 and 27 feet below ground surface.

Based on GFW's search of the NM Office of the State Engineer's iWaters database, the closest water supply wells are approximately 2,800 and 4,000 feet away from the Techron additive tank. The NMDOT has two wells for construction of public works approximately 2,500 feet west of the site, and Chindi Peavy has a non-domestic livestock well approximately 4,000 feet north of the site. Using the average hydraulic gradient of the general area (0.0042 ft/ft) and an assumed average hydraulic conductivity for sandstone (1.0 x 10⁻⁵ cm/sec), the calculated groundwater movement rate is approximately 2.1 feet/year. Assuming groundwater is flowing directly to the wells, we estimate it would take 1,300 years for hydrocarbon impacts from the tank to reach the NMDOT wells and 1,900 years to reach the Chindi Peavy well. These calculations assume a shallow water-bearing zone exists beneath the Techron tank and is continuous to these supply wells, which is unlikely given the discontinuous nature of the sandstone layers, and the fact that most of the water for this area is supplied by wells from deeper aquifers. Therefore, it appears that there are no receptors that would be immediately threatened by an additive release.

Suspected Release

A release of the additive was suspected primarily based on an inventory discrepancy of approximately 157 gallons (< 5 bbl). Although no direct evidence of release was observed, operators at the refinery reported observing what appeared to them to be additive within the secondary containment berm and at the adjacent electrical junction box and light pole foundation shortly after the additive system pump was activated. Based on these observations, it was assumed that the release was from a break in the underground product line that had migrated into the adjacent electrical conduit. According to Chevron Products Company, an integrity test of the additive tank showed the integrity of the tank itself had not been compromised.

Because of the suspected release, loading of the additive was suspended and a program to repair the suspected ruptured product line was initiated. The repair plan was to excavate the product line and either replace the line or install a sleeve inside the existing line. Gannett Fleming, Inc. (GF) was tasked by Chevron EMC to observe the excavations, document any product that was observed, and sample any potentially impacted soil.

Purpose of Investigation

The purpose of this investigation was to determine the presence of any subsurface hydrocarbon impacts that might have resulted from an additive release from the product line. If no hydrocarbons were found to be present above the soil action level, GF was to document that. If hydrocarbons were found, GF was asked to recommend a path forward to address the additive release.

2.0 FIELD INVESTIGATION

The field investigation consisted of hand excavation of soil to try locating the additive product line for repairs, field observations, field sampling, and collection of soil samples for laboratory analysis.

Site Excavation

GF mobilized to the site on September 2, 2008, when the repair program was initiated. The actual repair work was performed by Kachina Petroleum Company (Kachina), under contract to Chevron Products Company. Kachina began by hand digging an excavation at the east wall of the containment berm (Appendix B, photos 1, 2, and 3). The purpose of the excavation was to locate the product line coming from the additive tank to trace it and find the release point. The excavation was dug to approximately 4 feet along most of the containment wall, but no product line was uncovered. GF observed the digging and took a heated headspace sample of the soil from the bottom of the excavation. No evidence of any hydrocarbons was observed, and the headspace reading showed no Volatile Organic Compound (VOC) present.

Failing to find the product line by the end of the day, Kachina temporarily suspended work with the intention of continuing the search the following day. On September 3, Kachina began hand digging a new excavation north and east of the additive tank (Appendix B, photo 4). This location was west of the access road for the truck loading rack, on a line from the utility trench leading to the rack. This excavation exposed electrical conduits and one previously abandoned additive line, but no product line currently in use (Appendix B, photos 5 and 6).

Kachina then stopped work at that location and returned to the initial trench at the tank containment wall. They continued that excavation to the south and uncovered five utility conduits but still did not locate the Techron product line. The excavation then extended the entire length of the east wall of the tank containment berm, without uncovering a product line.

Kachina began a third excavation near the fire extinguisher at the intersection of the curb line of the access road and the utility trench (Appendix B, 7 and 8). This excavation uncovered approximately 12 utility conduits, but still did not find the Techron line. One additive line was encountered in this trench, but it turned to the north instead of to the south where the Techron tank was located. At that point, Kachina decided to stop work and develop a new work plan for replacing the additive line.

Field Observations

GF observed the excavation and collected soil samples for heated headspace analysis. GF field personnel inspected each of the three excavations and checked the breathing zone for VOC concentrations periodically during the excavation using a photoionization detector (PID). No concentration of VOCs was detected in the breathing zone, and no visual evidence of hydrocarbons was observed in any of the excavations. No phase separated hydrocarbon was observed, although there was a slight petroleum odor in the soil around the utility conduits in the excavation at the tank containment wall. Minor discolored soil was also observed around the conduit in the excavation near the fire extinguisher.

Field Testing

On September 2, 2008, prior to mobilizing to the site, GF calibrated the field instruments (PID and H_2S monitor). Both were found to be in good operating order and were calibrated using manufacturer supplied calibration gas, according to instrument specifications. One soil sample was collected from each of the three excavations for heated headspace analysis. Samples were collected using a shovel and hand scoop. Prior to sample collection, the sampling equipment was decontaminated by washing in a solution of Alconox and deionized (DI) water, rinsed with DI water, and allowed to air dry. The samples were collected with a hand scoop and placed directly into ziplock bags. The bags were filled to about half-volume, sealed, heated, and allowed to volatilize for at least ten minutes. The sample was analyzed by inserting the PID probe directly into the bag to measure Total Petroleum Hydrocarbon (TPH) concentration. The sample from each excavation was collected from the soil that appeared to have the highest potential for hydrocarbons. The results are shown on Table 1.

Table 1. Field Headspace Analysis Results					
LOCATION	DEPTH (FT)	PID READNG (PPM)			
East side of tank containment wall	4	0.3			
North and east of Techron tank	4	293			
Curb line on utility trench alignment	2	54.3			

The highest reading, and the only one that exceeded the soil action level of 100 parts per million (ppm), was around the utility lines in the excavation near the fire extinguisher, which was between the Techron tank and the access road for the truck loading rack. Because the Techron product line was never located, the source of this hydrocarbon impact cannot be determined. Since the site is a petroleum refinery, so a headspace result

of 293 ppm is not unusual, and could be associated with a long-term or older release and not with a recent release of Techron additive. No area of significant contamination between the Techron tank and the truck loading rack was found that could be directly correlated with the Chevron additive tank.

3.0 LABORATORY ANALYSIS

A soil sample was collected from each of the three excavations for laboratory analysis. These samples were collected from the same locations from which the headspace samples were collected. Based on the composition of Techron, the soil samples were analyzed for VOCs by EPA Method 8260B, and Gasoline and Diesel Range Organics (GRO/DRO) by EPA Method 8015. Samples were collected using the methanol extraction method. The sampling kits and bottles were provided by Test America, the laboratory that conducted the chemical analyses. The soil samples were collected using the methanol extraction device and extruded directly into the prepared sample bottles, which had the appropriate preservative added. The GRO/DRO samples were collected with the decontaminated hand scoop and placed directly into the laboratory-prepared soil sample jars. After collection, the samples were labeled and placed on ice in the sample container. The chain-of-custody form was completed, and the samples were shipped to the analytical laboratory on September 4, 2008. The analytical report (Appendix A) shows all samples were received by the laboratory in good condition and within specifications.

The sample locations are shown on Table 2. The results of the laboratory analyses are summarized on Table 3, and the full analytical report is included as Appendix A to this report.

Table 2. Laboratory Sample Locations				
SAMPLEID	SAMPLE LOCATION			
5084134-1	Beneath utility conduit in excavation by tank containment			
5084134-2	Discolored soil in excavation northeast of Techron tank			
5084134-3	Bottom of excavation near fire extinguisher			

Table 3 and Appendix A show that very few parameters were detected in any of the three samples, and those that were detected were found at low concentrations.

4.0 CONCLUSIONS

The purpose of this investigation was to determine if any environmental impact had occurred from a suspected product additive release, and if environmental remediation was required. No such adverse environmental impact was discovered by this investigation, and so no further action is recommended at this time. Following are the conclusions of this investigation:

Although no broken product line was found, three soil excavations were dug on a
direct line from the additive tank to the loading rack where any hydrocarbon
impact would be expected. None was found.

Table 3 Summary of Soil Analytical Results Chevron Facility # 5081434 Gallup, New Mexico

Sample Depth	(11)	4	4	2
Naphthalene		<0.41	0.0093	<0.13
MEK		<0.73	0.040	<0.23
DRO		1,900	12	<3.1
GRO		180	5.6	13
TMBs GRO		59	900.0	0.171
EDC		<0.23 <0.15	<0.0041 <0.0041 0.006	<0.073 <0.046 0.171
EDB		<0.23	<0.0041	<0.073
MTBE		<0.18	0.03	0.52
Xylenes		<0.27	<0.0082	<0.040
Ethylbenzene		<0.096	0.015	0.44
Toluene		<0.12	<0.0041	<0.038
Benzene	1	<0.082	0.014	0,60
	Date Sampled	80/60/60	80/60/60	80/60/60
	Sample	5084134-1	5084134-2	5084134-3

NOTES:
All results reported in millograms per microgram (parts per million [ppm]).
< = Less than the reporting limit shown.
Bold indicates detections

- 2. The excavation east of the tank containment wall is between the additive tank and the junction box where additive was reportedly observed. Had the suspected additive release occurred int that area, it should have been detected in that excavation, but none was found.
- 3. The excavation between the additive tank and the loading rack access road should have detected any hydrocarbon release, had a significant release of additive occurred anywhere between the tank and the utility trench. No hydrocarbons were detected.
- 4. One end of the Techron additive line was found in the utility trench at the loading rack. The excavation near the fire extinguisher was on line with that utility trench and downgradient from the rack. Therefore, any significant Techron release from the additive line in that trench would be expected to migrate in the direction of that trench. However, no such impact was detected.
- 5. Based on the Material Safety Data Sheet (MSDS), the major composition of Techron is petroleum distillates, naphtha, and Stoddard solvent, which are common, non-hazardous constituents of petroleum products.
- 6. The release was small (less than 5 bbl) and the site soils are very low permeability (10⁻⁶ cm/sec) clays. Therefore, no hydrocarbon from this release is expected to leave the boundaries of the immediate product line area within the refinery.
- 7. The highest hydrocarbon concentration detected was in one sample showing DRO at a concentration of 1,900 mg/kg near the tank containment wall. Because Techron is primarily composed of light aromatics, rather than the heavier components of DROs, this detection does not appear to represent a recent release of Techron.

GF understands that a replacement additive product line has been installed between the Techron tank and the truck loading rack, and the additive operation is back in service. The former product line, which was never found except at the ends, has been abandoned in place. The line was flushed out with water and the ends were capped. With the new line installed, and the former line out of service, no additional release should occur from the old product line.

Because the actual additive line could not be found, a subsurface release could not be confirmed. No hydrocarbons were found that could be attributed to a Techron release. The hydrocarbon that was detected was at low concentrations, and of a type commonly found throughout petroleum refineries in general. Based on the laboratory analytical results, no hydrocarbon was found above soil action levels. If subsurface impact does exist, it is confined to a very small area, and does not appear to have any potential for offsite migration. Therefore GF recommends no further action at this site.

5.0 REFERENCES

Gannett Fleming West, 2008, Gallup Refinery Groundwater Confirmation Monitoring Report, Monitoring Wells OW-14 and OW-30.

Giant Ciniza Refinery., 2001, NFA Report

Natural Resources Conservation Service, 2004, Soil Survey of McKinley Area, New Mexico.



ANALYTICAL REPORT

Job Number: 400-34074-1

SDG Number: CVX Fac #5084134

Job Description: Gallup, NM

For: Gannett Fleming 2155 Louisiana NE Suite 7000 Albuguerque, NM 87110

Attention: Mike E. Brazie

Stanbania Akara

Stephanie Akers
Project Manager I
stephanie.akers@testamericainc.com
09/22/2008

The test results in this report meet all NELAP requirements for accredited parameters and relate only to the referenced samples. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval from the laboratory.

TestAmerica Pensacola Certifications and Approvals: Alabama (40150), Arizona (AZ0710), Arkansas (88-0689), Florida (E81010), Illinois (200041), Iowa (367), Kansas (E-10253), Kentucky UST (53), Louisiana (30748), Maryland (233), Massachusetts (M-FL094), Michigan (9912), New Hampshire (250507), New Jersey (FL006), North Carolina (314), North Dakota (R-108), Oklahoma (9810), Pennsylvania (68-00467), Rhode Island (LAO00307), South Carolina (96026), Tennessee (TN02907), Texas (T104704286-08-TX), Virginia (00008), Washington (C2043), West Virginia (136), USDA Foreign Soil Permit (P330-08-00006).



Job Narrative 400-J34074-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC/MS VOA

Method(s) 8260B: samples 5084134-1 (400-34074-1) and 5044134-3 (400-34074-3) required dilutions due to the presence of target and/or non-target analytes. Sample data has been reported to laboratory MDLs in order to report as low as possible.

No analytical or quality issues were noted.

GC VOA

Method(s) 8021B: The fid surrogate for sample 5084134-1 (400-34074-1) was outside acceptance limits due to matrix interference.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 8015B: Surrogate recovery for the following sample(s) was outside control limits: 5084134-1 (400-34074-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Lab Sample ID Client Sample ID Analyte	Result / Q	ualifier	Reporting Limit	Units	Method
400-34074-1 5084134-1			***	<u></u>	
Isopropylbenzene	0.20	J	0.89	mg/Kg	8260B
N-Propylbenzene	0.54	j	0.89	mg/Kg	8260B
o-Xylene	2.8	5	0.89	mg/Kg	8260B
p-Cymene	0.58	J .	0.89	mg/Kg	8260B
1,2,4-Trimethylbenzene	29	3	0.89	mg/Kg	8260B
1,3,5-Trimethylbenzene	30		0.89	mg/Kg	8260B
Gasoline Range Organics (GRO)-C6-C10	180		18	mg/Kg	8015M
Diesel Range Organics (GRO)-C0-C10	1900		15	mg/Kg	8015B
Percent Solids	84		0.10	mg/Kg Percent	PercentMoisture
r ercent conds	04		0.10	reitein	rercentivioistare
400-34074-2 5084134-2					
Acetone	0.18		0.020	mg/Kg	8260B
Benzene	0.014		0.0041	mg/Kg	8260B
Ethylbenzene	0.015		0.0041	mg/Kg	8260B
Methyl Ethyl Ketone	0.040		0.020	mg/Kg	8260B
Methyl tert-butyl ether	0.030		0.0041	mg/Kg	8260B
Naphthalene	0.0093		0.0041	mg/Kg	8260B
N-Propylbenzene	0.0050		0.0041	mg/Kg	8260B
1,2,4-Trimethylbenzene	0.0061		0.0041	mg/Kg	8260B
Gasoline Range Organics (GRO)-C6-C10	5.6		5.1	mg/Kg	8015M
Diesel Range Organics [C10-C28]	12		2.9	mg/Kg	8015B
Percent Solids	87		0.10	Percent	PercentMoisture
400-34074-3 5084134-3					
Benzene	0.60		0.28	mg/Kg	8260B
Ethylbenzene	0.44		0.28	mg/Kg	8260B
Isopropylbenzene	0.036	J	0.28	mg/Kg	8260B
Methyl tert-butyl ether	0.52		0.28	mg/Kg	8260B
m-Xylene & p-Xylene	0.10	J	0.56	mg/Kg	8260B
N-Propylbenzene	0.10	J	0.28	mg/Kg	8260B
1,2,4-Trimethylbenzene	0.10	J	0.28	mg/Kg	8260B
1,3,5-Trimethylbenzene	0.071	J	0.28	mg/Kg	8260B
Gasoline Range Organics (GRO)-C6-C10	13		5.6	mg/Kg	8015M
Percent Solids	82		0.10	Percent	PercentMoisture

METHOD SUMMARY

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Description	Lab Location	Method	Preparation Method
Matrix: Solid			
Volatile Organic Compounds (GC/MS)	TAL PEN	SW846 8260B	
Closed System Purge and Trap	TAL PEN		SW846 5035
GRO by 8015M	TAL PEN	SW846 8015M	
Closed System Purge and Trap	TAL PEN		SW846 5035
Diesel Range Organics (DRO) (GC)	TAL PEN	SW846 8015B	
Ultrasonic Extraction	TAL PEN		SW846 3550B

Lab References:

TAL PEN = TestAmerica Pensacola

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD/ANALYST SUMMARY

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Method	Analyst	Analyst ID
SW846 8260B	Hunt, Bruce	ВН
SW846 8015M	Khramova, Galina	GK
SW846 8015B	Ayers, Kim	KA
EPA PercentMoisture	Chea, Vanda	VC

SAMPLE SUMMARY

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
400-34074-1	5084134-1	Solid	09/03/2008 1430	09/05/2008 1011
400-34074-2	5084134-2	Solid	09/03/2008 1445	09/05/2008 1011
400-34074-3	5084134-3	Solid	09/03/2008 1500	09/05/2008 1011

SAMPLE RESULTS

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-1

Lab Sample ID:

400-34074-1

Client Matrix:

Solid

% Moisture:

16.0

Date Sampled:

09/03/2008 1430

Date Received:

09/05/2008 1011

8260B Volatile Organic Compounds (GC/MS)

Method:

8260B

Analysis Batch: 400-76045

Instrument ID:

GC/MS

Preparation:

5035

Prep Batch: 400-76052

Lab File ID:

AS091008.D

Dilution:

200

Initial Weight/Volume:

6.68 g

Date Analyzed:

09/10/2008 1239

Final Weight/Volume:

5 g

Date Prepared:

09/10/2008 0800

Analyte	DryWt Corrected: Y Result (mg/Kg)	Qualifier	MDL	RL
Acetone	<1.3		1.3	4.5
Benzene	<0.082		0.082	0.89
Bromobenzene	<0.23		0.23	0.89
Bromochloromethane	<0.14		0.14	0.89
Bromodichloromethane	<0.15		0.15	0.89
Bromoform	< 0.089		0.089	0.89
Bromomethane	<0.16		0.16	0.89
Carbon disulfide	<0.18		0.18	0.89
Carbon tetrachloride	<0.30		0.30	0.89
Chlorobenzene	<0.093		0.093	0.89
Chloroethane	<0.34		0.34	0.89
Chloroform	<0.11		0.11	0.89
Chloromethane	<0.16		0.16	0.89
2-Chlorotoluene	<0.17		0.17	0.89
4-Chlorotoluene	<0.17		0.17	0.89
cis-1,2-Dichloroethene	<0.14		0.14	0.89
cis-1,3-Dichloropropene	<0.21		0.21	0.89
Dibromochloromethane	<0.16		0.16	0.89
1,2-Dibromo-3-Chloropropane	<0.59		0.59	0.89
Dibromomethane	<0.15		0.15	0.89
1,2-Dichlorobenzene	<0.13		0.13	0.89
1,3-Dichlorobenzene	<0.17		0.17	0.89
1,4-Dichlorobenzene	<0.15		0.15	0.89
Dichlorodifluoromethane	<0.23		0.23	0.89
1,1-Dichloroethane	<0.15		0.15	0.89
1,2-Dichloroethane	<0.15		0.15	0.89
1,1-Dichloroethene	<0.11		0.11	0.89
1,2-Dichloropropane	<0.13		0.13	0.89
1,3-Dichloropropane	<0.12		0.12	0.89
2,2-Dichloropropane	<0.32		0.32	0.89
1,1-Dichloropropene	<0.13		0.13	0.89
Ethylbenzene	<0.096		0.096	0.89
Ethylene Dibromide	<0.23		0.23	0.89
Hexachlorobutadiene	<0.20		0.20	0.89
2-Hexanone	<0.89		0.89	4.5
lodomethane	<0.61		0.61	0.89
Isopropylbenzene	0.20	J	0.10	0.89
Isopropyl ether	<0.098		0.098	0.89
Methylene Chloride	<0.48		0.48	0.89
Methyl Ethyl Ketone	<0.73		0.73	4.5
methyl isobutyl ketone	<0.71		0.71	4.5
Methyl tert-butyl ether	<0.18		0.18	0.89
m-Xylene & p-Xylene	<0.27		0.13	1.8
Naphthalene	<0.41		0.41	0.89

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-1

Lab Sample ID:

400-34074-1

Client Matrix:

Solid

% Moisture:

16.0

Date Sampled:

09/03/2008 1430

Date Received:

09/05/2008 1011

8260B Volatile Organic Compounds (GC/MS)

Method:

8260B

5035

Analysis Batch: 400-76045

Instrument ID:

GC/MS

Preparation:

Prep Batch: 400-76052

Lab File ID:

Dilution:

200

Initial Weight/Volume:

AS091008.D

09/10/2008 1239

Final Weight/Volume:

6.68 g 5 g

Date Analyzed: Date Prepared:

09/10/2008 0800

Analyte	DryWt Corrected: Y Result (mg/Kg)	Qualifier	MDL	RL
n-Butylbenzene	<0.17	AMERICAN O POPULATION D W LUL .	0.17	0.89
N-Propylbenzene	0.54	J	0.16	0.89
o-Xylene	2.8		0.13	0.89
p-Cymene	0.58	J	0.14	0.89
sec-Butylbenzene	<0.17		0.17	0.89
Styrene	<0.14		0.14	0.89
tert-Butylbenzene	<0.14		0.14	0.89
1,1,1,2-Tetrachloroethane	<0.18		0.18	0.89
1,1,2,2-Tetrachloroethane	<0.13		0.13	0.89
Tetrachloroethene	<0.15		0.15	0.89
Toluene	<0.12		0.12	0.89
trans-1,2-Dichloroethene	<0.12		0.12	0.89
trans-1,3-Dichloropropene	<0.16		0.16	0.89
1,2,3-Trichlorobenzene	<0.21		0.21	0.89
1,2,4-Trichlorobenzene	<0.13		0.13	0.89
1,1,1-Trichloroethane	<0.20		0.20	0.89
1,1,2-Trichloroethane	<0.16		0.16	0.89 .
Trichloroethene	<0.080		0.080	0.89
Trichlorofluoromethane	<0.14		0.14	0.89
1,2,3-Trichloropropane	<0.30		0.30	0.89
1,2,4-Trimethylbenzene	29		0.21	0.89
1,3,5-Trimethylbenzene	30		0.15	0.89
Vinyl acetate	<1.6		1.6	4.5
Vinyl chloride	<0.16		0.16	0.89
Surrogate	%Rec	%Rec Acceptance Limits		ance Limits
4-Bromofluorobenzene	102	M. S. Lan. Tow. Co. Co., Ann. Ass. Million St. M. Allert M. Million Market Mark	73 - 1	24
Dibromofluoromethane	98		75 - 1	36
Toluene-d8 (Surr)	105		75 - 1	26

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-2

Lab Sample ID:

400-34074-2

Client Matrix:

Solid

% Moisture: 13.5

Date Sampled:

09/03/2008 1445

Date Received:

09/05/2008 1011

8260B Volatile Organic Compounds (GC/MS)

Method:

8260B

Analysis Batch: 400-75880

Instrument ID:

GC/MS

Preparation:

5035

Prep Batch: 400-75885

Lab File ID:

AS090923.D

Dilution:

1.0

Initial Weight/Volume:

7.06 g

Date Analyzed:

09/09/2008 1718

Final Weight/Volume:

5 g

Date Prepared:

09/09/2008 0800

Analyte	DryWt Corrected: Y Result (mg/Kg) Qualifier	RL
Acetone	0.18	0.020
Benzene	0.014	0.0041
Bromobenzene	<0.0041	0.0041
Bromochloromethane	<0.0041	0.0041
Bromodichloromethane	<0.0041	0.0041
Bromoform	<0.0041	0.0041
Bromomethane	<0.0041	0.0041
Carbon disulfide	<0.0041	0.0041
Carbon tetrachloride	<0.0041	0.0041
Chlorobenzene	<0.0041	0.0041
Chloroethane	<0.0041	0.0041
Chloroform	<0.0041	0.0041
Chloromethane	< 0.0041	0.0041
2-Chlorotoluene	<0.0041	0.0041
4-Chlorotoluene	<0.0041	0.0041
cis-1,2-Dichloroethene	<0.0041	0.0041
cis-1,3-Dichloropropene	<0.0041	0.0041
Dibromochloromethane	<0.0041	0.0041
1,2-Dibromo-3-Chloropropane	<0.0041	0.0041
Dibromomethane	<0.0041	0.0041
1,2-Dichlorobenzene	<0.0041	0.0041
1,3-Dichlorobenzene	<0.0041	0.0041
1.4-Dichlorobenzene	<0.0041	0.0041
Dichlorodifluoromethane	< 0.0041	0.0041
1,1-Dichloroethane	<0.0041	0.0041
1,2-Dichloroethane	<0.0041	0.0041
1,1-Dichloroethene	<0.0041	0.0041
1,2-Dichloropropane	<0.0041	0.0041
1,3-Dichloropropane	< 0.0041	0.0041
2,2-Dichloropropane	<0.0041	0.0041
1,1-Dichloropropene	<0.0041	0.0041
Ethylbenzene	0.015	0.0041
Ethylene Dibromide	<0.0041	0.0041
Hexachlorobutadiene	<0.0041	0.0041
2-Hexanone	<0.020	0.020
lodomethane	<0.0041	0.0041
Isopropylbenzene	<0.0041	0.0041
Isopropyl ether	<0.0041	0.0041
Methylene Chloride	<0.0041	0.0041
Methyl Ethyl Ketone	0.040	0.020
methyl isobutyl ketone	<0.020	0.020
Methyl tert-butyl ether	0.030	0.0041
m-Xylene & p-Xylene	<0.0082	0.0082
Naphthalene	0.0093	0.0082

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-2

Lab Sample ID:

400-34074-2

Client Matrix:

Solid

% Moisture:

13.5

Date Sampled:

09/03/2008 1445

Date Received:

09/05/2008 1011

8260B Volatile Organic Compounds (GC/MS)

Method: Preparation: 8260B

Analysis Batch: 400-75880

Instrument ID:

GC/MS

Lab File ID:

Dilution:

5035

Prep Batch: 400-75885

Initial Weight/Volume:

AS090923.D

1.0

09/09/2008 1718

Final Weight/Volume:

7.06 g 5 g

Date Analyzed: Date Prepared:

09/09/2008 0800

Analyte	DryWt Corrected: Y Result (mg/Kg) Qualifier	RL
n-Butylbenzene	< 0.0041	0.0041
N-Propylbenzene	0.0050	0.0041
o-Xylene	<0.0041	0.0041
p-Cymene	<0.0041	0.0041
sec-Butylbenzene	<0.0041	0.0041
Styrene	<0.0041	0.0041
tert-Butylbenzene	<0.0041	0.0041
1,1,1,2-Tetrachloroethane	<0.0041	0.0041
1,1,2,2-Tetrachloroethane	<0.0041	0.0041
Tetrachloroethene	<0.0041	0.0041
Toluene	<0.0041	0.0041
trans-1,2-Dichloroethene	<0.0041	0.0041
trans-1,3-Dichloropropene	<0.0041	0.0041
1,2,3-Trichlorobenzene	<0.0041	0.0041
1,2,4-Trichlorobenzene	<0.0041	0.0041
1,1,1-Trichloroethane	<0.0041	0.0041
1,1,2-Trichloroethane	<0.0041	0.0041
Trichloroethene	<0.0041	0.0041
Trichlorofluoromethane	<0.0041	0.0041
1,2,3-Trichloropropane	<0.0041	0.0041
1,2,4-Trimethylbenzene	0.0061	0.0041
1,3,5-Trimethylbenzene	<0.0041	0.0041
Vinyl acetate	<0.020	0.020
Vinyl chloride	<0.0041	0.0041
Surrogate	%Rec	Acceptance Limits
4-Bromofluorobenzene	101	73 - 124
Dibromofluoromethane	102	75 - 136
Toluene-d8 (Surr)	102	75 - 126

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-3

Lab Sample ID:

400-34074-3

Client Matrix:

Solid

% Moisture:

18.4

Date Sampled:

09/03/2008 1500

Date Received:

09/05/2008 1011

8260B Volatile Organic Compounds (GC/MS)

Method:

8260B

Analysis Batch: 400-75880

Instrument ID:

GC/MS

Preparation:

5035

Prep Batch: 400-75885

Lab File ID:

AS090924.D

Dilution:

50

Initial Weight/Volume:

5.46 g

09/09/2008 1739

Final Weight/Volume:

5 g

Date Analyzed: Date Prepared:

09/09/2008 0800

Analyte	DryWt Corrected: Y Result (mg/Kg)	Qualifier	MDL	RL	
Acetone	<0.41		0.41	1.4	
Benzene	0.60		0.026	0.28	
Bromobenzene	<0.073		0.073	0.28	
Bromochloromethane	<0.043		0.043	0.28	
Bromodichloromethane	<0.047		0.047	0.28	
Bromoform	<0.028		0.028	0.28	
Bromomethane	<0.051		0.051	0.28	
Carbon disulfide	<0.056	h	0.056	0.28	
Carbon tetrachloride	<0.095		0.095	0.28	
Chlorobenzene	<0.029		0.029	0.28	
Chloroethane	<0.11		0.11	0.28	
Chļoroform	< 0.033		0.033	0.28	
Chloromethane	< 0.049		0.049	0.28	
2-Chlorotoluene	<0.054		0.054	0.28	
4-Chlorotoluene	<0.055		0.055	0.28	
cis-1,2-Dichloroethene	< 0.043		0.043	0.28	
cis-1,3-Dichloropropene	< 0.067		0.067	0.28	
Dibromochloromethane	< 0.049		0.049	0.28	
1,2-Dibromo-3-Chloropropane	<0.19		0.19	0.28	
Dibromomethane	< 0.047		0.047	0.28	
1,2-Dichlorobenzene	<0.040		0.040	0.28	
1,3-Dichlorobenzene	< 0.053		0.053	0.28	
1,4-Dichlorobenzene	<0.046		0.046	0.28	
Dichlorodifluoromethane	< 0.073		0.073	0.28	
1,1-Dichloroethane	<0.047		0.047	0.28	
1,2-Dichloroethane	<0.046		0.046	0.28	
1,1-Dichloroethene	< 0.036		0.036	0.28	
1,2-Dichloropropane	< 0.042		0.042	0.28	
1,3-Dichloropropane	< 0.036		0.036	0.28	
2,2-Dichloropropane	<0.10		0.10	0.28	
1,1-Dichloropropene	<0.041		0.041	0.28	
Ethylbenzene	0.44		0.030	0.28	
Ethylene Dibromide	<0.073		0.073	0.28	
Hexachlorobutadiene	<0.062		0.062	0.28	
2-Hexanone	<0.28		0.28	1.4	
Iodomethane	<0.19		0.19	0.28	
Isopropylbenzene	0.036	J	0.031	0.28	
Isopropyl ether	<0.031	-	0.031	0.28	
Methylene Chloride	<0.15		0.15	0.28	
Methyl Ethyl Ketone	<0.23		0.23	1.4	
methyl isobutyl ketone	<0.22		0.22	1.4	
Methyl tert-butyl ether	0.52		0.056	0.28	
m-Xylene & p-Xylene	0.10	J	0.084	0.56	
Naphthalene	<0.13	U	0.13	0.28	

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-3

Lab Sample ID:

400-34074-3

Client Matrix:

Solid

% Moisture:

Date Sampled:

09/03/2008 1500

Date Received:

09/05/2008 1011

8260B Volatile Organic Compounds (GC/MS)

18.4

Method:

8260B

Analysis Batch: 400-75880

Instrument ID:

GC/MS

Preparation:

5035

Lab File ID:

AS090924.D

Dilution:

Prep Batch: 400-75885

50

Initial Weight/Volume:

5.46 g

Date Analyzed: Date Prepared:

09/09/2008 1739 09/09/2008 0800 Final Weight/Volume:

5 g

Analyte	DryWt Corrected: Y Result (mg/Kg)	Qualifier	MDL	RL
n-Butylbenzene	< 0.054	471	0.054	0.28
N-Propylbenzene	0.10	J	0.050	0.28
o-Xylene	<0.040		0.040	0.28
p-Cymene	<0.044		0.044	0.28
sec-Butylbenzene	< 0.053		0.053	0.28
Styrene	< 0.043		0.043	0.28
tert-Butylbenzene	<0.044		0.044	0.28
1,1,1,2-Tetrachloroethane	<0.056		0.056	0.28
1,1,2,2-Tetrachloroethane	<0.040		0.040	0.28
Tetrachloroethene	<0.047		0.047	0.28
Toluene	<0.038		0.038	0.28
trans-1,2-Dichloroethene	<0.038		0.038	0.28
trans-1,3-Dichloropropene	< 0.052		0.052	0.28
1,2,3-Trichlorobenzene	< 0.067		0.067	0.28
1,2,4-Trichlorobenzene	< 0.040		0.040	0.28
1,1,1-Trichloroethane	< 0.062		0.062	0.28
1,1,2-Trichloroethane	< 0.052		0.052	0.28
Trichloroethene	<0.025		0.025	0.28
Trichlorofluoromethane	< 0.043		0.043	0.28
1,2,3-Trichloropropane	<0.095		0.095	. 0.28
1,2,4-Trimethylbenzene	0.10	J	0.067	0.28
1,3,5-Trimethylbenzene	0.071	J	0.047	0.28
Vinyl acetate	<0.51		0.51	1.4
Vinyl chloride	<0.052		0.052	0.28
Surrogate	%Rec		Accepta	ance Limits
4-Bromofluorobenzene	101	73 - 124		
Dibromofluoromethane	96	75 - 136		
Toluene-d8 (Surr)	103		75 - 1:	26

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-1

Lab Sample ID:

400-34074-1

Client Matrix:

09/13/2008 0206

09/12/2008 1000

Solid

8015M

5035

200

% Moisture:

16.0

Date Sampled:

09/03/2008 1430

Date Received:

09/05/2008 1011

8015M GRO by 8015M

Analysis Batch: 400-76008

Prep Batch: 400-76064

Instrument ID: Lab File ID:

GC/PID/FID

Initial Weight/Volume:

P091216.D 6.68 g

Final Weight/Volume:

5.0 g

Injection Volume:

Column ID:

PRIMARY

Analyte

Method:

Dilution:

Preparation:

Date Analyzed:

Date Prepared:

DryWt Corrected: Y Result (mg/Kg)

Qualifier

Gasoline Range Organics (GRO)-C6-C10

180

%Rec

X

Acceptance Limits

a,a,a-Trifluorotoluene (fid)

151

69 - 129

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-2

Lab Sample ID:

400-34074-2

Client Matrix:

Solid

% Moisture:

13.5

Date Sampled:

09/03/2008 1445

Date Received:

09/05/2008 1011

8015M GRO by 8015M

8015M 5035

50

Date Analyzed:

09/13/2008 0402 09/12/2008 1000

Date Prepared:

Analysis Batch: 400-76008

Prep Batch: 400-76064

Instrument ID: Lab File ID:

GC/PID/FID P091218.D

Initial Weight/Volume:

5.67 g

Final Weight/Volume:

5.0 g

Injection Volume:

Column ID:

PRIMARY

Analyte

Method:

Dilution:

Preparation:

DryWt Corrected: Y Result (mg/Kg)

Qualifier

RL

Gasoline Range Organics (GRO)-C6-C10

5.6

%Rec

Acceptance Limits

a,a,a-Trifluorotoluene (fid)

99

69 - 129

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-3

Lab Sample ID:

400-34074-3

09/13/2008 0500

09/12/2008 1000

Client Matrix:

Solid

8015M

50

% Moisture:

18.4

Date Sampled:

09/03/2008 1500

Date Received:

09/05/2008 1011

8015M GRO by 8015M

5035

Analysis Batch: 400-76008

Prep Batch: 400-76064

Instrument ID:

GC/PID/FID

Lab File ID: Initial Weight/Volume:

P091219.D 5.45 g

Final Weight/Volume:

5.0 g

Injection Volume:

Column ID:

PRIMARY

Analyte

Method:

Dilution:

Preparation:

Date Analyzed:

Date Prepared:

DryWt Corrected: Y Result (mg/Kg)

Qualifier

RL

Gasoline Range Organics (GRO)-C6-C10

13

5.6

a,a,a-Trifluorotoluene (fid)

%Rec 100

Acceptance Limits 69 - 129

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-1

Lab Sample ID:

400-34074-1

Client Matrix:

Solid

% Moisture:

16.0

Date Sampled:

09/03/2008 1430

Date Received: 09/05/2008 1011

8015B Diesel Range Organics (DRO) (GC)

Method:

8015B

Preparation:

3550B

Dilution:

5.0

Date Analyzed:

09/09/2008 0858

Date Prepared:

09/08/2008 0817

Analysis Batch: 400-75802

Prep Batch: 400-75702

Instrument ID:

Lab File ID:

GC/FID/FID 0801008.D

Initial Weight/Volume:

30.14 g

Final Weight/Volume:

5.0 mL

Injection Volume:

Column ID:

PRIMARY

Analyte

DryWt Corrected: Y Result (mg/Kg)

Qualifier

RL

Diesel Range Organics [C10-C28]

1900

15

Surrogate o-Terphenyl %Rec 2

Χ

Acceptance Limits 59 - 143

Page 17 of 37

09/22/2008

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-2

Lab Sample ID:

400-34074-2

Client Matrix:

Solid

% Moisture:

13.5

Date Sampled:

09/03/2008 1445

Date Received:

09/05/2008 1011

8015B Diesel Range Organics (DRO) (GC)

Method:

8015B

Preparation:

3550B

Dilution:

1.0

Date Analyzed: Date Prepared:

09/08/2008 2027

09/08/2008 0817

Analysis Batch: 400-75802

Prep Batch: 400-75702

Instrument ID:

GC/FID/FID

Lab File ID:

3801038.D

Initial Weight/Volume: Final Weight/Volume:

30.31 g 5.0 mL

Injection Volume:

Column ID:

PRIMARY

Analyte

DryWt Corrected: Y Result (mg/Kg)

Qualifier

RL 2.9

Diesel Range Organics [C10-C28]

12

Surrogate

%Rec

Acceptance Limits

o-Terphenyl

88

59 - 143

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-3

Lab Sample ID:

400-34074-3

Client Matrix:

Solid

18.4

Date Sampled:

Instrument ID:

Initial Weight/Volume:

Final Weight/Volume:

Injection Volume: Column ID:

Lab File ID:

09/03/2008 1500

30.04 g

5.0 mL

Date Received:

09/05/2008 1011

8015B Diesel Range Organics (DRO) (GC)

% Moisture:

Analysis Batch: 400-75802

Prep Batch: 400-75702

Method: Preparation: 8015B

3550B

Dilution:

Date Analyzed:

09/08/2008 2039

Date Prepared:

09/08/2008 0817

DryWt Corrected: Y Result (mg/Kg)

Qualifier

PRIMARY

GC/FID/FID

4001040.D

Diesel Range Organics [C10-C28]

<3.1

RL 3.1

Surrogate o-Terphenyl

Analyte

%Rec

Acceptance Limits

80

59 - 143

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Client Sample ID:

5084134-1

Lab Sample ID:

400-34074-1

Client Matrix:

Solid

Date Sampled:

09/03/2008 1430

Date Received:

09/05/2008 1011

Analyte

Result

Qual Units RL

RL

Dil

Percent Solids

84

Percent

Date Analyzed

0.10

Method 1.0 PercentMoisture

Client Sample ID:

5084134-2

Anly Batch: 400-75719

Lab Sample ID: Client Matrix:

400-34074-2

Solid

Date Sampled:

09/03/2008 1445

09/06/2008 0000

Date Received:

09/05/2008 1011

Method

PercentMoisture

Analyte Percent Solids Result

87

Qual Units

0.10

Dil

1.0

Anly Batch: 400-75719

Percent Date Analyzed

09/06/2008 0000

Client Sample ID:

5084134-3

Lab Sample ID:

400-34074-3

Date Sampled:

09/03/2008 1500 09/05/2008 1011

Client Matrix:

Solid

Date Received:

Analyte

82

Result

Units Percent

RL 0.10 Dil Method 1.0 PercentMoisture

Percent Solids

Anly Batch: 400-75719

Date Analyzed

Qual

09/06/2008 0000

09/22/2008

DATA REPORTING QUALIFIERS

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC VOA		
	X	Surrogate exceeds the control limits
GC Semi VOA		
	Χ	Surrogate exceeds the control limits

QUALITY CONTROL RESULTS

Quality Control Results

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:400-7588	30	YOU'V Sprainte, A. M and and	derendende v erns er e rivs	nii va nuurus di aadama oo madaana ii aan aa saa saa dhaa dhaanaa dhaanaa dhaanaa dhaanaa dhaanaa dhaanaa dhaa	antina a
LCS 400-75885/2-A	Lab Control Spike	T	Solid	8260B	400-75885
MB 400-75885/1-A	Method Blank	Т	Solid	8260B	400-75885
400-34074-2	5084134-2	Т	Solid ·	8260B	400-75885
100-34074-3	5084134-3	Т	Solid	8260B	400-75885
Prep Batch: 400-75885					
LCS 400-75885/2-A	Lab Control Spike	T	Solid	5035	
ИВ 400-75885/1-A	Method Blank	Т	Solid	5035	
400-34074-2	5084134-2	Т	Solid	5035	
400-34074-3	5084134-3	Т	Solid	5035	
Analysis Batch:400-7604	1 5				
_CS 400-76052/2-A	Lab Control Spike	Т	Solid	8260B	400-76052
MB 400-76052/1-A	Method Blank	Т	Solid	8260B	400-76052
400-34074-1	5084134-1	т	Solid	8260B	400-76052
Prep Batch: 400-76052					
LCS 400-76052/2-A	Lab Control Spike	Т	Solid	5035	
MB 400-76052/1-A	Method Blank	Т	Solid	5035	
400-34074-1	5084134-1	Т	Solid	5035	
Report Basis T = Total					
GC VOA					
Analysis Batch:400-7600	18	The second secon			
LCS 400-76064/2-A	Lab Control Spike	Т	Solid	8015M	400-76064
MB 400-76064/1-A	Method Blank	Т	Solid	8015M	400-76064
100-34074-1	5084134-1	Т	Solid	8015M	400-76064
400-34074-2	5084134-2	Т	Solid	8015M	400-76064
100-34074-3	5084134-3	Т	Solid	8015M	400-76064
Prep Batch: 400-76064					
LCS 400-76064/2-A	Lab Control Spike	Т	Solid	5035	
MB 400-76064/1-A	Method Blank	Т	Solid	5035	
100-34074-1	5084134-1	Т	Solid	5035	
400-34074-2	5084134-2	Т	Solid	5035	
400-34074-3	5084134-3	T	Solid	5035	

Report Basis

T = Total

TestAmerica Pensacola

Quality Control Results

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

QC Association Summary

		Report			
Lab Sample ID	Client Sample ID	Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Prep Batch: 400-75702		-AP-re-Art Althorn Manufacture (Manufacture		razzera ani,	entilettet + eteks - A vilationalevanonolovanaturippini, järvännigu
LCS 400-75702/12-A	Lab Control Spike	Т	Solid	3550B	
MB 400-75702/13-A	Method Blank	Т	Solid	3550B	
400-34074-1	5084134-1	Т	Solid	3550B	
400-34074-2	5084134-2	Т	Solid	3550B	
400-34074-2MS	Matrix Spike	Т	Solid	3550B	
400-34074-2MSD	Matrix Spike Duplicate	Т	Solid	3550B	
400-34074-3	5084134-3	Т	Solid	3550B	
Analysis Batch:400-7580	2				
LCS 400-75702/12-A	Lab Control Spike	Т	Solid	8015B	400-75702
MB 400-75702/13-A	Method Blank	T	Solid	8015B	400-75702
400-34074-1	5084134-1	Т	Solid	8015B	400-75702
400-34074-2	5084134-2	Т	Solid	8015B	400-75702
400-34074-2MS	Matrix Spike	Т	Solid	8015B	400-75702
400-34074-2MSD	Matrix Spike Duplicate	Т	Solid	8015B	400-75702
400-34074-3	5084134-3	Т	Solid	8015B	400-75702
Report Basis		•			
T = Total					
General Chemistry					
Analysis Batch:400-7571			· · · · · · · · · · · · · · · · · · ·		Transfer to the second
400-34074-1	5084134-1	Т	Solid	PercentMoisture	
400-34074-2	5084134-2	Т	Solid	PercentMoisture	
400-34074-3	5084134-3	Т	Solid	PercentMoisture	

Report Basis

T = Total

Quality Control Results

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Method Blank - Batch: 400-75885

Method: 8260B Preparation: 5035

Lab Sample ID: MB 400-75885/1-A

Client Matrix: Dilution:

1.0

Date Analyzed: Date Prepared:

Solid

09/09/2008 1057 09/09/2008 0800

Prep Batch: 400-75885 Units: mg/Kg

Instrument ID: GC/MS

Lab File ID: Initial Weight/Volume:

AS090905.D

5 g

Final Weight/Volume:

Analyte	Result	Qual	MDL	RL
	MANAGER VALLEY		ALL AND THE COMMENTS OF THE CO	**************************************

Analysis Batch: 400-75880

Acetone	<0.0073	0.0073	0.025
Benzene	<0.00046	0.00046	0.0050
Bromobenzene	<0.0013	0.0013	0.0050
Bromochloromethane	<0.00076	0.00076	0.0050
Bromodichloromethane	<0.00084	0.00084	0.0050
Bromoform	<0.00050	0.00050	0.0050
Bromomethane	<0.00091	0.00091	0.0050
Carbon disulfide	<0.0010	0.0010	0.0050
Carbon tetrachloride	<0.0017	0.0017	0.0050
Chlorobenzene	<0.00052	0.00052	0.0050
Chloroethane	<0.0019	0.0019	0.0050
Chloroform	<0.00059	0.00059	0.0050
Chloromethane	<0.00088	0.00088	0.0050
2-Chlorotoluene	<0.00096	0.00096	0.0050
4-Chlorotoluene	<0.00098	0.00098	0.0050
cis-1,2-Dichloroethene	<0.00076	0.00076	0.0050
cis-1,3-Dichloropropene	<0.0012	0.0012	0.0050
Dibromochloromethane	<0.00087	0.00087	0.0050
1,2-Dibromo-3-Chloropropane	<0.0033	0.0033	0.0050
Dibromomethane	<0.00083	0.00083	0.0050
1,2-Dichlorobenzene	<0.00071	0.00071	0.0050
1,3-Dichlorobenzene	<0.00095	0.00095	0.0050
1,4-Dichlorobenzene	<0.00082	0.00082	0.0050
Dichlorodifluoromethane	<0.0013	0.0013	0.0050
1,1-Dichloroethane	<0.00083	0.00083	0.0050
1,2-Dichloroethane	<0.00082	0.00082	0.0050
1,1-Dichloroethene	<0.00064	0.00064	0.0050
1,2-Dichloropropane	<0.00074	0.00074	0.0050
1,3-Dichloropropane	<0.00065	0.00065	0.0050
2,2-Dichloropropane	<0.0018	0.0018	0.0050
1,1-Dichloropropene	<0.00073	0.00073	0.0050
Ethylbenzene	<0.00054	0.00054	0.0050
Ethylene Dibromide	<0.0013	0.0013	0.0050
Hexachlorobutadiene	<0.0011	0.0011	0.0050
2-Hexanone	<0.0050	0.0050	0.025
lodomethane	<0.0034	0.0034	0.0050
Isopropylbenzene	<0.00056	0.00056	0.0050
.Isopropyl ether	<0.00055	0.00055	0.0050
Methylene Chloride	<0.0027	0.0027	0.0050
Methyl Ethyl Ketone	<0.0041	0.0041	0.025
methyl isobutyl ketone	<0.0040	0.0040	0.025

Calculations are performed before rounding to avoid round-off errors in calculated results.

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Method Blank - Batch: 400-75885

Method: 8260B Preparation: 5035

Lab Sample ID: MB 400-75885/1-A

Analysis Batch: 400-75880

Instrument ID: GC/MS

Client Matrix:

Solid

Prep Batch: 400-75885

Lab File ID:

Dilution:

1.0

Units: mg/Kg

AS090905.D

Date Analyzed: 09/09/2008 1057

Initial Weight/Volume: 5 g

Date Prepared:

09/09/2008 0800

Final Weight/Volume: 5 g

Analyte	Result	Qual	MDL	RL
Methyl tert-butyl ether	< 0.0010		0.0010	0.0050
m-Xylene & p-Xylene	<0.0015		0.0015	0.010
Naphthalene	<0.0023		0.0023	0.0050
n-Butylbenzene	<0.00096		0.00096	0.0050
N-Propylbenzene	<0.00090		0.00090	0.0050
o-Xylene	<0.00071		0.00071	0.0050
p-Cymene	<0.00078		0.00078	0.0050
sec-Butylbenzene	<0.00095		0.00095	0.0050
Styrene	<0.00076		0.00076	0.0050
tert-Butylbenzene	< 0.00079		0.00079	0.0050
1,1,1,2-Tetrachloroethane	<0.0010		0.0010	0.0050
1,1,2,2-Tetrachloroethane	< 0.00072		0.00072	0.0050
Tetrachloroethene	<0.00084		0.00084	0.0050
Toluene	<0.00068		0.00068	0.0050
trans-1,2-Dichloroethene	<0.00068		0.00068	0.0050
trans-1,3-Dichloropropene	<0.00092		0.00092	0.0050
1,2,3-Trichlorobenzene	<0.0012		0.0012	0.0050
1,2,4-Trichlorobenzene	< 0.00072		0.00072	0.0050
1,1,1-Trichloroethane	<0.0011		0.0011	0.0050
1,1,2-Trichloroethane	<0.00092		0.00092	0.0050
Trichloroethene	< 0.00045		0.00045	0.0050
Trichlorofluoromethane	< 0.00076		0.00076	0.0050
1,2,3-Trichloropropane	<0.0017		0.0017	0.0050
1,2,4-Trimethylbenzene	<0.0012		0.0012	0.0050
1,3,5-Trimethylbenzene	<0.00083		0.00083	0.0050
Vinyl acetate	<0.0091		0.0091	0.025
Vinyl chloride	<0.00092		0.00092	0.0050
Surrogate	% Rec		Acceptance Limits	
4-Bromofluorobenzene	103		73 - 124	
Dibromofluoromethane	99		75 - 136	
Toluene-d8 (Surr)	103		75 - 126	

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Lab Control Spike - Batch: 400-75885 Method: 8260B

Preparation: 5035

Lab Sample ID: LCS 400-75885/2-A

Client Matrix: Solid Dilution:

1.0

Date Analyzed:

09/09/2008 1140

09/09/2008 0800 Date Prepared:

Analysis Batch: 400-75880 Prep Batch: 400-75885

Units: mg/Kg

Instrument ID: GC/MS

AS090907.D Lab File ID:

Initial Weight/Volume: 5 g Final Weight/Volume: 5 g

Acelone 0.200 0.183 92 46 - 152 Berzene 0.0500 0.0514 103 81 - 124 Bromobenzene 0.0500 0.0514 103 81 - 120 Bromochloromethane 0.0500 0.0480 96 77 - 123 Bromochromethane 0.0500 0.0484 97 66 - 130 Bromotem 0.0500 0.0484 97 66 - 130 Bromotembane 0.0500 0.0376 75 65 - 123 Carbon disulfide 0.0500 0.0507 101 65 - 149 Carbon disulfide 0.0500 0.0507 101 65 - 149 Carbon disulfide 0.0500 0.0507 101 65 - 149 Carbon disulfide 0.0500 0.0507 101 75 - 152 Carbon disulfide 0.0500 0.0507 101 75 - 152 Carbon disulfide 0.0500 0.0507 101 75 - 152 Carbon disulfide 0.0500 0.0500 0.0460 92 53 - 134 <th>Analyte</th> <th>Spike Amount</th> <th>Result</th> <th>% Rec.</th> <th>Limit</th> <th>Qual</th>	Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bromochezene 0,0500 0,0480 96 77 - 123 Bromochioromethane 0,0500 0,0803 101 69 - 132 Bromochioromethane 0,0500 0,0484 97 66 - 130 Bromodelhioromethane 0,0500 0,0486 87 21 - 156 Bromodel sulfide 0,0500 0,0486 87 21 - 156 Carbon disulfide 0,0500 0,0376 75 65 - 123 Carbon tetrachloride 0,0500 0,0507 101 65 - 149 Chloromethane 0,0500 0,0503 107 83 - 120 Chloromethane 0,0500 0,0600 92 53 - 134 Chloromethane 0,0500 0,0507 101 72 - 129 Chloromothane 0,0500 0,0504 101 72 - 129 4-Chlorotoluene 0,0500 0,0504 104 75 - 128 6-1-2-Dichloroperpane 0,0500 0,0520 104 77 - 126 6-1-3-1,3-Dichloroperpane 0,0500 0,0477 95	Acetone	0.200	0.183	92	46 - 152	
Bromochloromethane 0,0500 0,0480 96 77 - 123 Bromodichloromethane 0,0500 0,0484 97 66 - 130 Bromomethane 0,0500 0,0486 97 21 - 156 Carbon disulfide 0,0500 0,0376 75 65 - 123 Carbon disulfide 0,0500 0,0507 101 65 - 149 Chlorobenzene 0,0500 0,0533 107 83 - 120 Chlorobenzene 0,0500 0,0460 92 53 - 134 Chloroform 0,0500 0,0450 91 55 - 126 Chlororofume 0,0500 0,0455 91 55 - 126 Chlororofuluene 0,0500 0,0504 101 72 - 127 Chlororotuluene 0,0500 0,0518 104 75 - 122 4-Chlororotuluene 0,0500 0,0518 104 75 - 122 4-Chlororotuluene 0,0500 0,0518 104 75 - 122 4-Chlororotuluene 0,0500 0,0497 99 74 - 130	Benzene	0.0500	0.0520	104	78 - 124	
Bromodichloromethane 0,0500 0,0503 101 69 - 132 Bromoform 0,0500 0,0484 97 65 - 103 Bromomethane 0,0500 0,0376 75 65 - 123 Carbon tetrachloride 0,0500 0,0507 101 65 - 148 Chlorobenzene 0,0500 0,0533 107 83 - 120 Chlorochtane 0,0500 0,0460 92 53 - 134 Chlorochtane 0,0500 0,0507 101 72 - 127 Chloromethane 0,0500 0,0550 101 72 - 127 Chlorochtane 0,0500 0,0545 91 55 - 126 2-Chlorotoluene 0,0500 0,0545 101 72 - 127 Chlororothane 0,0500 0,0501 104 77 - 126 cis-1,2-Dichlorothane 0,0500 0,0502 104 77 - 126 cis-1,2-Dichlorothane 0,0500 0,047 95 76 - 122 cis-1,3-Dichlorothane 0,0500 0,041 89 60 - 139	Bromobenzene	0.0500	0.0514	103	81 - 120	
Bromoform 0.0500 0.0484 97 66 - 130 Bromomethane 0.0500 0.0486 97 21 - 156 Carbon disulfide 0.0500 0.0507 101 65 - 143 Carbon tetrachloride 0.0500 0.0507 101 65 - 149 Chloroebracene 0.0500 0.0480 92 53 - 134 Chloroefform 0.0500 0.0450 91 72 - 127 Chlororoffar 0.0500 0.0507 101 72 - 127 Chlororotluene 0.0500 0.0504 101 72 - 129 4-Chlorotoluene 0.0500 0.0518 104 75 - 126 2-Chiorotoluene 0.0500 0.0518 104 75 - 126 4-Chlororotoluene 0.0500 0.0518 104 75 - 126 4-Chlorotoluene 0.0500 0.0518 104 75 - 126 6-1,3-Dichlorothene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0417 95 76 - 122	Bromochloromethane	0.0500	0.0480	96	77 - 123	
Bromomethane 0.0500 0.0486 97 21-156 Carbon telsuffide 0.0500 0.0376 75 65-143 Carbon tetrachloride 0.0500 0.0533 107 83-120 Chloroethane 0.0500 0.0460 92 53-134 Chloroform 0.0500 0.0455 91 55-126 Chlorotoluene 0.0500 0.0504 101 72-127 Chlorotoluene 0.0500 0.0504 101 72-129 4-Chlorotoluene 0.0500 0.0518 104 75-129 4-Chlorotoluene 0.0500 0.0520 104 77-126 cis-1,3-Dichloropropene 0.0500 0.0520 104 77-126 cis-1,3-Dichloropropene 0.0500 0.0477 95 76-122 1,2-Dichloropropane 0.0500 0.0477 95 76-122 1,2-Dichloropropane 0.0500 0.0443 89 60-139 1,2-Dichloropropane 0.0500 0.0511 102 80-122	Bromodichloromethane	0.0500	0.0503	101	69 - 132	
Carbon disulfide 0.0500 0.0376 75 65-123 Carbon tetrachloride 0.0500 0.0507 101 65-149 Chlorobenace 0.0500 0.0503 107 83-120 Chloroethane 0.0500 0.0460 92 53-134 Chloroform 0.0500 0.0507 101 72-127 Chlororothuene 0.0500 0.0504 101 72-129 4-Chlorotoluene 0.0500 0.0504 101 72-129 4-Chlorotoluene 0.0500 0.0518 104 75-129 cis-1,2-Dichlororethene 0.0500 0.0520 104 77-126 cis-1,3-Dichloropropene 0.0500 0.0497 99 74-130 Dibromochloromethane 0.0500 0.0447 95 76-122 1,2-Dichlorobenzene 0.0500 0.0510 102 73-134 1,2-Dichlorobenzene 0.0500 0.0511 102 80-122 1,4-Dichloroethane 0.0500 0.0514 103 71-131	Bromoform	0.0500	0.0484	97	66 - 130	
Carbon tetrachloride 0.0500 0.0507 101 65 - 149 Chlorobenzene 0.0500 0.0533 107 83 - 120 Chlorofame 0.0500 0.0460 92 53 - 134 Chloroform 0.0500 0.0507 101 72 - 127 Chlorofolune 0.0500 0.0555 91 55 - 126 2-Chlorotolune 0.0500 0.0518 104 75 - 129 4-Chlorotolune 0.0500 0.0520 104 77 - 126 cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0477 95 76 - 122 1,2-Diromo-3-Chloropropane 0.0500 0.0477 95 76 - 122 1,2-Diromo-3-Chloropropane 0.0500 0.0477 95 76 - 122 1,2-Dirohoro-S-Chloropropane 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,4-Dichlorobenzene 0.0500 0.0514	Bromomethane	0.0500	0.0486	97	21 - 156	
Chlorobenzene 0.0500 0.0533 107 83 - 120 Chloroethane 0.0500 0.0460 92 53 - 134 Chloromethane 0.0500 0.0507 101 72 - 127 Chloromethane 0.0500 0.0554 91 55 - 126 2-Chiorotoluene 0.0500 0.0504 101 72 - 129 4-Chlorotoluene 0.0500 0.0504 101 72 - 129 4-Chlorotoluene 0.0500 0.0502 104 75 - 129 cis-1,2-Dichloroethene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0477 95 76 - 122 1,2-Dibromo-3-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromochloromethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0514 102 76 - 122 1,3-Dichlorobenzene 0.0500 0.0514 102 76 - 128 Dichlorodifluroromethane 0.0500 0.0514 <td< td=""><td>Carbon disulfide</td><td>0.0500</td><td>0.0376</td><td>75</td><td>65 - 123</td><td></td></td<>	Carbon disulfide	0.0500	0.0376	75	65 - 123	
Chloroethane 0.0500 0.0460 92 53 - 134 Chloroform 0.0500 0.0545 91 55 - 126 Chloroteluene 0.0500 0.0545 91 55 - 126 2-Chioroteluene 0.0500 0.0514 101 72 - 129 4-Chioroteluene 0.0500 0.0518 104 75 - 129 cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dibromo-3-Chloropropane 0.0500 0.0511 102 80 - 122 1,2-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0514 102 80 - 122 1,4-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloropropane 0.0500 0.0456	Carbon tetrachloride	0.0500	0.0507	101	65 - 149	
Chloroform 0.0500 0.0507 101 72 - 127 Chloromethane 0.0500 0.0554 91 55 - 126 2-Chlorotofuene 0.0500 0.0504 101 72 - 129 4-Chlorotofuene 0.0500 0.0518 104 75 - 129 cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0477 95 76 - 122 1,2-Dichloropropane 0.0500 0.0443 89 60 - 139 Dibromo-3-Chloropropane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,3-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0514 103 71 - 131 1,2-Dichloropenane 0.0500 0.0546 91 41 - 140 1,1-Dichloropropane 0.0500 0.0438	Chlorobenzene	0.0500	0.0533	107	83 - 120	
Chloromethane 0.0500 0.0455 91 55 - 126 2-Chiorotoluene 0.0500 0.0504 104 72 - 129 4-Chiorotoluene 0.0500 0.0518 104 75 - 129 cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0477 95 76 - 122 1,2-Dibromos-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 76 - 128 1,4-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 103 71 - 131 1,1-Dichloroethane 0.0500 0.0438 88 66 - 137 1,2-Dichloropropane 0.0500 0.043	Chloroethane	0.0500	0.0460	92	53 - 134	
2-Chiorotoluene 0.0500 0.0514 101 72 - 129 4-Chiorotoluene 0.0500 0.0518 104 75 - 129 cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0447 95 76 - 122 1,2-Dibromo-3-Chiloropropane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0511 102 89 - 122 1,4-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 103 71 - 131 1,1-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloropropane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane <	Chloroform	0.0500	0.0507	101	72 - 127	
4-Chlorotoluene 0.0500 0.0518 104 75 - 129 cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0477 95 76 - 122 1,2-Dibromo-3-Chloropropane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0511 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0511 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 103 71 - 131 1,2-Dichlorobethane 0.0500 0.0436 91 41 - 140 1,1-Dichloroethane 0.0500 0.0470 94 75 - 122 1,2-Dichloroptopane 0.0500 0.0470 94 75 - 122 1,2-Dichloroptopane 0.0500 0.0470 94 78 - 122 1,2-Dichloroptopane <	Chloromethane	0.0500	0.0455	91	55 - 126	
cis-1,2-Dichloroethene 0.0500 0.0520 104 77 - 126 cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0477 95 76 - 122 1,2-Dibromo-3-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichloroethane 0.0500 0.0510 102 76 - 128 Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0438 8 66 - 137 1,1-Dichloroethane 0.0500 0.0438 8 66 - 137 1,2-Dichloroptopane 0.0500 0.0470 94 75 - 122 1,2-Dichloroptopane 0.0500 0.0481 98 64 - 141 1,3-Dichloroptopane 0.0500 0.050	2-Chlorotoluene	0.0500	0.0504	101	72 - 129	
cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.0477 95 76 - 122 1,2-Dibromo-3-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,3-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0436 88 66 - 137 1,1-Dichloropropane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 99 78 - 124 1,3-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500	4-Chlorotoluene	0.0500	0.0518	104	75 - 129	
cis-1,3-Dichloropropene 0.0500 0.0497 99 74 - 130 Dibromochloromethane 0.0500 0.04477 95 76 - 122 1,2-Dibromo-3-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,3-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0438 88 66 - 137 1,2-Dichloropropane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 99 78 - 124 1,3-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500	cis-1,2-Dichloroethene	0.0500	0.0520	104	77 - 126	
Dibromochloromethane 0.0500 0.0477 95 76 - 122 1,2-Dibromo-3-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,3-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroptopane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500 0.0512 102 73 - 130 Ethylene Dibromide 0.0500	•	0.0500				
1,2-Dibromo-3-Chloropropane 0.0500 0.0443 89 60 - 139 Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0456 91 41 - 140 1,1-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,3-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500 0.0512 102 73 - 130 Ethylene Dibromide 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>						
Dibromomethane 0.0500 0.0510 102 73 - 134 1,2-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0546 91 41 - 140 1,1-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroethane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500 0.0512 102 73 - 130 Ethylene Dibromide 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0573 115 62 - 150 2-Hexanone 0.0500 0.0485						
1,2-Dichlorobenzene 0.0500 0.0518 104 82 - 120 1,3-Dichlorobenzene 0.0500 0.0511 102 80 - 122 1,4-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0456 91 41 - 140 1,1-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 94 75 - 122 1,2-Dichloropropane 0.0500 0.0497 99 78 - 121 1,3-Dichloropropane 0.0500 0.0488 98 64 - 141 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Isopropylbenzene 0.0500 0.0518	• •					
1,3-Dichlorobenzene 0.0500 0.0511 102 76 - 128 1,4-Dichlorodenzene 0.0500 0.0510 102 76 - 128 Dichlorodiffluoromethane 0.0500 0.0456 91 41 - 140 1,1-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0519 104 78 - 121 1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylbenzene 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0518	1,2-Dichlorobenzene	0.0500	0.0518	104		
1,4-Dichlorobenzene 0.0500 0.0510 102 76 - 128 Dichlorodifluoromethane 0.0500 0.0456 91 41 - 140 1,1-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0519 104 78 - 121 1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexanone 0.0500 0.0573 115 62 - 150 2-Hexanone 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 <td< td=""><td>1,3-Dichlorobenzene</td><td>0.0500</td><td>0.0511</td><td>102</td><td></td><td></td></td<>	1,3-Dichlorobenzene	0.0500	0.0511	102		
Dichlorodifluoromethane 0.0500 0.0456 91 41 - 140 1,1-Dichloroethane 0.0500 0.0514 103 71 - 131 1,2-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0519 104 78 - 121 1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropane 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Iodomethane 0.0500 0.0539 108 78 - 126 Isopropylbenzene 0.0500 0.0518 104	1,4-Dichlorobenzene	0.0500	0.0510	102	76 - 128	
1,2-Dichloroethane 0.0500 0.0438 88 66 - 137 1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0519 104 78 - 121 1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Isopropylbenzene 0.0500 0.0485 97 62 - 136 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193	Dichlorodifluoromethane		0.0456	91	41 - 140	
1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0519 104 78 - 121 1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Isopropylbenzene 0.0500 0.0485 97 62 - 136 Isopropyl ether 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 0.	1,1-Dichloroethane	0.0500	0.0514	103	71 - 131	
1,1-Dichloroethene 0.0500 0.0470 94 75 - 122 1,2-Dichloropropane 0.0500 0.0519 104 78 - 121 1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Isopropylbenzene 0.0500 0.0485 97 62 - 136 Isopropyl ether 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 0.	1,2-Dichloroethane	0.0500	0.0438	88	66 - 137	
1,3-Dichloropropane 0.0500 0.0497 99 78 - 124 2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Iodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	1,1-Dichloroethene	0.0500	0.0470		75 - 122	
2,2-Dichloropropane 0.0500 0.0488 98 64 - 141 1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Iodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	1,2-Dichloropropane	0.0500	0.0519	104	78 - 121	
1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 Iodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	1,3-Dichloropropane	0.0500	0.0497	99	78 - 124	
1,1-Dichloropropene 0.0500 0.0512 102 73 - 130 Ethylbenzene 0.0500 0.0525 105 79 - 125 Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 lodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	2,2-Dichloropropane	0.0500	0.0488	98	64 - 141	
Ethylene Dibromide 0.0500 0.0501 100 82 - 121 Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 lodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	1,1-Dichloropropene	0.0500	0.0512		73 - 130	
Hexachlorobutadiene 0.0500 0.0573 115 62 - 150 2-Hexanone 0.200 0.183 92 61 - 138 lodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	Ethylbenzene	0.0500	0.0525	105	79 - 125	
2-Hexanone 0.200 0.183 92 61 - 138 Iodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	Ethylene Dibromide	0.0500	0.0501	100	82 - 121	
Iodomethane 0.0500 0.0485 97 62 - 136 Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	Hexachlorobutadiene	0.0500	0.0573	115	62 - 150	
Isopropylbenzene 0.0500 0.0539 108 78 - 126 Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	2-Hexanone	0.200	0.183	92	61 - 138	
Isopropyl ether 0.0500 0.0518 104 63 - 143 Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	Iodomethane	0.0500	0.0485	97	62 - 136	
Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134	Isopropylbenzene	0.0500	0.0539	108	78 - 126	
Methylene Chloride 0.0500 0.0457 91 67 - 131 Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134		0.0500	0.0518			
Methyl Ethyl Ketone 0.200 0.188 94 54 - 149 methyl isobutyl ketone 0.200 0.193 96 67 - 134						
methyl isobutyl ketone 0.200 0.193 96 67 - 134	•					
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	* *					

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Lab Control Spike - Batch: 400-75885

Method: 8260B Preparation: 5035

Lab Sample ID: LCS 400-75885/2-A

Client Matrix:

Solid

Dilution:

1.0

Date Analyzed: 09/09/2008 1140

Date Prepared: 09/09/2008 0800

Analysis Batch: 400-75880 Prep Batch: 400-75885

Units: mg/Kg

Instrument ID: GC/MS

Lab File ID:

AS090907.D

Initial Weight/Volume: 5 g

Final Weight/Volume: 5 g

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
m-Xylene & p-Xylene	0.100	0.106	106	77 - 128	
Naphthalene	0.0500	0.0508	102	60 - 138	
n-Butylbenzene	0.0500	0.0524	105	62 - 143	
N-Propylbenzene	0.0500	0.0517	103	72 - 131	
o-Xylene	0.0500	0.0536	107	81 - 122	
p-Cymene	0.0500	0.0523	105	71 - 133	
sec-Butylbenzene	0.0500	0.0526	105	74 - 128	
Styrene	0.0500	0.0525	105	82 - 119	
tert-Butylbenzene	0.0500	0.0511	102	76 - 124	
1,1,1,2-Tetrachloroethane	0.0500	0.0503	101	78 - 124	
1,1,2,2-Tetrachloroethane	0.0500	0.0452	90	73 - 124	
Tetrachloroethene	0.0500	0.0544	109	79 - 126	
Toluene	0.0500	0.0534	107	80 - 123	
trans-1,2-Dichloroethene	0.0500	0.0496	99	77 - 124	
trans-1,3-Dichloropropene	0.0500	0.0476	95	75 - 128	
1,2,3-Trichlorobenzene	0.0500	0.0536	107	76 - 129	
1,2,4-Trichlorobenzene	0.0500	0.0546	109	74 - 132	
1,1,1-Trichloroethane	0.0500	0.0498	100	78 - 129	
1,1,2-Trichloroethane	0.0500	0.0514	103	78 - 122	
Trichloroethene	0.0500	0.0528	106	79 - 126	
Trichlorofluoromethane	0.0500	0.0508	102	65 - 138	
1,2,3-Trichloropropane	0.0500	0.0444	89	72 - 129	
1,2,4-Trimethylbenzene	0.0500	0.0523	105	74 - 131	
1,3,5-Trimethylbenzene	0.0500	0.0521	104	74 - 131	
Vinyl acetate	0.100	0.0962	96	55 - 156	
Vinyl chloride	0.0500	0.0433	87	60 - 124	
Surrogate	%	Rec	A	cceptance Limits	
4-Bromofluorobenzene		02		73 - 124	
Dibromofluoromethane	9	7	75 - 136		
Foluene-d8 (Surr)	1	02		75 - 126	

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Method Blank - Batch: 400-76052

Method: 8260B Preparation: 5035

Lab Sample ID:

MB 400-76052/1-A

Analysis Batch: 400-76045

Instrument ID: GC/MS

Client Matrix:

Solid

Prep Batch: 400-76052

Units: mg/Kg

AS091005.D

Dilution:

1.0

Lab File ID: Initial Weight/Volume: 5 q

Date Analyzed:

09/10/2008 1135

Final Weight/Volume:

5 g

Date Prepared:

09/10/2008 0800

Result MDL RL Analyte Qual Acetone < 0.0073 0.0073 0.025 Benzene < 0.00046 0.00046 0.0050 < 0.0013 0.0013 0.0050 Bromobenzene Bromochloromethane < 0.00076 0.00076 0.0050 Bromodichloromethane < 0.00084 0.00084 0.0050 Bromoform < 0.00050 0.00050 0.0050 < 0.00091 0.00091 0.0050 Bromomethane Carbon disulfide < 0.0010 0.0010 0.0050 Carbon tetrachloride < 0.0017 0.0017 0.0050 Chlorobenzene < 0.00052 0.00052 0.0050 Chloroethane < 0.0019 0.0019 0.0050 Chloroform < 0.00059 0.00059 0.0050 Chloromethane < 0.00088 0.00088 0.0050 2-Chlorotoluene < 0.00096 0.00096 0.0050 4-Chlorotoluene <0.00098 0.00098 0.0050 cis-1,2-Dichloroethene < 0.00076 0.00076 0.0050 cis-1,3-Dichloropropene < 0.0012 0.0012 0.0050 Dibromochloromethane < 0.00087 0.00087 0.0050 1,2-Dibromo-3-Chloropropane < 0.0033 0.0033 0.0050 Dibromomethane < 0.00083 0.00083 0.0050 < 0.00071 1,2-Dichlorobenzene 0.00071 0.0050 1,3-Dichlorobenzene < 0.00095 0.00095 0.0050 < 0.00082 0.00082 0.0050 1.4-Dichlorobenzene < 0.0013 Dichlorodifluoromethane 0.0013 0.0050 < 0.00083 1,1-Dichloroethane 0.00083 0.0050 < 0.00082 1.2-Dichloroethane 0.00082 0.0050 1,1-Dichloroethene < 0.00064 0.00064 0.0050 < 0.00074 1,2-Dichloropropane 0.00074 0.0050 < 0.00065 1,3-Dichloropropane 0.00065 0.0050 < 0.0018 2,2-Dichloropropane 0.0018 0.0050 < 0.00073 1,1-Dichloropropene 0.00073 0.0050 Ethylbenzene < 0.00054 0.00054 0.0050 Ethylene Dibromide < 0.0013 0.0013 0.0050 Hexachlorobutadiene < 0.0011 0.0011 0.0050 < 0.0050 2-Hexanone 0.0050 0.025 iodomethane < 0.0034 0.0034 0.0050 < 0.00056 Isopropylbenzene 0.00056 0.0050 < 0.00055 Isopropyl ether 0.00055 0.0050 Methylene Chloride < 0.0027 0.0027 0.0050 Methyl Ethyl Ketone < 0.0041 0.0041 0.025 methyl isobutyl ketone < 0.0040 0.0040 0.025

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Method Blank - Batch: 400-76052

Method: 8260B Preparation: 5035

Lab Sample ID: MB 400-76052/1-A

Solid

Client Matrix: Dilution:

Date Analyzed:

Surrogate

4-Bromofluorobenzene

Dibromofluoromethane

Toluene-d8 (Surr)

1.0

09/10/2008 1135 Date Prepared: 09/10/2008 0800 Analysis Batch: 400-76045

Prep Batch: 400-76052

Units: mg/Kg

Instrument ID: GC/MS

Acceptance Limits

73 - 124 75 - 136

75 - 126

AS091005.D Lab File ID: Initial Weight/Volume: 5 g

Final Weight/Volume:

Analyte	Result	Qual	MDL	RL
Methyl tert-butyl ether	<0.0010		0.0010	0.0050
m-Xylene & p-Xylene	<0.0015		0.0015	0.010
Naphthalene	<0.0023		0.0023	0.0050
n-Butylbenzene	<0.00096		0.00096	0.0050
N-Propylbenzene	<0.00090		0.00090	0.0050
o-Xylene	<0.00071		0.00071	0.0050
p-Cymene	<0.00078		0.00078	0.0050
sec-Butylbenzene	<0.00095		0.00095	0.0050
Styrene	<0.00076		0.00076	0.0050
tert-Butylbenzene	< 0.00079		0.00079	0.0050
1,1,1,2-Tetrachloroethane	<0.0010		0.0010	0.0050
1,1,2,2-Tetrachloroethane	< 0.00072		0.00072	0.0050
Tetrachloroethene	<0.00084		0.00084	0.0050
Toluene	<0.00068		0.00068	0.0050
trans-1,2-Dichloroethene	<0.00068		0.00068	0.0050
trans-1,3-Dichloropropene	< 0.00092		0.00092	0.0050
1,2,3-Trichlorobenzene	<0.0012		0.0012	0.0050
1,2,4-Trichlorobenzene	<0.00072		0.00072	0.0050
1,1,1-Trichloroethane	<0.0011		0.0011	0.0050
1,1,2-Trichloroethane	<0.00092		0.00092	0.0050
Trichloroethene	< 0.00045		0.00045	0.0050
Trichlorofluoromethane	< 0.00076		0.00076	0.0050
1,2,3-Trichloropropane	<0.0017		0.0017	0.0050
1,2,4-Trimethylbenzene	<0.0012		0.0012	0.0050
1,3,5-Trimethylbenzene	<0.00083		0.00083	0.0050
Vinyl acetate	<0.0091		0.0091	0.025
Vinyl chloride	<0.00092		0.00092	0.0050

% Rec

101

98

98

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Lab Control Spike - Batch: 400-76052

Method: 8260B Preparation: 5035

Client Matrix:

Lab Sample ID: LCS 400-76052/2-A

Solid

1.0 Dilution:

Date Analyzed: 09/10/2008 1157

Analysis Batch: 400-76045 Prep Batch: 400-76052

Units: mg/Kg

Instrument ID: GC/MS Lab File ID:

AS091006.D

Initial Weight/Volume: 5 g

Final Weight/Volume: 5 g

Date Prepared: 09/10/2008 0800	Date Analyzed.	00/10/2000	
	Date Prepared:	09/10/2008	0800

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acetone	0.200	0.192	96	46 - 152	
Benzene	0.0500	0.0486	97	78 - 124	
Bromobenzene	0.0500	0.0514	103	81 - 120	
3romochloromethane	0.0500	0.0473	95	77 - 123	
3romodichloromethane	0.0500	0.0512	102	69 - 132	
3romoform	0.0500	0.0520	104	66 - 130	
3romomethane	0.0500	0.0424	85	21 - 156	
Carbon disulfide	0.0500	0.0375	75	65 - 123	
Carbon tetrachloride	0.0500	0.0504	101	65 - 149	
Chlorobenzene	0.0500	0.0520	104	83 - 120	
Chloroethane	0.0500	0.0434	87	53 - 134	
Chloroform	0.0500	0.0497	99	72 - 127	
Chloromethane	0.0500	0.0414	83	55 - 126	
2-Chlorotoluene	0.0500	0.0500	100	72 - 129	
4-Chlorotoluene	0.0500	0.0511	102	75 - 129	
cis-1,2-Dichloroethene	0.0500	0.0489	98	77 - 126	
cis-1,3-Dichloropropene	0.0500	0.0482	96	74 - 130	
Dibromochloromethane	0.0500	0.0490	98	76 - 122	
1,2-Dibromo-3-Chloropropane	0.0500	0.0509	102	60 - 139	
Dibromomethane	0.0500	0.0525	105	73 - 134	
1,2-Dichlorobenzene	0.0500	0.0510	102	82 - 120	
,3-Dichlorobenzene	0.0500	0.0502	100	80 - 122	
1,4-Dichlorobenzene	0.0500	0.0506	101	76 - 128	
Dichlorodifluoromethane	0.0500	0.0432	86	41 - 140	
1,1-Dichloroethane	0.0500	0.0488	98	71 - 131	
I,2-Dichloroethane	0.0500	0.0411	82	66 - 137	
,1-Dichloroethene	0.0500	0.0454	91	75 - 122	
,2-Dichloropropane	0.0500	0.0427	85	78 - 121	
1,3-Dichloropropane	0.0500	0.0501	100	78 - 124	
2,2-Dichloropropane	0.0500	0.0481	96	64 - 141	
,1-Dichloropropene	0.0500	0.0483	97	73 - 130	
Ethylbenzene	0.0500	0.0507	101	79 - 125	
Ethylene Dibromide	0.0500	0.0521	104	82 - 121	
lexachlorobutadiene	0.0500	0.0556	111	62 - 150	
?-Hexanone	0.200	0.205	103	61 - 138	
odomethane	0.0500	0.0478	96	62 - 136	
sopropylbenzene	0.0500	0.0521	104	78 - 126	
sopropyl ether	0.0500	0.0503	101	63 - 143	
Methylene Chloride	0.0500	0.0456	91	67 - 131	
Methyl Ethyl Ketone	0.200	0.192	96	54 - 149	
methyl isobutyl ketone	0.200	0.206	103	67 - 134	
Methyl tert-butyl ether	0.0500	0.0469	94	68 - 137	

Client: Gannett Fleming

Job Number: 400-34074-1 Sdg Number: CVX Fac #5084134

Lab Control Spike - Batch: 400-76052

Method: 8260B Preparation: 5035

Lab Sample ID: LCS 400-76052/2-A

Analysis Batch: 400-76045

Client Matrix:

Solid

Instrument ID: GC/MS Lab File ID:

AS091006.D

Dilution:

Prep Batch: 400-76052

Date Analyzed: 09/10/2008 1157

1.0

Units: mg/Kg

Initial Weight/Volume: 5 g

Date Prepared: 09/10/2008 0800

Final Weight/Volume: 5 g

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
m-Xylene & p-Xylene	0.100	0.103	103	77 - 128	
Naphthalene	0.0500	0.0557	111	60 - 138	
n-Butylbenzene	0.0500	0.0504	101	62 - 143	
N-Propylbenzene	0.0500	0.0502	100	72 - 131	
o-Xylene	0.0500	0.0522	104	81 - 122	
p-Cymene	0.0500	0.0498	100	71 - 133	
sec-Butylbenzene	0.0500	0.0504	101	74 - 128	
Styrene	0.0500	0.0509	102	82 - 119	
tert-Butylbenzene	0.0500	0.0490	98	76 - 124	
1,1,1,2-Tetrachloroethane	0.0500	0.0502	100	78 - 124	
1,1,2,2-Tetrachloroethane	0.0500	0.0486	97	73 - 124	
Tetrachloroethene	0.0500	0.0523	105	79 - 126	
Toluene	0.0500	0.0531	106	80 - 123	
trans-1,2-Dichloroethene	0.0500	0.0471	94	77 - 124	
trans-1,3-Dichloropropene	0.0500	0.0492	98	75 - 128	
1,2,3-Trichlorobenzene	0.0500	0.0550	110	76 - 129	
1,2,4-Trichlorobenzene	0.0500	0.0549	110	74 - 132	
1,1,1-Trichloroethane	0.0500	0.0494	99	78 - 129	
1,1,2-Trichloroethane	0.0500	0.0532	106	78 - 122	
Trichloroethene	0.0500	0.0504	101	79 - 126	
Trichlorofluoromethane	0.0500	0.0493	99	65 - 138	
1,2,3-Trichloropropane	0.0500	0.0475	95	72 - 129	
1,2,4-Trimethylbenzene	0.0500	0.0510	102	74 - 131	
1,3,5-Trimethylbenzene	0.0500	0.0507	101	74 - 131	
Vinyl acetate	0.100	0.0975	98	55 - 156	
Vinyl chloride	0.0500	0.0401	80	60 - 124	
Surrogate	%	Rec	A	cceptance Limits	
4-Bromofluorobenzene	1	02		73 - 124	THE PERSON NAMED AND POST OF THE PERSON NAMED AND POST OF THE PERSON NAMED AND POST OF THE PERSON NAMED AND P
Dibromofluoromethane	9	9		75 - 136	
Toluene-d8 (Surr)	1	02		75 - 126	

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Method Blank - Batch: 400-76064

Method: 8015M Preparation: 5035

Lab Sample ID:

MB 400-76064/1-A

Client Matrix:

Solid

Dilution:

Date Analyzed: Date Prepared:

50

09/10/2008 1810

09/10/2008 1630

Analysis Batch: 400-76008

Prep Batch: 400-76064

Units: mg/Kg

Instrument ID: GC/PID/FID

Lab File ID:

P091002.D

Initial Weight/Volume:

5.0 g 5.0 g

Final Weight/Volume: Injection Volume:

Column ID:

PRIMARY

Analyte

Gasoline Range Organics (GRO)-C6-C10

Result

Qual

RL

Lab Control Spike - Batch: 400-76064

<5.0

5.0

Surrogate

a,a,a-Trifluorotoluene (fid)

% Rec 96

Acceptance Limits 69 - 129

Method: 8015M Preparation: 5035

Lab Sample ID: LCS 400-76064/2-A

Client Matrix:

Solid

Dilution:

09/11/2008 1207 Date Analyzed:

Date Prepared:

09/10/2008 1630

Analysis Batch: 400-76008

Prep Batch: 400-76064

Units: mg/Kg

Instrument ID: GC/PID/FID

Lab File ID:

P091103.D

Initial Weight/Volume:

5.0 g 5.0 g

Final Weight/Volume: Injection Volume:

Column ID:

PRIMARY

Analyte

Spike Amount 10.0

Result 11.3

% Rec.

Limit

Qual

Gasoline Range Organics (GRO)-C6-C10

113

79 - 123

Surrogate

a,a,a-Trifluorotoluene (fid)

% Rec 96

Acceptance Limits 69 - 129

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Method Blank - Batch: 400-75702

Method: 8015B Preparation: 3550B

Lab Sample ID: MB 400-75702/13-A

Client Matrix:

Solid

Dilution:

1.0

Date Analyzed: Date Prepared: 09/08/2008 1918

09/08/2008 0817

Analysis Batch: 400-75802 Prep Batch: 400-75702

Units: mg/Kg

Instrument ID: GC/FID/FID 2601026.D

Lab File ID: Initial Weight/Volume:

30.00 g

Final Weight/Volume:

5.0 mL

Injection Volume:

Column ID:

PRIMARY

Analyte

Result

Qual

RL

2.5

Diesel Range Organics [C10-C28]

<2.5

Surrogate

% Rec

Acceptance Limits

o-Terphenyl

78

59 - 143

Lab Control Spike - Batch: 400-75702

Method: 8015B Preparation: 3550B

Lab Sample ID: LCS 400-75702/12-A

Client Matrix:

Solid

Dilution: Date Analyzed:

1.0 09/08/2008 1924

Date Prepared:

09/08/2008 0817

Analysis Batch: 400-75802 Prep Batch: 400-75702

Units: mg/Kg

Instrument ID: GC/FID/FID Lab File ID:

2701027.D

Initial Weight/Volume: 30.00 g

Final Weight/Volume:

Injection Volume:

Column ID:

PRIMARY

5.0 mL

Qual

Spike Amount

Result

% Rec.

Limit

Diesel Range Organics [C10-C28]

Analyte

334

351

105

67 - 155

Surrogate o-Terphenyl % Rec 89

Acceptance Limits 59 - 143

Client: Gannett Fleming

Job Number: 400-34074-1

Sdg Number: CVX Fac #5084134

Matrix Spike/

Matrix Spike Duplicate Recovery Report - Batch: 400-75702

Method: 8015B Preparation: 3550B

MS Lab Sample ID:

400-34074-2

Analysis Batch: 400-75802

Instrument ID: GC/FID/FID

Client Matrix:

Solid

Prep Batch: 400-75702

2901029.D

Dilution:

1.0

Lab File ID:

Date Analyzed:

09/08/2008 1935

Initial Weight/Volume: Final Weight/Volume:

30.20 g 5.0 mL

Date Prepared:

09/08/2008 0817

Injection Volume: Column ID:

PRIMARY

MSD Lab Sample ID:

400-34074-2

Analysis Batch: 400-75802

Instrument ID: GC/FID/FID

Client Matrix:

Solid

Lab File ID:

3001030.D

Dilution:

Prep Batch: 400-75702

Initial Weight/Volume:

30.03 g

Date Analyzed: Date Prepared: 1.0 09/08/2008 1941

09/08/2008 0817

Final Weight/Volume:

5.0 mL

Injection Volume:

Column ID:

PRIMARY

% Rec.

Analyte

MS

MSD Limit RPD

2

RPD Limit

MSD Qual

Diesel Range Organics [C10-C28]

84

85 43 - 144

47

MS Qual

Surrogate

MS % Rec

MSD % Rec

Acceptance Limits

o-Terphenyl

74

61

59 - 143

Matrix Spike/

Matrix Spike Duplicate Data Report - Batch: 400-75702

Method: 8015B

Preparation: 3550B

MS Lab Sample ID:

400-34074-2

Units: mg/Kg

MSD Lab Sample ID:

400-34074-2

Client Matrix:

Solid

Client Matrix:

Solid

Dilution:

1.0

Dilution:

1.0

Date Analyzed: Date Prepared: 09/08/2008 1935 09/08/2008 0817

Date Analyzed: Date Prepared: 09/08/2008 1941 09/08/2008 0817

Sample

12

MS Spike

MSD Spike

MS

341

Analyte Diesel Range Organics [C10-C28] Result/Qual

Amount

384

Amount

386

Result/Qual 335

MSD Result/Qual

SERIAL NUMBER:

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<u> TestAmerica</u>	THE LEADER IN ENVIRONMENTAL TESTING		th Fleming	ア	WESING (BIELING CODE)	NWRTB	1265-8468	ED: RUSH NEEDS LAB PF	SAMPLE DISPOSAI - THETTIBN TO CLIENT TO DISP	PACKAGE (DELIVERABLE): CITX TRRP CIN COTHER	SAMPLE	1430 508	1445 5084	1500 508					RELINQUISHED BY: (SIGNATURE) EMDTY CONTAINEDS	RECEIVED BY: (SIGNATURE) EMPTY CONTAINERS	DIMPORATION DV: 61	
<u>Ψ</u>	THEL		CONSULTANT	CHEVRON FACIL	SAMPLED BY	GLENT BHOME	(505)2	TAT REQUESTE	SAMPLE DISP	PACKAGE (DE	SAM	9-3-08	9-3-08	8-3-08					RELINQUISHEL EMDTY (RECEIVED BY:	DECENTED CODING OF THE	

Login Sample Receipt Check List

Client: Gannett Fleming

Job Number: 400-34074-1

SDG Number: CVX Fac #5084134

List Source: TestAmerica Pensacola

Login Number: 34074

Creator: Hor, Koma List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.6°C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



Photograph 1: Initial excavation, east containment wall



Photograph 3: Initial excavation with Techron tank in the background



Photograph 5: Conduit in second excavation



Photograph 2: Initial excavation



Photograph 4: Second excavation



Photograph 6: Conduit in second excavation



Photograph 7: Third excavation, near curb line



Photograph 8: Third excavation

WNR

GALLUP REFINERY

MEUEIVED

CERTIFIED MAIL: 7006 3450 0000 7452 3097

2008 NOV 20 PM 1 51

November 19, 2008

State of New Mexico Energy Minerals and Natural Resources Oil Conservation Division (OCD) 1220 South St. Francis Dr. Santa Fe, NM 87505 Attention: Mr. Carl Chavez State of New Mexico New Mexico Environmental Department-Hazardous Waste Bureau (HWB) 2905 Radio Park East- Bldg #1 Santa Fe, NM 87505 Attention: Mr. Steve Conley

Reference: **SPILL INCIDENT** (INITIAL REPORT)-Light Cat Gasoline Spill (November 11, 2008) (NMAC 19:15.3.116; NMAC 20.6.1203)- IDEA#888 / GW-032

Dear Mr. Chavez and Mr. Conley;

In accordance with and prescribed in the above regulations, please accept the following submittal for a spill incident that occurred at approximately 0300 hours on November 11, 2008. Light Cat Gasoline was being slopped to Tank 107 at the time of the incident. Tank 107 was overfilled and ran down the sides of the tank due to poor communication and employees not following Company Tank Filling Procedures. The rundown valve was closed immediately and the Light Cat Gasoline was routed to Tank 235. The spill material was contained within an earthen dike that surrounds Tank 107/Tank 108. The onsite Fire Department was immediately dispatched in order to apply a foam blanket over the spill area.

The Environmental Engineer on call was notified at approximately 0315 hours. He arrived at the facility at approximately 0415 hours. After assessing the situation, he then notified both the NMED (Spill Response Hotline, at 0519 hours) and the Oil Conservation Division (OCD, at 0527 hours). Initial cleanup commenced by the removal of any free liquids including the slop product and the foam that was remained in the spill area. Soil samples were collected for analysis. The results are pending at this time. The spill material is to be collected in roll-off boxes pending the analytical results. Once analytical results have been received from the laboratory, a proper determination can be ascertained as to its disposition.

If you should have any questions or concerns in regards to this matter, please feel free to contact me at (505) 722-0258.

Sincerely,

Beck Larsen

Environmental Engineer-CHMM/REM

Cc: NMED-HWB

File

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

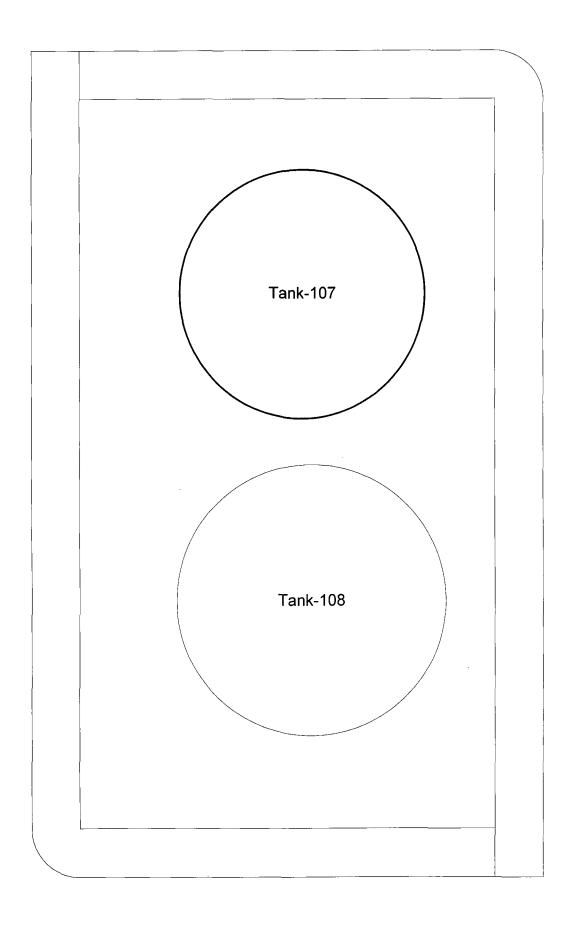
* Attach Additional Sheets If Necessary

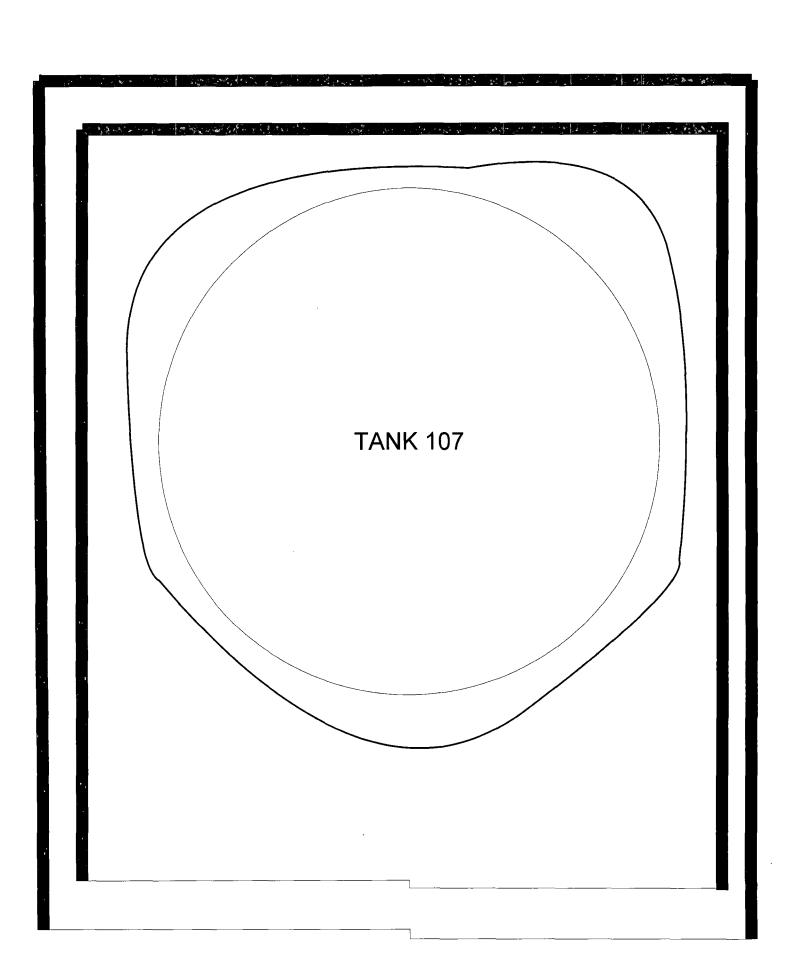
State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

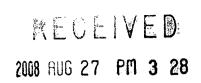
Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action OPERATOR Initial Report Final Report Name of Company: Western Refining Contact: Beck Larsen Telephone No.: (505) 722-0258 Address: I-40 / Exit 39 Facility Name: Western Refining (Gallup) Facility Type: Petroleum Refinery Mineral Owner Lease No. Surface Owner LOCATION OF RELEASE Unit Letter Township Range Feet from the | North/South Line Feet from the East/West Line County Section T-107 28 15 N 15 W McKinley **Latitude** 108° 24' 040" **Longitude** 35° 29' 030" NATURE OF RELEASE Type of Release: Light Cat Gasoline Volume of Release 22 bbls Volume Recovered 0 bbls Source of Release T-107 Date and Hour of Occurrence Date and Hour of Discovery 11/11/2008 0300 11/11/2008 0300 If YES, To Whom? Was Immediate Notice Given? Yes No Not Required Message left with NMED & OCD By Whom? Beck Larsen Date and Hour 11/11/2008 (0519 & 0527 respectively) Was a Watercourse Reached? If YES, Volume Impacting the Watercourse. If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* The Company experienced a large quantity of Light Cat Gasoline to the slop system (Tank 107). Communication could have been better leading to this event. Employees did not follow designated Company tank filling procedures. Tank 107 overfilled and ran down the sides as a result of not following these Company filling procedures. The Rundown valve at T-107 was immediately closed and the Lt Cat Gasoline was routed to T-235. The spill was contained within an earthen dike area around Tk-107. The onsite Fire Department immediately applied a foam blanket on top of the spilled area. Describe Area Affected and Cleanup Action Taken.* The spill was contained within an earthen dike berm area around Tk-107. The onsite Fire Department immediately applied a foam blanket on top of the spilled area until remediation of the effected area could be initiated. The foam and all liquids were cleaned up using vacuum trucks. Initial sampling and cleanup procedures are commencing requiring soil excavation of the affected area. The contaminated soil will then be shipped to an approved waste facility. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. **OIL CONSERVATION DIVISION** SME CON DOD FOR MARK TOWN Signature: Approved by District Supervisor: Printed Name: Mark B. Turri Title: Facility Manager Approval Date: **Expiration Date:** E-mail Address: mark.turri@wnr.com Conditions of Approval: Attached Date: 11/13/2008 Phone: (505) 949-0904









Global Marketing

maxico Caura.

Our Family of Brands

Chevron Products Company 3200 Broadway, SE Albuquerque, NM 87105 Tel (505) 301-5576 Ilin@chevron.com

August 25, 2008

Mr. Carl J. Chavez, CHMM New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau 1220 South St. Francis Dr., Santa Fe, New Mexico 87505

RE: Techron Fuel Additive Release, Western Refining-Gallup Terminal

Dear Mr. Chavez:

Pursuant to your request, enclosed please find a completed Release Notification and Corrective Action Form C-141 for the Techron fuel additive release that occurred at the Western Refining-Gallup Refinery facility located at Gallup, New Mexico.

Don Lindsey

Health, Environmental & Safety Specialist

As we discussed, our records indicate that approximately 157 gallons (less than five (5) barrels) of Techron fuel additive was released. Because the release was of a fuel additive and was less than five (5) barrels, written notification is not required under 19:15:116 of the New Mexico Administrative Code. However, this matter is still under internal review so we are pursuing a conservative approach by submitting this form. Additionally, we appreciate your assistance and want to continue the current level of cooperation between Chevron Products Company and New Mexico Oil Conservation Division through the final resolution of this matter.

As noted in the form, upon discovery of the release, we immediately shutdown the line to avoid the potential for any further release. The line remains out of service and will remain that way until the line is repaired. We have retained a contractor to perform the repairs to the line. Additionally, plans are being developed for the remediation of impacted soils in the area of the release. The remediation will be performed upon completion on the line repairs.

If you should have any questions or would like to discuss this matter further, please do not hesitate to contact me at my office, 505-898-5914, or via my cell, 505-301-5576.

Sincerely,

Don L. Lindsey

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141
Revised October 10, 2003

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

Attached

Release Notification and Corrective Action OPERATOR Initial Report Final Report PRODUCTS COMPANY Contact Name of Company Telephone No. Address 505 Facility Name) WESTERN REFLUING GALLY TERMINAL Facility Type BULK FUEL TERMINAL OPERATED BY Mineral Owner Surface Owner LOCATION OF RELEASE Feet from the North/South Line Feet from the Unit Letter Section Township Range East/West Line County Latitude Longitude NATURE OF RELEASE FUEL ADDITIVE Volume of Release EST 157 GAL Volume Recovered Type of Release TECHRON Date and Hour of Occurrence Date and Hour of Discovery 7/23/08, 1460
If YES, To Whom? STEVE CONNELLY - NM HAZ. WATE DIV. Source of Release TECHRON ADDITIVE LINE Was Immediate Notice Given? ☐ No Not Required de CALL CHANEZ - OCD CHENRAN Date and Hour 8/5/08 15:37 (CONNELLY) By Whom? DON If YES, Volume Impacting the Watercourse. Was a Watercourse Reached? If a Watercourse was Impacted, Describe Fully.* Describe Cause of Problem and Remedial Action Taken.* CAUSE: LEAK IN LINE FROM TECHRON TANK TO TERMINAL LOADING RACK. ATTIAN TAKEN: TECHRON SYSTEM WAS SHUT DOWN IMMEDIATELY AND REMAINS OUT OF SERVICE. LINE REPAIR PLANNED, CONTENTOR HAS BEEN HIRED. PLANS CURRENTLY DEING PLANNED & CONTENTIORS SOUGHT FUR DESCRIBE AREA Affected and Cleanup Action Taken.*

AREA AFFECTED: SOIL IN PIPELINE CHASE. ALTION TAKEN: AS ABOVE. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. OIL CONSERVATION DIVISION Signature: Approved by District Supervisor: Printed Name: NVIDONMANTAL, SHETY SECIAL Approval Date: Expiration Date: E-mail Address Conditions of Approval:

Phone: 201

^{*} Attach Additional Sheets If Necessary

ChevronTexaco Chevron Products Company Albuquerque, NM 87048 P.O. Box 66135











The second secon

New Mexico Energy, Minerals & Natural Resources Dept.

Mr. Carl J. Chavez, CHIMM

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

Form C-141 Revised October 10, 2003

District IV

District II

1301 W. Grand Avenue, Artesia, NM 88210

District III

1000 Rio Brazos Road, Aztec, NM 87410

District IV PM 2 45 1220 South St. Francis Dr.

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

1220 S. St. Francis Dr., Sagraffe, NM 87512 Santa Fe, NM 87505 **Release Notification and Corrective Action**

						OPERA			Initial	al Report		Final Repo	ort
		estern Refini				Contact Gau							
		Jamestown,	NM 8734	17		Telephone No. 505-722-0227							
Facility Nar	ne Gallup	Refinery				Facility Typ	e Oil refinery						
Surface Ow	ner Weste	rn Refining		Mineral O	wner \	Western Ref	ning		Lease N	No.			
				LOCA	OIT	N OF REI	LEASE						
Unit Letter	Section 23&33	Township 15N	Range 15W	Feet from the	North	South Line	Feet from the	East/W	est Line	County McKinley			
		Lati	tude3:	5°29'22"		_ Longitud	le108°25'24)) 					
				NAT	URE	OF REL	EASE						
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Was Immedia	ate Notice (If YES, To	Whom? Carl J. C						
			Yes [No Not Re	equired	Hope Mon	zeglio, NMED H	azardous	Waste Bu	reau (via tele	phone)	
By Whom? C							lour 8/7/2008 (ap						
Was a Water	course Read		Yes 🗵] No		If YES, Vo	lume Impacting t	he Wate	rcourse. N	ot applicable		***************************************	
If a Watercou	irse was Im	pacted, Descri	be Fully.*	Not applicable									
Tank #3 was surrounded by	running ov y a berm. N	er. This Marke To product left	eting Tank the conta	n Taken.*□At app c #3 was running c inment area within on underway – the	over at to the be	he roof drains rm. Water and	and spilling 87 (Octane G yed on th	asoline on e spilled p	to the soil ward to the soil was	thin th	e area	
Describe Are The affected	a Affected area within	and Cleanup A the berm had	Action Tak a surface		itely 100	000 square fee					of as y	et unknown	ì
(product mixe	ed with foa	m and water)	from with	des to prevent una in the berm. Given of gasoline spilled	the du	ration of the c							
materials will any signs of c the spray had	be dispose contaminati not contac	ed off in accord on apart from ted any gasoli	dance with spray of v ne. This d	ill be excavated, con applicable regulation in the regulation of the regulation of the real appears of the	ations. I om the f will als	There is a draing ire suppression of the tested in	nage ditch runnin n techniques emp the sampling and	g alongs loyed. T assessm	ide the bei he water r ent to be i	rmed area that eaching the countries.	ıt did n Irainag	ot exhibit e ditch via	
regulations al public health should their of or the environ	l operators or the envi- perations hament. In a	are required to ronment. The lave failed to a	report ar acceptance dequately CD accep	e is true and completed is true and completed in the certain received a C-141 reportance of a C-141 reportance of a C-141 received.	elease n rt by the emediate	otifications ar e NMOCD m e contaminati	nd perform correct arked as "Final Roon that pose a thre	tive action eport" do eat to gro	ons for releases not releases not releases	eases which a ieve the oper r, surface war	may en ator of er, hur	danger liability nan health	
Signature:	hal	D. Or	m.				OIL CONS	SERV.	ATION	<u>DIVISIO</u>	N		
Printed Name	: Mark B.	Furri	· · · · ·	· · · · · · · · · · · · · · · · · · ·		Approved by	District Supervise	or:		•			-
Title: Refiner	y Manager	– Gallup				Approval Dat			xpiration 1	Date:			
E-mail Addre	ss: <u>mturri@</u>	wnr.com				Conditions of	Approval:			Attached			
Date: 8-4-2008 Phone: 505-722-3833													

Chavez, Carl J, EMNRD

From: Chavez, Carl J, EMNRD

Sent: Monday, August 11, 2008 11:26 AM

To: 'Rajen, Gaurav'; Monzeglio, Hope, NMENV

Cc: Riege, Ed; Turri, Mark; Price, Wayne, EMNRD

Subject: RE: GW-32 Typographical error on incident report of August 2, 2008

Raj:

Be sure to take photos along the base of excavation areas and in the drainage ditch (discrete surface sample). Include copies of C-138's of any disposed or treated soils. If the water used during emergency procedures is fire pit water, the OCD also wants chlorides, in addition to metals, VOCs and TPH analytical test methods. If the spill location is in a RCRA SWMU area, NMED may also want MTBE or other scans run? You need to check with Hope for the final report. Please contact me if you have questions. Thank you.

* Please note that the OCD is tracking initial and final reports on OCD Online (GW-32- "C-141s") for this facility at http://ocdimage.emnrd.state.nm.us/imaging/AEOrderFileView.aspx?appNo=pENV000GW00033

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept.

Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Rajen, Gaurav [mailto:Gaurav.Rajen@wnr.com]

Sent: Monday, August 11, 2008 10:22 AM

To: Chavez, Carl J, EMNRD; Monzeglio, Hope, NMENV

Cc: Riege, Ed; Turri, Mark

Subject: Typographical error on incident report of August 2, 2008

Dear Carl and Hope:

It is a pleasure to write to you.

My apologies for a typographical error in our initial incident report filed for a spill from Marketing Tank #2 that occurred on August 2, 2008 – the text in answer to the section on "source of release" says "overflow from Tank 116", but should read "overflow from Tank# 2".

We will make sure that in the future such errors are not carried over by virtue of having used a prior spill report as a template. Please note this correction for our report.

Many thanks and best regards,

Gaurav Rajen

This inbound email has been scanned by the MessageLabs Email Security System.

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

State of New Mexico

Form C-141

Revised October 10, 2003

side of form

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

Energy Minerals and Natural Resources

Oil Conserved. District III
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410 Oil Conservation Division 4820 South St. Francis Dr. Santa Fe, NM 87505 District IV 1220 S. St. Francis Dr., Santa 2609MRV195 7 P. 11 3

Release Notification and Corrective Action

						OPERA'	ГOR		Initi	al Report	Fin	ıal Report		
		estern Refini				Contact Gaurav Rajen								
		Jamestown,	NM 873	<u>. </u>		Telephone No. 505-722-0227								
Facility Na	ne Gallup	Refinery			I	Cacility Typ	e Oil refinery							
Surface Ow	ner Weste	rn Refining		Mineral C	wner W	Vestern Ref	ining		Lease 1	No.				
				LOCA	TION	OF RE	LEASE							
Unit Letter	Section 23&33	Township 15N	Range 15W	Feet from the	North/	South Line	Feet from the	East/V	West Line	County McKinley				
	-!	Lati	tude 3	5°29'22"		Longitud	le <u>108°25'24</u>	.,,						
				NAT	URE	OF REL	EASE							
Type of Rele			. 2				Release 200 barr (400 gallons) esti		oil and w	Recovered 210 ater mixture (volume on sof oil in the	with 190 b	parrels or		
Source of Re	lease Overf	low from Tan	k 1 / 6				Iour of Occurrence before 6:45 am ately)	e	Date and 6:45 am	Hour of Disco	very 8/2/2	2008;		
Was Immedi	. : *		Yes [No Not Re	equired	If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division; Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone)								
By Whom?	Jaurav Raje	n				Date and Hour 8/2/2008 (approximately) 10:00 am								
Was a Water		· 🗆	Yes 🗵	the second second	· ·		olume Impacting				<u> </u>			
Describe Cause of Problem and Remedial Action Taken.* At approximately 6:45 am on 8/2/2008, the Operations Supervisor discovered that Marketing Tank #2 was running over. This Marketing Tank #2 was running over at the roof vents and drains and spilling premium gasoline onto the soil within the area surrounded by a berm. No product left the containment area within the berm. Water and foam were sprayed on the spilled product for suppression of any possibility of fire. The response team used earth moving equipment to build up the containment barrier at that end of the containment berm at which product was collecting. This was done as a precautionary measure as the volume of liquid present was increasing from the water and the foam being sprayed onto the tank and being used to cover the spilled product. Product from the bottom of the tank was also drained out on to the ground to prevent further outflow from the roof drains – this action was taken as the outflow from the roof had a greater possibility of creating an explosive situation and draining directly on to the ground was preferable from a safety perspective. Either from the roof or the ground drain, the product was reaching the ground. This drain was disconnected from the sewer system which prevented any possibility of explosion within the sewers. This disconnect was previously in place from ongoing maintenance work. Water used to spray the tank was also entering into the tank, so water was emerging from the bottom drain along with product. There is a detailed investigation underway – the tank was overfilled, and the primary cause is yet to be determined. Describe Area Affected and Cleanup Action Taken.* The affected area within the berm had a surface area of approximately 10000 square feet with some vertical penetration of the gasoline (of as yet unknown depth, but, based on prior experience, presumed to be of the order of 2 feet or less).										in the sion of which ag event and ground. y in along				
loads) and So approximate there was 1 i	inday 8-3-2 y 75 barrels nch of gaso	008 (7 loads) s per load were line floating o	to collect e collected n about a	des to prevent una free liquids (produ I for a total of app foot and greater o to the ground.	uct mixe roximate	d with foam ely 2100 barr	and water) from vels (88200 gallor	within thus). Visu	ne berm. Ap ial observat	pproximately 2 tion of the area	28 truck-lo determin	oads of		
materials wil	In further cleanup actions, contaminated soils will be excavated, confirmatory environmental samples will be collected and analyzed, and all contaminated materials will be disposed off in accordance with applicable regulations. There is a drainage ditch running alongside the bermed area that did not exhibit any signs of contamination apart from some limited spray of water from the fire suppression techniques employed. The water reaching the drainage ditch via the spray had not contacted any gasoline. This drainage ditch area will also be tested in the sampling and assessment to be undertaken.													

hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger											
public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability											
should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health											
	or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other										
federal, state, or local laws and/or regulations.											
Signature: Mal Sum											
Printed Name: Mark B. Turri	Approved by District Supervisor:										
Title: Refinery Manager – Gallup	Approval Date:	Expiration D	ate:								
E-mail Address: mturri@wnr.com Conditions of Approval: Attached											
Date: 8-4-2008 Phone: 505-722-3833											

Attach Additional Sheets If Necessary

Chavez, Carl J, EMNRD

From:

Monzeglio, Hope, NMENV

Sent:

Thursday, May 22, 2008 8:59 AM

To:

Ed Riege

Cc:

Cobrain, Dave, NMENV; Frischkorn, Cheryl, NMENV; Chavez, Carl J, EMNRD

Subject:

Truck Loading rack spill December

Attachments: C-141 Form for the Gasoline Spill at the Giant Gallup Refinery Loading Rack on December 4

2007 .htm; LoadRack12-4-07.pdf

Ed

I have included two attachments pertaining to a load rack spill in December. Is this the same spill you mentioned yesterday on the phone and sent me analytical to? I will need the following to review the confirmation samples from the spill to determine if additional cleanup is needed: the original laboratory reports, data for S-1 though S-9, what type of product spilled (gasoline?). I think that is all for now. Let me know if you have any questions.

Thanks

Hope

Hope Monzeglio **Environmental Specialist** New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, BLDG 1 Santa Fe NM 87505

Phone: (505) 476-6045; Main No.: (505)-476-6000

Fax: (505)-476-6060

hope.monzeglio@state.nm.us

Websites:

New Mexico Environment Department Hazardous Waste Bureau

From: Jim Lieb [Jim.Lieb@wnr.com]

Sent: Monday, December 17, 2007 1:51 PM

To: Monzeglio, Hope, NMENV; Chavez, Carl J, EMNRD; Powell, Brandon, EMNRD

Cc: Price, Wayne, EMNRD; Cobrain, Dave, NMENV; Ed Rios; Stan Fisher; Ed Riege; Joel Quinones;

Don Riley; Bryon Holbrook; Ann Allen; Cheryl Johnson

Subject: C-141 Form for the Gasoline Spill at the Giant Gallup Refinery Loading Rack on December 4,

2007

Attachments: LoadRack12-4-07.pdf

Hope, Carl, Brandon:

As you know from the messages I left on your phones, we experienced a large spill of gasoline product here at the refinery on December 4, 2007. A tanker driver was opening a valve on a tanker allowing 6,800 gallons of gasoline to leak onto the loading rack pad. We immediately shut down the loading rack and foamed the area to prevent fire. We immediately dispatched a vac truck to vacuum up as much gasoline as possible - approximately 5,000 gallons was vacuumed up. Some of the gasoline made its way to drains in the loading rack area leading to the new API separator. About 300 gallons made its way onto adjoining soil. We washed down the pad with water which was vacuumed up. After the pad cleanup was finished and it was determined it was safe to do so, the rack was put back into service late in the afternoon.

A crew was immediately put to work diking the area where the gasoline leaked onto the soil. We have excavated impacted soil and placed it into either roll off boxes or on plastic liner material. We are currently making arrangements on a facility to accept the soil.

We will take confirmatory soil samples once we have excavated all the impacted soil. We will provide the sampling results to NMED and OCD. Once we receive approval we will back fill the area with clean soil.

We are conducting an incident evaluation on the spill to determine exactly why the spill occurred and how we can prevent a reoccurrence from ever happening again.

If you have any questions, please contact me at (505) 722-0227.

Regards,

Jim Lieb

Environmental Engineer Giant Industries, Inc. Gallup Refinery I-40, Exit 39 Jamestown, NM 87347 (505) 722-0227 fax (505) 722-0210 jlieb@giant.com

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

State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505 Form C-141 Revised October 10, 2003

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

Release Notification and Corrective Action														
							TOR							
							Contact Jim Lieb							
							Telephone No. 505-722-0227							
Facility Nar	ne: Gallı	up Refinery	Facility Type Oil refinery											
Surface Ow	ner: Gia	r: Giant Industries, Inc. Lease No.												
LOCATION OF RELEASE														
Unit Letter	Section 23 & 33	Township 15N	Range 15W	Feet from the	North/	orth/South Line Feet from the East/West Line County McKinley					,			
Latitude 35°29'30" Longitude -108°24'40"														
NATURE OF RELEASE														
Type of Rele		asoline Produ								ne Recovered: 5,000 gallons				
Source of Re		12/4/07 @ 1230 hours @ 12				d Hour of Discovery: 12/4/07 30 hours								
Was Immedia	ite Notice C		Van E	No □ Not Re	animad	If YES, To Whom?								
		لط	165	NO LINGUE	equired	oCD - Carl Chavez NMED - Hope Monzeglio								
By Whom?	Jim l	Lieb				Date and Hour 12/4/07 at 1426 hours								
Was a Water	course Reac		5	7		If YES, Volume Impacting the Watercourse.								
If a Watercou	•	•	•											
Describe Cause of Problem and Remedial Action Taken.* A truck driver inadvertently opened a valve on a tanker and gasoline poured out onto the loading dock pad. Most of the gasoline was contained on the pad and some entered the process sewer that goes to the new API separator (NAPIS). Some of the gasoline spilled over the pad onto adjacent soil. We immediately shut down the loading dock and foamed the pad to prevent fire. A vac truck was immediately dispatched to recover spilled gasoline product. The area was also flushed with water spray to reduce likelihood of fire and to assist recovery of gasoline by the vac truck. A crew of 8 workers was put to work to dig up the impacted soil. The crew also built a low dike of soil around the impacted area. Describe Area Affected and Cleanup Action Taken.* The release is restricted to the loading dock area. None of the release got off Giant property. The pad was washed down to help prevent fire and assist with vac truck recovery. A vac truck was able to recover approximately 5,000 gallons of gasoline product which was directed into the New API. We estimate that approximately 300 gallons of gasoline was released to the soil. The balance evaporated. The impacted soil was removed and placed either directly into roll-off boxes or on plastic liner until additional boxes can be obtained. We will sample the excavated area to ensure all the gasoline contamination has been removed. Upon OCD and NMED approval, the excavation will be back-filled with fresh soil after confirmatory sampling is conducted. I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed														
federal, state, Signature:						OIL CONSERVATION DIVISION								
Printed Name: A FO R105							Approved by District Supervisor:							
Title: Genera	×						Approval Date: Expiration			Date:				
E-mail Addre	ss: <u>erios@</u>	07 Pho		Conditions of Approval:			Attached							
Attach Addi	tional Shee	ets If Necess	ary											

Chavez, Carl J, EMNRD

From:

Ed Riege [Ed.Riege@wnr.com]

Sent:

Wednesday, May 21, 2008 4:19 PM

To:

Chavez, Carl J, EMNRD

Cc:

Monzeglio, Hope, NMENV; Gaurav Rajen; Thurman B. Larsen

Subject:

December 2007 Truck Rack Spill

Attachments:

_0521160047_001.pdf



pdf (212 KB)

<<_0521160047_001.pdf>> Carl,

Attached are analytical data detailing soil confirmation clean-up results from truck rack spill in December 2007. Approximately 450 cubic yards was removed and sent to Envirotech landfill. Please review and let us know if this meets OCD approval for closure. Once approved we can send out Final Report on Form C-141.

Thanks

Ed Riege

Ed Riege

Environmental Superintendent

Western Refining Gallup Refinery Route 3 Box 7 Gallup, NM 87301 (505) 722-0217 ed.riege@wnr.com

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Bull Louse - 1/2. Wester prody

Chavez, Carl J, EMNRD

From:

Chavez, Carl J, EMNRD

Sent:

Thursday, April 24, 2008 11:16 AM

To:

Price, Wayne, EMNRD

Cc:

Monzeglio, Hope, NMENV; 'gaurav.rajen@wnr.com'

Subject: Gallup Release ~ 81 bbls Ultra-Low Sulfur Diesel Overlow on Tk 116 within and through berm

(suspected foam lines exit) ~ 150 - 200 ft. West of Tk.116

Wayne:

FYI, some changes at Gallup Refinery. Mr. Gaurav Rajen (Rag) a new engineer has replaced Jim Lieb. Jim is now stationed at the Bloomfield Refinery. A new Environmental Specialist (Ms. Cheryl Johnson- CJ) is working at the refinery. Brian Holbrook has moved to the Phoenix Refinery.

I was contacted around 11 a.m. today by Raj and CJ. At approximately 2:30 a.m. this morning, CJ discovered a tank overflow at Tk. 116. The release appears to be operator error and they are looking into the details of the accident. They have vac trucks on site recovering standing fluid and will be excavating contaminated soils and running TPH and BTEX analysis of samples beneath the release. C-141 w/ photos to follow.

Please contact me if you have questions. Thanks.

Carl J. Chavez, CHMM

New Mexico Energy, Minerals & Natural Resources Dept. Oil Conservation Division, Environmental Bureau

1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

Mr. Lieb:

The Oil Conservation Division (OCD) has reviewed your permit modification request under the recently issued WQCC discharge plan. The OCD has determined that your request is a "Minor Modification" and is hereby approved by the OCD. There is no fee and the minor modification will be attached onto the existing permit.

Please contact me if you have questions. Thank you.

Disclaimer: Please be advised that this e-mail does not relieve Western Refining (Giant Refining Company) Ciniza Refinery of responsibility should its operations pose a threat to ground water, surface water, human health or the environment. In addition, Giant is not relieved of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Carl J. Chavez, CHMM
New Mexico Energy, Minerals & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 South St. Francis Dr., Santa Fe, New Mexico 87505

Office: (505) 476-3491 Fax: (505) 476-3462

E-mail: CarlJ.Chavez@state.nm.us

Website: http://www.emnrd.state.nm.us/ocd/index.htm (Pollution Prevention Guidance is under "Publications")

From: Jim Lieb [mailto:jlieb@giant.com] **Sent:** Friday, September 21, 2007 12:57 PM

To: Chavez, Carl J, EMNRD

Cc: Price, Wayne, EMNRD; Monzeglio, Hope, NMENV; Cobrain, Dave, NMENV; Ed Rios; Ed Riege;

Ann Allen; Allen Hains

Subject: Minor Permit Modification Request - Giant Refining Permit (Gw-032)

Carl:

As we discussed this morning, Giant would like to request a minor permit modification for Permit GW-032 regarding some deadlines in the permit as issued. I have attached a table containing the deadlines that we discussed and agreed upon as being mutually acceptable to both OCD and Giant.

Please issue the minor permit modification at your earliest convenience. Would it be possible to issue by September 27th?

If you have any questions, please contact me at (505) 722-0227.

Very Sincerely,

Jim Lieb

Environmental Engineer Giant Industries, Inc. Ciniza Refinery I-40, Exit 39 Jamestown, NM 87347 (505) 722-0227 fax (505) 722-0210

jlieb@giant.com

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State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division C L | V E D 1220 South St. Francis Dr.

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

Form C-141

Revised October 10, 2003

PM 2 16 9 Santa Fe. NM 8776057AY

Release Notification and Corrective Action													
						OPERA'	TOR .	ſ	☐ Initial Report ☐ Final Report				
Name of Co	mpany W	estern Refin	ing South	west Inc.	-	Contact Gaurav Rajen						•	
		Jamestown,				Telephone No. 505-722-0227							
Facility Nar						Facility Type Oil refinery							
Surface Ow				Mineral C	Juner	Western Ref	ining		Lease N	Jo			
Surface Ow	nei_weste	in Keming				Lease IVO.							
TT 2 T -44-11	Castian	Township	Feet from the	ON OF RELEASE rth/South Line Feet from the East/West Line County									
Unit Letter	Section 23&33	15N	Range 15W	reet nom the	Non	orth/South Line Feet from the East/West Line County McKinley							
		Lati	tude <u>3:</u>	Longitud	le108°25'24	<u>''</u>							
NATURE OF RELEASE													
Type of Rele	ase Ultra-L	ow Sulfur Die	0)	Volume of Release 75 barrels (3150 gallons) estimate Volume Recovered 12 bar gallons) estimate					2 barre	els (500			
Source of Re	lease Overf	low from Tan		4/24/2008; 2:00 am 2:50 am				Hour of Dis	lour of Discovery 4/24/2008;				
Was Immedia	ate Notice (Given?				(approximately) If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division;							
Was Immediate Notice Given? Yes No Not Required If YES, To Whom? Carl J. Chavez, NMEMNRD, Oil Conservation Division Hope Monzeglio, NMED Hazardous Waste Bureau (via telephone) -													
			Johnson	ne necessione y depresent that with the record of			Iour 4/24/2008 (a						
Was a Water	course Read	ched?		, ,		If YES, Vo	olume Impacting t	the Water	course. N	ot applicable	e		
. Yes ⊠ No													
	If a Watercourse was Impacted, Describe Fully.* Not applicable												
				n Taken.*□At ap									
				nsfer was started i									
in the ground	surrounded by a berm. A lesser amount of ULSD ran down within the foam line leading into the tank. Through a drain valve on the foam line that is buried in the ground outside the berm area, some ULSD leaked out onto a service road running adjacent to Tank 116. The operator used a backhoe to build a												
				erm area, and the	spill o	n the road was	blocked from fur	ther migra	ation.				
		and Cleanup A				-1.1.500	C 4 11	1		C.I. III.C	D / C		
				area less than app									
	unknown depth, but, based on prior experience, presumed to be of the order of 1-2 feet maximum). An affected area of approximately 500 feet in length and 2-10 feet wide (depending on the amount of pooling of the spilled material) lay along the service road. The material on the road surface is expected to												
	have penetrated to a depth of the order of a few inches (maximum) into the underlying surface as the road surface is partially paved.												
A to				4 C III CD d	at 64a				.1 . A ll.				
				t free ULSD prod rough the use of									
				llyzed, and all cor									
				is true and comp									
				nd/or file certain r									
				ce of a C-141 repo									
	should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health												
or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.													
	1-1			and the straight of the same		OIL CONSERVATION DIVISION							
Signature:	· 1406	<u> (/3. U/2</u>	. 50										
Printed Name: Mark B. Turri						Approved by District Supervisor:					, ,		
- i-i micu ivaliit	. IVIAI K.D.	1 UIT		Approved by District Supervisor.					effectively and a second of the second				
Title: Refinery Manager – Gallup						Approval Dat	e:	E	Expiration Date:			ferritarian magazini, a az jenin na in	
	·			•		0 1::			appropriate	1 - 18 1 - 1 - 1 - 1	ang Mil Sias, K	m Divisio: .	
E-mail Addre	ss: <u>mturri@</u>	wnr.com				Conditions of	Approval:			Attached			

Phone: 505-722-0833

Date: 4-30-2008