State of New Mexico Energy Minerals and Natural Resources JUL 23 2009

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

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New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson Governor

Joanna Prukop Cabinet Secretary Reese Fullerton Deputy Cabinet Secretary Mark Fesmire Division Director Oil Conservation Division



June 18, 2009

Oxy USA Inc. 102 S. Main St. Carlsbad NM 88220 ATTN: Kelton Beaird

Reference: Sundance Fed 23 30-015-33384 Release Date 4/27/09 (OCD # 2RP-318)

Dear Mr. Beaird,

Regarding the "Site Closure Report" prepared by Talon/LPE on behalf of Occidental Permian LTD (OXY USA Inc.) for the release as referenced above, the closure proposal is approved with the following stipulation: OCD would request that a random, representative sample be obtained from the backfill material that is being hauled back from Lea Land as a precautionary measure. OCD understands that 1500 yards of material will be utilized for backfill. Please obtain one sample from each 500 yards of material and have the samples analyzed for TPH and Chloride constituents. Upon receipt, and, OCD approval of the analytical data, the Final Report C-141 may then be approved.

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

Sincerely,

Mike Bratcher NMOCD District 2 1301 W. Grand Ave. Artesia, NM 88210 575-748-1283 Ext.108 mike.bratcher@state.nm.us

email copy to: kelton beaird@oxy.com

Bratcher, Mike, EMNRD

From:	Bratcher, Mike, EMNRD
Sent:	Thursday, June 18, 2009 2:29 PM
То:	Kelton Beaird
Subject:	Sundance Fed 23
Attachments:	OXY_SundanceFed_23.doc

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Please see attachment

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JUN 112009



AMARILLO 921 North Bivins Amarillo, Texas 79107 Phone 806.467.0607 Fax 806.467 0622

AUSTIN 911 W Anderson Lane, Suite 202 Austin, TX 78757 Phone 512.989 3428 Fax 512.989 3487

HOBBS

318 East Taylor Street Hobbs, New Mexico 88241 Phone 505 393.4261 Fax 505 393 4658

MIDLAND

2901 State Highway 349 Midland, Texas 79706 Phone 432.522.2133 Fax 432.522 2180

> SAN ANTONIO 17170 Jordan Road Suite 102 Selma, Texas 78154 Phone 210.579 0235 Fax 210.568 2191

TULSA 9906 East 43rd Street Suite G Tulsa, Oklahoma 74146 Phone 918 742 0871 Fax 918 742 0876

TYLER 719 West Front Street Suite 255 Tyler, Texas 75702 Phone 903 531 9971 Fax 903 531.9979

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SITE CLOSURE REPORT

SUNDANCE FEDERAL #23 SECTION 4, TOWNSHIP 24 S, RANGE 31 E EDDY COUNTY, NEW MEXICO

PREPARED FOR:

OCCIDENTAL PERMIAN LTD. 6 DESTA DRIVE, SUITE 6000 MIDLAND, TX 79705-5505

PREPARED BY:

TALON/LPE 318 EAST TAYLOR STREET HOBBS, NEW MEXICO 88241

JUNE 3, 2009

SITE CLOSURE REPORT

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SUNDANCE FEDERAL #23 SECTION 4, TOWNSHIP 24 S, RANGE 31 E EDDY COUNTY, NEW MEXICO

PREPARED BY:

TALON/LPE 318 EAST TAYLOR STREET HOBBS, NEW MEXICO 88241

Murrey

J.T. Murrey Senior Project Manager

> Eb Taylor Division Manager

> > JUNE 3, 2009

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Appendix A Figures

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Appendix B Tables

Table 1 – Summary of Soil Analytical Data

Appendix C Sample Analytical Data Reports and Chain of Custody Documentation

Appendix D New Mexico Oil Conservation Division Release Notification and Corrective Action Form C-141

1.0 OBJECTIVES

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1.1 SITE CLOSURE OBJECTIVES

This Site Closure Report (report) has been prepared for Oxy USA Inc. (Oxy) to provide details of site closure activities for the produced water spill located at the Sundance Federal #23 site in Eddy County, New Mexico. Geographical coordinates for the site are 32.24792° N and 103.79024° W. The site is located in Section 4, Township 24 South, and Range 31 East. The site location is presented on Figure 1.

The objectives of the site closure activities were to excavate and haul off petroleum hydrocarbon and chloride affected soil due to the release of 20 barrels of produced water. The release occurred from a surface 4" poly-line located in a pasture on April 27, 2009. The release was reported to Mr. Mike Bratcher with the New Mexico Oil Conservation Department (NMOCD) and Mr. Jim Amos with the Bureau of Land Management. A Release Notification and Corrective Action Form C-141 was prepared and submitted to the NMOCD on April 27, 2009. Details of the site closure activities and proposed final site activities are presented herein.

2.0 SITE CLOSURE ACTIVITIES

Due to the produced water release from a surface 4" poly-line, remedial excavation activities were conducted in the pasture where the line was located.

2.1 EXCAVATION ACTIVITIES

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Due to the flow path of the release, an area of approximately 80 feet by 27 feet was excavated using a backhoe to approximately 3 feet below ground surface (bgs). A second area of approximately 65 feet by 27 feet was excavated using a backhoe to approximately 8 feet bgs. No visible impact was observed at 3 feet and 8 feet bgs depth in the respective excavations; therefore, confirmation samples were collected as outlined in Section 2.1.1. The location of the excavation area is presented on Figure 2.

Approximately 1,500 cubic yards of affected soil was excavated and stockpiled adjacent to the excavation area. Following NMOCD approval of this report, the affected soil will be transported and disposed of at the Lea Land, Inc landfill (Permit # WM-01-035) west of Hobbs, New Mexico.

2.1.1 Confirmation Sampling

Once all visually impacted soil was removed, discrete confirmation soil samples were collected from the bottom and sidewalls of the excavation. Personnel wearing new disposable gloves collected soil samples and placed the samples in laboratory-supplied containers, which were sealed with Teflon lined caps, labeled, and subsequently placed on ice in a covered, insulated cooler and chilled to 40°F. The soil samples were shipped to Trace Analysis Inc. in Midland, Texas for analysis. The collected soil samples were analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) by EPA SW-846 Method 8021B, TPH Gasoline Range Organics (TPH GRO) by EPA SW-846 Method 8015B, TPH Diesel Range Organics (TPH DRO) by EPA SW-846 Method 8015B, TPH Diesel Range Organics (TPH DRO) by EPA SW-846 Method 8015B Modified, Chlorides (titration) by EPA Method 4500-Cl B. The following NMOCD limits were used to determine whether additional investigation and/or excavation were required:

Constituent	Regulatory Limits (mg/Kg)
Total TPH	100
Benzene	10
BTEX	50.0
Chlorides	250

2.1.2 Analytical Results

Analytical results indicate BTEX concentrations in soil samples collected from the excavation were below the laboratory reporting limit of <0.0600 mg/Kg. TPH concentrations ranged from 5.01 mg/Kg to 6.01 mg/Kg. Chloride concentrations ranged from <200 mg/Kg to 287 mg/Kg. A summary of the soil sample analytical results is presented on Table 1 – Appendix B. Certified copies of the laboratory analytical results and proper chain of custody documentation are presented in Appendix C.

3.0 CONCLUSIONS AND PROPOSED FINAL SITE ACTIVITIES

3.1 CONCLUSIONS

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Due to the release of 20 barrels of produced water, remedial excavation activities were conducted along the ruptured poly line. Due to the flow path of the release, an area of approximately 80 feet by 27 feet was excavated using a backhoe to approximately 3 feet bgs. A second area of approximately 65 feet by 27 feet was excavated using a backhoe to approximately 8 feet bgs. No visible impact was observed at 3 feet bgs or 8 feet bgs depth in the respective excavations; therefore, confirmation samples were collected and submitted for laboratory analysis. Analytical results indicate non-detectable concentrations of BTEX and detectable concentrations of TPH and chlorides. However, all detected TPH and chloride concentrations were below applicable NMOCD limits with the exception of one (1) sample (SW-1) which reported a chloride concentration of 287 mg/Kg.

3.2 PROPOSED FINAL SITE ACTIVITIES

Talon proposes that the 1,500 cubic yards of affected soil be transported and disposed of at the Lea Land Inc. landfill (Permit # WM-01-035) west of Hobbs, New Mexico. During affected soil transportation and disposal activities, the excavation will be backfilled and compacted with soil back hauled from Lea Land Inc. A final Release Notification and Corrective Action Form C-141 is presented in Appendix D.

Based on analytical data from soil samples collected at the site, no further assessment and/or remediation is planned for the site and closure of the site soils should be requested from the NMOCD following transportation, disposal, and backfill activities are completed.

APPENDIX A

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FIGURES





APPENDIX B

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ANALYTICAL SUMMARY TABLES



TABLE 1 SUMMARY OF SOIL ANALYTICAL DATA OXY USA INC. SUNDANCE FEDERAL #23 EDDY COUNTY, NEW MEXICO

SAMPLE LOCATION	DATE SAMPLED	BENZENE	TOLUENE	ETHLYBENZENE	XYLENES	BTEX	TPH DRO	TPH GRO	CHLORIDES
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
SW-1	5/11/2009	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0600	<50.0	5.84	287
SW-2	5/11/2009	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0600	<50.0	5.01	240
BH-1	5/11/2009	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0600	<50.0	5.95	<200
BH-2	5/11/2009	< 0.0100	< 0.0100	< 0.0100	< 0.0100	< 0.0600	<50.0	6.01	209
BH-3	5/11/2009	< 0.0100	< 0.0100	<0.0100	< 0.0100	< 0.0600	<50.0	5.99	<200

1. BTEX = Benzene, toluene, ethylbenzene and xylenes analyzed by EPA SW-846 Method 8021B

2 TPH DRO = Total Petroluem Hydrocarbons Diesel Range Organics by EPA Method 8015M.

3. TPH GRO = Total Petroluem Hydrocarbons Gasoline Range Organics by EPA Method 8015.

4. Chlorides by EPA Method 4500-Cl B.

APPENDIX C

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SOIL SAMPLE ANALYTICAL DATA REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

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Summary Report

Eb Taylor Talon LPE-Hobbs 318 E. Taylor Hobbs, NM 88240

Report Date: May 15, 2009

Work Order: 9051203

Project Location:Eddy Co., NMProject Name:Sundance Fed 23Project Number:OXYUSA006SPL

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
195571	SW-1	soil	2009-05-11	08:00	2009-05-12
195572	SW-2	soil	2009-05-11	08:10	2009-05-12
195573	BH-1	soil	2009-05-11	08:20	2009-05-12
195574	BH-2	soil	2009-05-11	08:25	2009-05-12
195575	BH-3	soil	2009-05-11	08:40	2009-05-12

	TPH DRO	TPH GRO
	DRO	GRO
Sample - Field Code	(mg/Kg)	(mg/Kg)
195571 - SW-1	<50.0	5.84
195572 - SW-2	<50.0	5.01
195573 - BH-1	<50.0	5.95
195574 - BH-2	<50.0	6.01
195575 - BH-3	<50.0	5.99

Sample: 195571 - SW-1

Param	Flag	Result	Units	RL
Benzene		< 0.0100	mg/Kg	0.0100
Toluene		< 0.0100	m mg/Kg	0.0100
Ethylbenzene		< 0.0100	m mg/Kg	0.0100
Xylene		< 0.0100	m mg/Kg	0.0100
Total BTEX		< 0.0600	mg/Kg	0.0600
Chloride		287	m mg/Kg	4.00

Sample: 195572 - SW-2

TraceAnalysis, Inc. • 6701 Aberdeen Ave., Suite 9 • Lubbock, TX 79424-1515 • (806) 794-1296 This is only a summary. Please, refer to the complete report package for quality control data.

Report Date: May 15, 2009 OXYUSA006SPL		Work Order: 9051203 Sundance Fed 23		Page Number: 2 of 2 Eddy Co., NM	
Param	Flag	Result	Units	RL	
Benzene		< 0.0100	mg/Kg	0.0100	
Toluene		< 0.0100	mg/Kg	0.0100	
Ethylbenzene		< 0.0100	mg/Kg	0.0100	
Xylene		< 0.0100	$\mathrm{mg/Kg}$	0.0100	
Total BTEX		< 0.0600	mg/Kg	0.0600	
Chloride		240	mg/Kg	4.00	

Sample: 195573 - BH-1

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Param	Flag	Result	Units	RL
Benzene		< 0.0100	mg/Kg	0.0100
Toluene		< 0.0100	m mg/Kg	0.0100
Ethylbenzene		< 0.0100	m mg/Kg	0.0100
Xylene		< 0.0100	m mg/Kg	0.0100
Total BTEX		< 0.0600	m mg/Kg	0.0600
Chloride		<200	m mg/Kg	4.00

Sample: 195574 - BH-2

Param	Flag	Result	Units	RL
Benzene		< 0.0100	mg/Kg	0.0100
Toluene		< 0.0100	m mg/Kg	0.0100
Ethylbenzene		< 0.0100	m mg/Kg	0.0100
Xylene		< 0.0100	m mg/Kg	0.0100
Total BTEX		< 0.0600	m mg/Kg	0.0600
Chloride		209	m mg/Kg	4.00

Sample: 195575 - BH-3

Param	Flag	\mathbf{Result}	Units	RL
Benzene		< 0.0100	mg/Kg	0.0100
Toluene		< 0.0100	m mg/Kg	0.0100
Ethylbenzene		< 0.0100	m mg/Kg	0.0100
Xylene		< 0.0100	m mg/Kg	0.0100
Total BTEX		< 0.0600	m mg/Kg	0.0600
Chloride		<200	m mg/Kg	4.00



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WBENC: 237019

HUB:1752439743100-86536NCTRCAWFWB38444Y0909

DBE: VN 20657

NELAP Certifications

Lubbock: T104704219-08-TX LELAP-02003 Kansas E-10317 El Paso: T104704221-08-TX LELAP-02002 Midland: T104704392-08-TX

Analytical and Quality Control Report

Eb Taylor Talon LPE-Hobbs 318 E. Taylor Hobbs, NM, 88240

Report Date: May 15, 2009

Work Order: 9051203

Project Location:Eddy Co., NMProject Name:Sundance Fed 23Project Number:OXYUSA006SPL

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
195571	SW-1	soil	2009-05-11	08:00	2009-05-12
195572	SW-2	soil	2009-05-11	08:10	2009-05-12
195573	BH-1	soil	2009-05-11	08:20	2009-05-12
195574	BH-2	soil	2009-05-11	08:25	2009-05-12
195575	BH-3	soil	2009-05-11	08:40	2009-05-12

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 18 pages and shall not be reproduced except in its entirety, without written approval of

TraceAnalysis, Inc.

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Michael abel

Dr. Blair Leftwich, Director

Standard Flags

 ${\bf B}\,$ - The sample contains less than ten times the concentration found in the method blank.

Case Narrative

Samples for project Sundance Fed 23 were received by TraceAnalysis, Inc. on 2009-05-12 and assigned to work order 9051203. Samples for work order 9051203 were received intact at a temperature of 12.1 deg. C.

Samples were analyzed for the following tests using their respective methods.

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		Prep	Prep	\mathbf{QC}	Analysis
Test	Method	Batch	Date	Batch	Date
BTEX	S 8021B	50680	2009-05-12 at 15:54	59380	2009-05-12 at 15:54
Chloride (Titration)	SM 4500-Cl B	50742	2009-05-14 at $13:45$	59456	2009-05-14 at 13:45
Total BTEX	S 8021B	50680	2009-05-12 at $15:54$	59380	2009-05-12 at 15:54
TPH DRO	Mod. 8015B	50666	2009-05-12 at $09:30$	59370	2009-05-12 at $11:00$
TPH GRO	S 8015B	50734	2009-05-13 at $16:19$	59381	2009-05-13 at $16:19$

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 9051203 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

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Analytical Report

Sample: 195571 - SW-1

Laboratory:	Midland								
Analysis:	BTEX, Total BTEX	-	Analytical Method:		od: S 8021E	3	Prep Me	thod:	S 5035
QC Batch: 59380			Date	Analyzed:	2009-05	-12	Analyzed	Analyzed By:	
Prep Batch:	50680		Sample Preparation: 2009-05-12		-12	Prepared	l By:	ME	
			RI						
Parameter	Flag		Result	t	Units		Dilution		RL
Benzene			< 0.0100)	mg/Kg		1		0.0100
Toluene			< 0.0100)	mg/Kg		1		0.0100
Ethylbenzene			< 0.0100)	mg/Kg		1		0.0100
Xylene			< 0.0100)	mg/Kg		1		0.0100
Total BTEX			< 0.0600)	mg/Kg		1		0.0600
						Spike	Percent	Re	ecovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	I	Limits
Trifluorotolue	ene (TFT)		2.01	mg/Kg	1	2.00	100	49	- 129.7
4-Bromofluor	obenzene (4-BFB)		1.51	mg/Kg	1	2.00	76	45.2	2 - 144.3

Sample: 195571 - SW-1

Laboratory: Analysis: QC Batch: Prep Batch:	Midland Chloride (Titration) 59456 50742	Analytical Method: Date Analyzed: Sample Preparation:	SM 4500-Cl B 2009-05-14 2009-05-14	Prep Method: Analyzed By: Prepared By:	N/A AR AR
		RL			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Chloride		287 1	mg/Kg	50	4.00

Sample: 195571 - SW-1

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO 59370 50666	Analytical Method: Date Analyzed: Sample Preparation:	Mod. 8015B 2009-05-12 2009-05-12	Prep Method: Analyzed By: Prepared By:	N/A LD LD
		RL			
Parameter	Flag	Result	\mathbf{Units}	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Report Date: May 15, 2009Work Order: 905OXYUSA006SPLSundance Fed			c Order: 905120 ndance Fed 23	3	Page	Page Number: 5 of 18 Eddy Co., NM	
Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		107	mg/Kg	1	100	107	13.2 - 219.3

Sample: 195571 - SW-1

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Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 59381 50734		Analytica Date Ana Sample Pr	l Method: lyzed: reparation:	S 8015B 2009-05-13 2009-05-13		Prep Me Analyzee Preparee	thod: S 5035 d By: ME d By: ME
			RL					
Parameter	Flag		Result		Units		Dilution	\mathbf{RL}
GRO			5.84		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recoverv	Recovery Limits
Trifluorotolue	ene (TFT)	0	1.84	mg/Kg	1	2.00	92	68.5 - 119.4
4-Bromofluor	obenzene (4-BFB)		1.46	mg/Kg	1	2.00	73	52 - 117

Sample: 195572 - SW-2

Laboratory: Analysis: QC Batch: Prep Batch:	Midland BTEX, Total B7 59380 50680	ΓEX	Anal Date Samj	ytical Metho Analyzed: ple Preparat	od: S 80211 2009-05 ion: 2009-05	B 5-12 5-12	Prep Me Analyzed Prepared	thod: S 5035 l By: ME l By: ME
			RI					
Parameter	. Fl	ag	Result	t	Units		Dilution	RL
Benzene			< 0.0100)	mg/Kg		1	0.0100
Toluene			< 0.0100)	mg/Kg		1	0.0100
Ethylbenzene			< 0.0100)	mg/Kg		1	0.0100
Xylene			< 0.0100)	mg/Kg		1	0.0100
Total BTEX			< 0.0600)	mg/Kg		1	0.0600
						Spike	Percent	Recovery
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		1.98	mg/Kg	1	2.00	99	49 - 129.7
4-Bromofluor	obenzene (4-BFB)	1.49	m mg/Kg	1	2.00	. 74	45.2 - 144.3

Report Date: May 15, 2009	Work Order: 9051203	Page Number: 6 of 18
OXYUSA006SPL	Sundance Fed 23	Eddy Co., NM

Sample: 195572 - SW-2

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Chloride		240	m mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	\mathbf{RL}
Prep Batch:	50742	Sample Preparation	n: 2009-05-14	Prepared By:	\mathbf{AR}
QC Batch:	59456	Date Analyzed:	2009-05-14	Analyzed By:	\mathbf{AR}
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500 -Cl B	Prep Method:	N/A
Laboratory:	Midland				

Sample: 195572 - SW-2

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH DRO 59370 50666		Analytical M Date Analyz Sample Prep	fethod: Mod. ed: 2009- paration: 2009-	8015B -05-12 -05-12	Prep Analy Prepa	Method: N/A vzed By: LD ured By: LD
D	FI		RL Basselt	TT		Dilution	DI
Parameter	E la	ag	Result	0	nits	Dilution	RL RL
DRO			<50.0	mg	/Kg	1	50.0
a		D 1			Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane	e	119	m mg/Kg	1	100	119	13.2 - 219.3

Sample: 195572 - SW-2

Laboratory: Analysis: QC Batch: Prep Batch:	Midland TPH GRO 59381 50734		Analytica Date Ana Sample Pi	l Method: lyzed: reparation:	S 8015B 2009-05-13 2009-05-13		Prep Me Analyzec Preparec	thod: S 5035 l By: ME l By: ME
			RL					
Parameter	\mathbf{Flag}		Result		Units		Dilution	RL
GRO			5.01		mg/Kg		1	1.00
Surrogate		Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotolue	ene (TFT)	0	1.85	mg/Kg	1	2.00	92	68.5 - 119.4
4-Bromofluor	obenzene (4-BFB)		1.43	mg/Kg	1	2.00	72	52 - 117

Report Date: May 15, 2009 OXYUSA006SPL			Wo	Work Order: 9051203 Sundance Fed 23				Page Number: 7 of 18 Eddy Co., NM		
Sample: 195	5573 - BH-1			-			,			
Laboratory: Midland Analysis: BTEX, Total BTEX QC Batch: 59380 Prep Batch: 50680		Analy Date J Sampl	Analytical Method:S 8021BDate Analyzed:2009-05-12Sample Preparation:2009-05-12			Prep Method: S 503 Analyzed By: ME Prepared By: ME				
D			RL		TT 1.				DI	
Parameter	Flag		Result		Units		Dilution		<u></u>	
Benzene			< 0.0100		mg/Kg		1	0	.0100	
Toluene		,	< 0.0100		m mg/Kg		1	0	.0100	
Ethylbenzene			< 0.0100		m mg/Kg		1	0	.0100	
Xylene			< 0.0100		m mg/Kg		1	0	.0100	
Total BTEX			< 0.0600		mg/Kg		1	0	.0600	
						Spike	Percent	Reco	very	
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Lim	its	
Trifluorotolue	ene (TFT)		1.96	mg/Kg	1	2.00	98	49 - 1	29.7	
4-Bromofluor	obenzene (4-BFB)		1.55	mg/Kg	1	2.00	78	45.2 -	144.3	

Sample: 195573 - BH-1

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Chloride		<200	mg/Kg	50	4.00
Parameter	Flag	RL Result	Units	Dilution	RL
Prep Batch:	50742	Sample Preparation:	2009-05-14	Prepared By:	AR
Laboratory: Analysis: QC Batch:	Midland Chloride (Titration) 59456	Analytical Method: Date Analyzed:	SM 4500-Cl B 2009-05-14	Prep Method: Analyzed By:	N/A AR

Sample: 195573 - BH-1

n-Triacontane	3	132	m mg/Kg	1	100	132	13.2 - 219.3	
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits	
					Snike	Percent	Becoverv	
DRO			<50.0	m	g/Kg	1	50.0	
Parameter Flag		g	RL Result	1	Units	Dilution	RL	
Prep Batch:	50666		Sample Prep	paration: 200	9-05-12	Prepa	ared By: LD	
QC Batch:	59370		Date Analyz	ed: 2009	9-05-12	Analy	zed By: LD	
Laboratory: Midland Analysis: TPH DRO			Analytical Method: Mod. 8015B			Prep Method: N		

Report Date: May 15, 2009 OXYUSA006SPL				ork Order: Sundance I	Page Number: 8 of 18 Eddy Co., NM				
Sample: 195573	6 - BH-1								
Laboratory: Mid	lland				0.00150				
Analysis: TPL	H GRO		Analytical	Method:	S 8015B		Prep Me	thod: $S = 5035$	
QC Batch: 593	81		Date Anal Somple D	lyzea:	2009-05-13		Propared	1 Dy: ME	
riep batch: 507	94		Sample 1	eparation.	2009-00-13		Tiepared	TDy. ME	
			\mathbf{RL}						
Parameter	Flag		Result		Units		Dilution	RL	
GRO			5.95		m mg/Kg		1	1.00	
·····						Cuiler	Deneent	Decerem	
C		Flor	Docult	Unita	Dilution	Spike	Percent	Limita	
Triffuorotoluono (TTT)	riag	1 86	mg/Kg	1	2 00	necovery 02	<u>68 5 110 /</u>	
4-Bromofluoroben	(4-BFR)		1.80 mg/Kg 1.48 mg/Kg		1	2.00	95 74	52 - 117	
Sample: 195574	- BH-2								
Taha atau Mia	llend								
Analysis: BT	Hand EX Total BTEX		Anal	utical Meth	od S 8021E	2	Pren Me	thod: \$ 5035	
OC Batch: 593	BA, IOUALDILA 80		Date	Analyzed	2009-05	, -12	Analyzed By: ME		
Prep Batch: 506	80		Sam	ole Preparat	tion: $2009-05$	-12	2 Prepared By: ME		
1			1	1				U	
			RL	i					
Parameter	Flag		Result		Units		Dilution	RL	
Benzene			< 0.0100)	mg/Kg		1	0.0100	
Toluene			<0.0100	ļ	mg/Kg		1	0.0100	
Ethyibenzene			<0.0100	J	mg/Kg		1	0.0100	
Aylene Total PTEV			<0.0100)	mg/Kg		1	0.0100	
IOUAI DILA			<0.0000)	mg/Kg		1	0.0000	
						Spike	Percent	Recovery	
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits	
Trifluorotoluene (TFT)		1.94	mg/Kg	1	2.00	97	49 - 129.7	
4-Bromofluoroben	zene (4-BFB)		1.50	m mg/Kg	1	2.00	75	45.2 - 144.3	

Sample: 195574 - BH-2

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Prep Batch:	50742	Sample Preparation:	2009-05-14	 Prepared By:	AR
QC Batch:	59456	Date Analyzed:	2009-05-14	Analyzed By:	\mathbf{AR}
Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
Laboratory:	Midland				

continued ...

Report Date: May 15, 2009	Work Order: 9051203	Page Number: 9 of 18
OXYUSA006SPL	Sundance Fed 23	Eddy Co., NM

sample 195574 continued ...

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		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		209	mg/Kg	50	4.00

Sample: 195574 - BH-2

Laboratory:	Midland						
Analysis:	TPH DRO		Analytical M	lethod: Mo	od. 8015B	Prep	Method: N/A
QC Batch:	59370		Date Analyz	ed: 200)9-05-12	Anal	yzed By: LD
Prep Batch:	50666		Sample Prep	paration: 200	on: 2009-05-12 Prepared		ared By: LD
			RL				
Parameter	Flag		Result		Units	Dilution	RL
DRO			<50.0	n	ng/Kg	1	50.0
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
n-Triacontane	9	105	mg/Kg	1	100	105	13.2 - 219.3

Sample: 195574 - BH-2

Laboratory: Midland									
Analysis:	TPH GRO		Analytica	Analytical Method:			Prep Me	S 5035	
QC Batch:	59381		Date Ana	Date Analyzed:			Analyze	d Bv:	ME
Prep Batch:	50734		Sample P	reparation:	2009-05-13		Prepared By:		ME
			\mathbf{RL}						
Parameter	Flag		Result		Units	Dilution			RL
GRO		6.01		mg/Kg	1			1.00	
						Spike	Percent	Re	covery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	\mathbf{L}	imits
Trifluorotoluene (TFT)		1.85	mg/Kg	1	2.00	92	68.5	- 119.4	
4-Bromofluorobenzene (4-BFB)		1.45	mg/Kg	1	2.00	72	52	- 117	

Report Date: May 15, 2009 OXYUSA006SPL			Work Order: 9051203 Sundance Fed 23				Page Number: 12 of 18 Eddy Co., NM			
Method Blank (1) QC Batcl	h: 59381								
QC Batch: 5938 Prep Batch: 5073	51 54		Date An QC Prep	alyzed: paration:	2009-05 2009-05	-13 -13		Ana Prep	lyzed By: bared By:	ME ME
				Μ	DL					
Parameter	Fla	ag		Re	sult		Ur	nits		RL
JRO				<0.	482		mg	/Kg		1
Surrogate		Flag	Result	Units	Dil	ution	Spike Amount	Percent Recovery	Rec Liz	overy nits
Frifluorotoluene (T	TFT)		1.85	mg/K	g	1	2.00	92	71.9	- 115
4-Bromofluorobenz	ene (4-BFB)		1.79	mg/K	g	1	2.00	90	45.7	- 118.9
Vlethod Blank (3 QC Batch: 5945 Prep Batch: 5074 Parameter	1) QC Batel 66 12	h: 59456	Date An QC Prep	alyzed: baration: M Bes	2009-05 2009-05 DL	-14 -14	Ur	Ana Prep nits	lyzed By: bared By:	AR AR BL
		~~ ` ``		1000						
Chloride	T			<2	.18		mg	/Kg		4
Chloride Laboratory Cont QC Batch: 5937 Prep Batch: 5066	trol Spike (LC: 70 66	5-1)	Date An QC Prep	<pre><2</pre>	2009-05 2009-05	-12 -12	mg	/Kg Ana Prej	lyzed By pared By:	4 LD LD
Laboratory Conf QC Batch: 5937 Prep Batch: 5066	trol Spike (LC: 70 56	S-1) LCS	Date An QC Prep	<2	2009-05 2009-05	-12 -12 Spike	Mat	/Kg Ana Prej rix	lyzed By pared By: R	LD LD ec.
Chloride Chloride Laboratory Conf QC Batch: 5937 Prep Batch: 5066 Param DBO	trol Spike (LC: 70 66	S-1) LCS Resul	Date An QC Prep	<pre><2</pre>	2009-05 2009-05 2009-05	-12 -12 Spike Amount 250	mg Mat Res	/Kg Ana Prej rix ult Rec. 86 111	lyzed By pared By: R Li	LD LD EC. mit
Chloride Chloride Laboratory Conf QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is	trol Spike (LC: 70 56 5 based on the sp	S-1) LCS Resul 278 ike result.	Date An QC Prep t U RPD is b	<pre></pre>	$\begin{array}{c} 10 \\ \hline 12009-05 \\ 2009-05 \\ \hline 2009-05 \\ \hline 1 \\ 1 \\$	-12 -12 Spike Amount 250 and spike	mg Mat Ress <5. duplicate	/Kg Ana Prej rix ult Rec. 86 111 result.	lyzed By pared By: R Li 57.4	4 LD LD ec. mit - 133.4
Chloride Laboratory Conf QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is	trol Spike (LCS 70 36 3 based on the sp	S-1) E-1) Resul 278 ike result.	Date An QC Prep It U RPD is b	<pre><2 alyzed: oaration: <u></u></pre>	2009-05 2009-05 2009-05 Dil. 1 the spike Spike	-12 5-12 Amount 250 and spike Matrix	Mat Res <5. duplicate	/Kg Ana Prej rix ult Rec. 86 111 result. Rec.	lyzed By: pared By: R Li 57.4	4 LD LD ec. mit - 133.4 RPD
Chloride Laboratory Conf QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is Param	trol Spike (LC: 70 36 5 based on the sp	S-1) LCS Resul 278 ike result.	Date An QC Prep t U RPD is b Units	22 alyzed: paration: <u>Jnits</u> <u>g/Kg</u> pased on Dil.	2009-05 2009-05 2009-05 Dil. 1 the spike Amount	-12 -12 Spike Amount 250 and spike Matrix Result	Mat Ress <5. duplicate Rec.	/Kg Ana Prej rix ult Rec. 86 111 result. Rec. Limit	lyzed By pared By: R Li 57.4 RPD	LD LD ec. mit - 133.4 RPD Limit
Chloride Chloride Laboratory Cont QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is Param DRO	trol Spike (LC: 70 36 5 based on the sp	S-1) LCS Resul 278 ike result. LCSD Result 276	Date An QC Prep It U RPD is t Units mg/Kg	2 alyzed: paration: <u>Jnits</u> g/Kg pased on <u>Dil.</u> 1	2009-05 2009-05 2009-05 Dil. 1 the spike Amount 250	-12 -12 Spike Amount 250 and spike Matrix Result <5.86	Mat Ress duplicate Rec. 110	/Kg Ana Prej rix ult Rec. 86 111 result. Rec. Limit 57.4 - 133.4	lyzed By pared By: R Li 57.4 RPD 1	LD LD ec. mit - 133.4 RPD Limit 20
Chloride Chloride Laboratory Cont QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is Param DRO Percent recovery is Param DRO Percent recovery is	trol Spike (LC: 70 56 5 based on the sp	LCS Resul 278 ike result. LCSD Result 276 ike result.	Date An QC Prep It U RPD is t Units mg/Kg RPD is t	<pre>22 23 24 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25</pre>	2009-05 2009-05 2009-05 Dil. 1 the spike Amount 250 the spike	-12 5-12 Spike Amount 250 and spike Matrix Result <5.86 and spike	Mat Ress <5. duplicate Rec. 110 duplicate	/Kg Ana Prep rix ult Rec. 86 111 result. Rec. Limit 57.4 - 133.4 result.	lyzed By: pared By: Li 57.4 RPD 1	4 LD LD ec. mit - 133.4 RPD Limit 20
Chloride Chloride Laboratory Conf QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is Param DRO Percent recovery is	trol Spike (LC: 36 3 based on the sp 4 based on the sp LCS	S-1) E-1) E-1) E-1) E-1) E-1) E-1) E-1) E	Date An QC Prep It U RPD is b Units mg/Kg RPD is b	<pre></pre>	$\begin{array}{c} 2009-05\\ 2009-05\\ 2009-05\\ \hline \\ 1\\ \hline \\ 1\\ \hline \\ the spike\\ \hline \\ Amount\\ \hline \\ 250\\ \hline \\ the spike\\ \end{array}$	-12 -12 Spike Amount 250 and spike Matrix Result <5.86 and spike Spike	Mat Rest <5. duplicate Rec. 110 duplicate LCS	/Kg Ana Prej rix ult Rec. 86 111 result. Rec. Limit 57.4 - 133.4 result. LCSD	lyzed By: pared By: R Li 57.4 RPD 1 R	4 LD LD ec. mit - 133.4 RPD Limit 20 ec.
Chloride Chloride Laboratory Cont QC Batch: 5937 Prep Batch: 5066 Param DRO Percent recovery is Param DRO Percent recovery is Surrogate	trol Spike (LC: 6 5 based on the sp LCS Result	S-1) LCS Result 278 ike result. LCSD Result ike result. LCSD Result	Date An QC Prep It U RPD is b Units mg/Kg RPD is b Units	<pre> 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2</pre>	$\begin{array}{c} 2009-05\\ 2009-05\\ 2009-05\\ \hline \\ 1\\ \hline \\ 1\\ \hline \\ the spike\\ \hline \\ Spike\\ \hline \\ Amount\\ \hline \\ 250\\ \hline \\ the spike\\ \hline \\ Dil.\\ \hline \end{array}$	-12 -12 Spike Amount 250 and spike Matrix Result <5.86 and spike Spike Amount	Mat Ress <5. duplicate Rec. 110 duplicate LCS Rec.	/Kg Ana Prej rix ult Rec. 86 111 result. Rec. Limit 57.4 - 133.4 result. LCSD Rec.	lyzed By pared By: R Li 57.4 RPD 1 R Li	LD LD EC. mit - 133.4 RPD Limit 20 ec. mit

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Laboratory Control Spike (LCS-1)

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QC Batch: Prep Batch:	59380 50680	Da QC	Date Analyzed: 2009-05-12 QC Preparation: 2009-05-12				Analy Prepa	aalyzed By: ME repared By: ME	
		LCS			Spike	Matrix	_	Rec.	
Param		Result	\mathbf{Units}	Dil.	Amount	Result	$\operatorname{Rec.}$	Limit	
Benzene		2.01	mg/Kg	1	2.00	< 0.00100	100	72.7 - 129.8	
Toluene		2.00	mg/Kg	1	2.00	< 0.00100	100	71.6 - 129.6	
Ethylbenzene	9	1.97	mg/Kg	1	2.00	< 0.00110	98	70.8 - 129.7	
Xylene		5.86	mg/Kg	1	. 6.00	< 0.00360	98	70.9 - 129.4	

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limit
Benzene	1.90	mg/Kg	1	2.00	< 0.00100	95	72.7 - 129.8	6	20
Toluene	1.92	mg/Kg	1	2.00	< 0.00100	96	71.6 - 129.6	4	20
Ethylbenzene .	1.90	mg/Kg	1	2.00	< 0.00110	95	70.8 - 129.7	4	20
Xylene	5.69	mg/Kg	1	6.00	< 0.00360	95	70.9 - 129.4	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			\mathbf{Spike}	LCS	LCSD	Rec.
Surrogate	\mathbf{Result}	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.97	2.00	mg/Kg	1	2.00	98	100	65.9 - 132
4-Bromofluorobenzene (4-BFB)	1.85	1.87	mg/Kg	1	2.00	92	94	55.2 - 128.9

Laboratory Control Spike (LCS-1)

QC Batch:	59381	Date Analyzed:	2009-05-13	Analyzed By:	ME
Prep Batch:	50734	QC Preparation:	2009-05-13	Prepared By:	ME

	LCS			Spike	Matrix		$\operatorname{Rec.}$
Param	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit
GRO	14.3	mg/Kg	1	20.0	< 0.482	72	60.5 - 100.1

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
GRO	14.0	mg/Kg	1	20.0	< 0.482	70	60.5 - 100.1	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			\mathbf{Spike}	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	1.90	1.87	mg/Kg	1	2.00	95	94	78.8 - 104.7
4-Bromofluorobenzene (4-BFB)	1.91	1.89	m mg/Kg	1	2.00	96	94	66.1 - 107.3

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Laboratory Control Spi	ke (LCS-1)							
QC Batch: 59456 Prep Batch: 50742		Date Analyzed: QC Preparation	: 2009-05- n: 2009-05-	14 14		Ana Pre	alyzed By pared By	r: AR r: AR
	LC	S		Spike	Mati	rix		Rec.
Param	Res	ult Units	Dil.	Amount	Resi	ilt Re	ec.	Limit
Chloride	97.	2 mg/Kg	1	100	<2	18 9	7	85 - 115
Percent recovery is based of	on the spike result.	RPD is based o	n the spike a	and spike d	uplicate res	sult.		
	LCSD		\mathbf{Spike}	Matrix		Rec.		RPD
Param	Result	Units Dil.	. Amount	Result	Rec.	Limit	RPD	Limit
Chloride	98.5	mg/Kg 1	100	<2.18	98	85 - 115	1	20
Matrix Spike (MS-1)	Spiked Sample: 19	05575						TD
			~~~~	10				
QC Batch: 59370 Prep Batch: 50666		Date Analyzed QC Preparation	: 2009-05- n: 2009-05-	-12 -12		Ana Pre	pared By	r: LD
QC Batch: 59370 Prep Batch: 50666	MS	QC Preparation	: 2009-05- n: 2009-05-	12 12 Spike	Matrix	Ana Pre	pared By	7: LD 7: LD Rec.
QC Batch: 59370 Prep Batch: 50666 Param DRO	MS Resu 202	Date Analyzed QC Preparation	: 2009-05- n: 2009-05- 	12 12 Spike Amount 250	Matrix Result 19.4	Ana Pre <u>Rec.</u> 73	pared By	7: LD 7: LD Rec. .imit - 167.1
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of	MS Resu 202 on the spike result.	Date Analyzed QC Preparation lt Units mg/Kg RPD is based o	: 2009-05- n: 2009-05- Dil. 1 n the spike a	12 12 Spike Amount 250 and spike d	Matrix Result 19.4 uplicate res	Ana Pre Rec. 73 sult.	pared By	7: LD 7: LD Rec. .imit - 167.1
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of	MS Resu 202 on the spike result. MSD	Date Analyzed QC Preparation It Units mg/Kg RPD is based o	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike	12 12 Spike <u>Amount</u> 250 and spike d Matrix	Matrix Result 19.4 uplicate res	Ana Pre <u>Rec.</u> 73 sult. Rec.	1 jzed By pared By 1 35.2	Rec. - 167.1
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param	MS Resu 202 on the spike result. MSD Result	Date Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil.	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount	12 12 Spike Amount 250 and spike d Matrix Result	Matrix Result 19.4 uplicate res Rec.	Ana Pre Rec. 73 sult. Rec. Limit	RPD	r: LD r: LD Rec. .imit - 167.1 RPD Limit
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO	MS Resu 202 on the spike result. MSD Result 1 165	Unite     Units       lt     Units       mg/Kg     RPD is based o       Units     Dil.       mg/Kg     1	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250	12 12 Spike Amount 250 and spike d Matrix Result 19.4	Matrix Result 19.4 uplicate res Rec. 66 35	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1	alyzed By pared By I I 35.2 RPD 20	Rec. .imit - 167.1 RPD Limit 20
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of	MS Resu 202 on the spike result. MSD Result 1 165 on the spike result.	late Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250 n the spike a	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult.	RPD	r: LD r: LD Rec. .imit - 167.1 RPD Limit 20
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of	MS Resu 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD	Date Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o	: 2009-05- n: 2009-05- <u>Dil.</u> <u>1</u> n the spike a <u>Spike</u> <u>Amount</u> <u>250</u> n the spike a	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike	Matrix Result 19.4 uplicate res <u>Rec.</u> 66 35 uplicate res MS	Ana Pre Rec. $\overline{73}$ sult. Rec. Limit $\overline{.2 - 167.1}$ sult. MSD	Ilyzed By pared By I I 35.2 RPD 20	r: LD r: LD Rec. .imit - 167.1 RPD Limit 20 Rec.
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of Surrogate	MS Resu 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD Result Result	Date Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o Units	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250 n the spike a Dil.	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike Amount	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res MS Rec.	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult. MSD Rec.	RPD 20	r: LD Rec. .imit - 167.1 RPD Limit 20 Rec. .imit
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of Surrogate n-Triacontane	MS Resu 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD Result Result 118 107	Date Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o Units mg/Kg	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250 n the spike a Dil. 1	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike Amount 100	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res MS Rec. 118	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult. MSD Rec. 107	RPD 20 I 34.5	<ul> <li>Rec.</li> <li>imit</li> <li>- 167.1</li> <li>RPD</li> <li>Limit</li> <li>20</li> <li>Rec.</li> <li>imit</li> <li>- 178.4</li> </ul>
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of Surrogate n-Triacontane Matrix Spike (MS-1) QC Batch: 59380	MS Resul 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD Result Result 118 107 Spiked Sample: 19	Date Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o Units mg/Kg 95575 Date Analyzed:	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250 n the spike a Dil. 1	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike Amount 100	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res MS Rec. 118	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult. MSD Rec. 107	Ilyzed By pared By I 35.2 RPD 20	7: LD 7: LD Rec. imit - 167.1 RPD Limit 20 Rec. imit - 178.4
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of Surrogate n-Triacontane Matrix Spike (MS-1) QC Batch: 59380 Prep Batch: 50680	MS Resul 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD Result Result 118 107 Spiked Sample: 19	Date Analyzed QC Preparation It Units mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o Units mg/Kg 95575 Date Analyzed: QC Preparation	: 2009-05- n: 2009-05- <u>Dil.</u> n the spike a <u>Spike</u> <u>Amount</u> 250 n the spike a <u>Dil.</u> 1 : 2009-05- n: 2009-05-	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike Amount 100	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res MS Rec. 118	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult. MSD Rec. 107 Ana Prej	Alyzed By pared By I 35.2 RPD 20 I 34.5 Support By	Rec. imit - 167.1 RPD Limit 20 Rec. imit - 178.4
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of Surrogate n-Triacontane Matrix Spike (MS-1) QC Batch: 59380 Prep Batch: 50680	MS Resul 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD Result 118 107 Spiked Sample: 19	late Analyzed QC Preparation mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o Units mg/Kg 05575 Date Analyzed: QC Preparation	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250 n the spike a Dil. 1 : 2009-05- n: 2009-05-	12 12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike Amount 100 12 12 Spike	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res MS Rec. 118	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult. MSD Rec. 107 Ana Prej	Ilyzed By pared By I 35.2 RPD 20 I 34.5 Ilyzed By pared By	r: LD Rec. imit - 167.1 RPD Limit 20 Rec. imit - 178.4 r: ME : ME Rec.
QC Batch: 59370 Prep Batch: 50666 Param DRO Percent recovery is based of Param DRO Percent recovery is based of Surrogate n-Triacontane Matrix Spike (MS-1) QC Batch: 59380 Prep Batch: 50680 Param	MS Resul 202 on the spike result. MSD Result 1 165 on the spike result. MS MSD Result Result 118 107 Spiked Sample: 19 MS Resul	late Analyzed QC Preparation mg/Kg RPD is based o Units Dil. mg/Kg 1 RPD is based o Units mg/Kg 95575 Date Analyzed: QC Preparation t Units	: 2009-05- n: 2009-05- Dil. 1 n the spike a Spike Amount 250 n the spike a Dil. 1 : 2009-05- n: 2009-05- n: 2009-05-	12 12 Spike Amount 250 and spike d Matrix Result 19.4 and spike d Spike Amount 12 12 Spike Amount	Matrix Result 19.4 uplicate res Rec. 66 35 uplicate res MS Rec. 118 Matrix Result	Ana Pre Rec. 73 sult. Rec. Limit .2 - 167.1 sult. MSD Rec. 107 Ana Prej Rec.	Ilyzed By pared By I 35.2 RPD 20 I 34.5 Ilyzed By pared By	r: LD Rec. imit - 167.1 RPD Limit 20 Rec. imit - 178.4 r: ME : ME Rec. imit

¹MS/MSD RPD out of RPD Limits. Use LCS/LCSD to demonstrate analysis is under control

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#### matrix spikes continued ...

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	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	$\operatorname{Result}$	Rec.	Limit
Toluene	1.86	mg/Kg	1	2.00	< 0.00100	93	64.2 - 153.8
Ethylbenzene	1.91	m mg/Kg	1	2.00	< 0.00110	96	61.6 - 159.4
Xylene	5.57	mg/Kg	1	6.00	< 0.00360	93	64.4 - 155.3

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	$\operatorname{Result}$	Units	Dil.	$\operatorname{Amount}$	$\operatorname{Result}$	Rec.	$\operatorname{Limit}$	$\operatorname{RPD}$	$\operatorname{Limit}$
Benzene	1.92	mg/Kg	1	2.00	< 0.00100	96	58.6 - 165.2	2	20
Toluene	1.91	$\mathrm{mg/Kg}$	1	2.00	< 0.00100	96	64.2 - 153.8	3	20
Ethylbenzene	1.95	$\mathrm{mg/Kg}$	1	2.00	< 0.00110	98	61.6 - 159.4	2	20
Xylene	5.72	mg/Kg	1	6.00	< 0.00360	95	64.4 - 155.3	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	$\operatorname{Result}$	$\operatorname{Result}$	Units	Dil.	Amount	Rec.	Rec.	$\operatorname{Limit}$
Trifluorotoluene (TFT)	2.00	2.04	mg/Kg	1	2	100	102	76 - 127.9
4-Bromofluorobenzene (4-BFB)	1.58	1.60	m mg/Kg	1	2	79	80	72 - 127.8

#### Matrix Spike (MS-1) Spiked Sample: 195575

QC Batch:	59381	Date Analyzed:	2009-05-13	Analyzed By:	ME
Prep Batch:	50734	QC Preparation:	2009-05-13	Prepared By:	ME

	MS			$\mathbf{Spike}$	Matrix		Rec.
Param	$\operatorname{Result}$	Units	Dil.	Amount	$\operatorname{Result}$	Rec.	$\operatorname{Limit}$
GRO	20.7	mg/Kg	1	20.0	5.9871	74	12.8 - 175.2

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	$\mathbf{Result}$	Units	Dil.	$\operatorname{Amount}$	Result	Rec.	Limit	$\operatorname{RPD}$	$\operatorname{Limit}$
GRO	24.8	m mg/Kg	1	20.0	5.9871	94	12.8 - 175.2	18	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	$\operatorname{Result}$	$\operatorname{Result}$	Units	Dil.	Amount	Rec.	Rec.	$\operatorname{Limit}$
Trifluorotoluene (TFT)	1.85	1.89	mg/Kg	1	2	92	94	60.8 - 132.1
4-Bromofluorobenzene (4-BFB)	1.59	2.98	mg/Kg	1	2	80	149	31.3 - 161.7

#### Matrix Spike (MS-1) Spiked Sample: 195575

QC Batch:	59456	Date Analyzed:	2009-05-14	Analyzed By:	$\mathbf{AR}$
Prep Batch:	50742	QC Preparation:	2009-05-14	Prepared By:	$\mathbf{AR}$

Report Dat OXYUSA0	te: May 15, 2009 06SPL	)	W	Vork Orden Sundance		Page Number: 16 of 18 Eddy Co., NM						
_		N	AS			Spike	Ma	atrix		Rec.		
Param		Re	esult	Units		Amount	Re	$\frac{100}{100}$ 1	$\frac{1}{100}$	Limit 85 115		
		j		ng/Kg	00 1	<u> </u>	<u> </u>	109 1	02	00 - 110		
Percent rec	overy is based of	n the spike result	t. RPD is t	based on t	he spike ai	na spike aup	licate i	result.				
		$\mathbf{MSD}$			Spike	Matrix		Rec.		$\operatorname{RPD}$		
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit		
Chloride		5140	mg/Kg	50	5000	<109	103	85 - 115	1	20		
Percent rec	overy is based o	n the spike result	t. RPD is l	based on t	he spike a	nd spike dup	licate 1	result.				
Standard	(CCV-1)											
QC Batch:	59370		Date Ar	alyzed:	2009-05-12	!		An	alyzed l	By: LD		
			$\mathrm{CCVs}$	CCV	/s	$\mathrm{CCVs}$		Percent				
			True	Four	nd	Percent		Recovery		Date		
Param	Flag	Units	Conc.	Con	с.	Recovery		Limits	I	Analyzed		
DRO		mg/Kg	250	290	)	116		80 - 120	20	009-05-12		
<b>Standard</b> QC Batch:	(CCV-2) 59370		Date Ar CCVs	nalyzed: CCV	2009-05-12 √s	ccvs		An Percent	alyzed l	By: LD		
			True	Four	nd	Percent		Recovery		Date		
Param	Flag	Units	Conc.	Con	<u>.c.</u>	Recovery		Limits	A	Analyzed		
DRO		mg/Kg	250	29.	3	117		80 - 120	20	009-05-12		
Standard	(CCV-3)											
QC Batch:	59370		Date Ar	nalyzed:	2009-05-12	2		An	alyzed l	By: LD		
			CCVs	CCV	Vs	CCVs		Percent				
			True	Four	nd	Percent		Recovery		Date		
Param	Flag	Units	Conc.	Con	с.	Recovery		Limits	A	Analyzed		
DRO		m mg/Kg	250	298	8	119		80 - 120	20	009-05-12		
Standard	(CCV-1)											
QC Batch:	59380		Date An	alyzed:	2009-05-12	:		An	alyzed H	By: ME		
				а ( Б	CCVs	CCVs Percent		Percent		Data		
Param	Flag	Units	Cone	г . С	Conc.	Recovery		Limits	4	Analyzed		
Benzene		mg/Kg	0.100	) 0	.0965	<u>96</u>		80 - 120	2	009-05-12		
		5, 5						-	cont	inued		

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standard cor	ntinued											
			$\mathrm{CCVs}$	$\mathrm{CCVs}$	CCVs	Percent						
			True	Found	Percent	Recovery	Date					
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed					
Toluene	0	mg/Kg	0.100	0.0954	95	80 - 120	2009-05-12					
Ethylbenzen	e	mg/Kg	0.100	0.0949	95	80 - 120	2009-05-12					
Xylene		mg/Kg	0.300	0.284	95	80 - 120	2009-05-12					
Standard (	(CCV-2)											
QC Batch:	59380		Date Analy	zed: 2009-05-	-12	Anal	yzed By: ME					
			CCVs	CCVs	CCVs	Percent						
			True	Found	Percent	Becovery	Date					
Param	Flag	Units	Conc.	Conc.	Becovery	Limits	Analyzed					
Benzene		mg/Kg	0.100	0.102	102	80 - 120	2009-05-12					
Toluene		mg/Kg	0.100	0.0993	99	80 - 120	2009-05-12					
Ethylbenzen	e	mg/Kg	0.100	0.100	100	80 - 120	2009-05-12					
Xylene	-	mg/Kg	0.300	0.302	101	80 - 120	2009-05-12					
Standard (	(CCV-1)											
QC Batch:	59381		Date Analy	zed: 2009-05-	-13	Anal	yzed By: ME					
			CCVs	CCVs	CCVs	Percent						
			True	Found	Percent	Recovery	Date					
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed					
GRO		mg/Kg	1.00	0.935	94	80 - 120	2009-05-13					
Standard (	(CCV-2)											
OC Batah	50291		Data Analy		10	Á ma l	unad Dav. ME					
QU Datch:	99991		Date Analy	zeu: 2009-00-	-19	Anar	yzed by: ME					
			$\mathrm{CCVs}$	$\mathrm{CCVs}$	$\mathrm{CCVs}$	Percent						
			True	Found	Percent	Recovery	Date					
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed					
GRO		mg/Kg	1.00	0.828	83	80 - 120	2009-05-13					

### Standard (ICV-1)

QC Batch: 59456

Date Analyzed: 2009-05-14

Analyzed By: AR

Report Dat OXYUSA00	e: May 15, 200 06SPL	9	Wo S	rk Order: 9051 Sundance Fed 23	Page Number: 18 of 18 Eddy Co., NM				
Param Chloride	Flag	Units mg/Kg	ICVs True Conc. 100	ICVs Found Conc. 101	ICVs Percent Recovery 101	Percent Recovery Limits 85 - 115	Date Analyzed 2009-05-14		
Standard ( QC Batch:	(CCV-1) 59456		Date Anal	lyzed: 2009-05	j-14	Anal	yzed By: AR		
-			$\operatorname{CCVs}$	CCVs	$\mathrm{CCVs}$	Percent			

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Param	Flag	Units	True Conc.	Found Conc.	Percent Recovery	Recovery Limits	${f Date} {f Analyzed}$
Chloride		mg/Kg	100	99.3	99	85 - 115	2009-05-14

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ivoice to: if different from above)						Irolog	+ N/2				***			/ 624	624	Ext(C3		Hg 6010	Pb Se H					2 2									om stan	
roject <del>m.</del> OX Y USA OOL SPL roject Location (including state):			้นพ	<u>יא</u> ב וצ	<u>V/</u>	amp	E I	igna	ture:	2	3			/ 8260B	8260B /	1X1005		I Cr Pb Se	a Cd Cr				524	70C / 62		20							ifferent fi	
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LAB# FIELD CODE LAB USE ONLY	# CONTAINE	Volume / Am	WATER	soil	SLUDGE			H,SO,	NaOH	ICE	NONE	DATE	TIME	MTBE 802	BTEX 8024	TPH 418 1 /		Total Metals Ag	TCLP Metals	TCLP Volatife	TCLP Semi V	RCI 1 CU	GC/MS Vol. 8	GC/MS Sem	PCB's 8082 /	Pesticides 80	Moisture Cor						Turn Around	
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Submittal of samples constitutes agreement to Tr	erms an	d Conc O	lition: RIG	s liste	d on L C(	revei	se s	ide d	of C.	0, (	C.	, transfer		Ca	urrier	*#		<	.or (	'7		<u>۱</u>												

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## **APPENDIX D**

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## New Mexico Oil Conservation Division Release Notification and Corrective Action Form C-141

Rec'd 6/11/09 NMOCD DISTIT

Lease No.

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	$\boxtimes$	Final Report
Name of Company OXY USA	Contact Kelton Beaird			
Address 102 S Main Carlsbad, NM 88220	Telephone No. (O) 505-887-8337	C) 575-390-1903		
Facility Name Sundance Fed. #23	Facility Type Oil Well			

Surface Owner BLM

LOCATION OF RELEASE

	LOCATION OF RELEASE										
Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County			
	4	24S	31E					Eddy			

Latitude_____ Longitude_

Mineral Owner

#### NATURE OF RELEASE

Type of Release Produced water	Volume of Release 20bbls Volume Recovered 0								
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery							
		4-27-09 @ 12:00pm							
Was Immediate Notice Given?	If YES, To Whom?								
Yes 🗌 No 🗌 Not Required	ed Mike Bratcher-NMOCD J1m Amos-BLM (left message)								
By Whom? Kelton Beaird (HES Specialist)-Oxy	Date and Hour See above								
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.*									
Poly-line split causing fluid to leak into the pasture									
Describe Area Affected and Cleanup Action Taken *									
Due to the release of 20 barrels of produced water, remedial excavation ac	tivities were conducted along the rupt	tured poly-line. Due to the flow path of the							
release, an area of approximately 80 feet by 27 feet was excavated using a	backhoe to approximately 3 feet bgs	A second area of approximately 65 feet by							
27 feet was excavated using a backhoe to approximately 8 feet bgs. No vi	sible impact was observed at 3 feet bg	gs or 8 feet bgs depth in the respective							
excavations; therefore, confirmation samples were collected and submittee	for laboratory analysis. Analytical r	esults indicate non-detectable							
concentrations of BTEX and detectable concentrations of TPH and chlorid	les. However, all detected TPH and c	hloride concentrations were below							
applicable NMOCD limits with the exception of one (1) sample (SW-1) w	thich reported a chloride concentration	n of 287 mg/Kg.							
Talen propaga that the 1.500 ophic yards of affected soil he transported a	nd dianaged of at the Lee Lend Inc. le	ndfill (Domnit # WIM 01 025) wast of							
Hobbs New Mexico. During affected soil transportation and disposal act	witing the exception will be backfill	ad and compacted with soil back hould							
from Lea Land Inc	whiles, the excavation will be backline	ed and compacted with son back natied							
I hereby certify that the information given above is true and complete to the	he hest of my knowledge and understa	nd that nursuant to NMOCD rules and							
regulations all operators are required to report and/or file certain release n	otifications and perform corrective act	tions for releases which may endanger							
public health or the environment. The acceptance of a C-141 report by the	NMOCD marked as "Final Report" of	does not relieve the operator of liability							
should their operations have failed to adequately investigate and remediate	e contamination that pose a threat to g	round water, surface water, human health							
or the environment. In addition, NMOCD acceptance of a C-141 report d	bes not relieve the operator of respons	ability for compliance with any other							
federal, state, or local laws and/or regulations.									
NAR	OIL CONSERV	ATION DIVISION							

Signature:	Approved by District Supervisor		
Printed Name: Kelton Beaird			
Title: HES Specialist	Approval Date:	Expiration Date:	
E-mail Address. kelton_beaird@oxy.com Date: 4-9-09	Conditions of Approval:		Attached

* Attach Additional Sheets If Necessary