

April 1, 2005





Prepared for:

Oxy USA 1017 W. Stanolind Road Hobbs, New Mexico 88240



## By:

Safety & Environmental Solutions, Inc. 703 E. Clinton Suite 102 Hobbs, New Mexico 88240 (505) 397-0510

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#### i. Company Contacts

Rick Kerby	Oxy USA	505-393-2174	rick_kerby@oxy.com
Bob Allen	SESI	505-397-0510	ballen@sesi-nm.com

#### II. Background

Safety & Environmental Solutions, Inc. (SESI) was contracted by Oxy USA to perform assessment and cleanup services on an area identified as the Myers Langlie Mattix Southwest Water injection Trunk Line. The subject site is an injection line leak area located in Section 12, Township 24S, Range 36E, Lea County, New Mexico.

#### III. Contaminant and Size of Area

The suspected contaminate was produced water from a flat plug on a 2" injection lateral that rusted out. Approximately 260 barrels of brine was released, of which, 230 barrels was recovered. The suspected contaminant was classified as an exempt oilfield waste. No evidence of other contaminants was observed.

#### IV. Surface and Ground Water

According to the database provided by the New Mexico State Engineer's Office the nearest groundwater of record is in Section 13 of the same range and township. The depth of water in the well was  $\underline{131}$  feet on May 22, 1991.

#### V. Soils

The soils in the area are predominantly sand and sandy loam.

#### VI. Work Performed

The cleanup level reached by the application of the "Guidelines for Remediation of Leaks, Spill and Releases" New Mexico Oil Conservation Division – August 13, 1993 to this site is 5000 ppm Total Petroleum Hydrocarbon (TPH). Application of the New Mexico Oil Conservation Division's ranking criteria for contaminated soils at this site is presented below.

Depth to Ground Water:	0 points
Distance to Well Head or Water Source:	0 points
Distance to Surface Water/Waterways:	0 points
Total Score:	0 points

On April 29, 2004 Oxy retrieved four (4) surface samples and drilled four (4) boreholes to a depth of 6'. On May 20, 2004 Oxy retrieved samples at 6 ½', 8', and 9'. On July 20, 2004 Oxy retrieved samples of the sidewalls and bottom of the excavated area around the leak site. All samples were sent under Chain of Custody to Cardinal Laboratories of Hobbs, New Mexico. All samples were analyzed for Chlorides (CI') (EPA Method 4500-CI'B) and Borehole G, which was drilled at the site of the leak, was analyzed for TPH (EPA Method 8015) and Benzene, Toluene, Ethyl Benzene, and Total Xylenes (BTEX) (EPA Method 8260). The results of the analysis are as follows:

Date	Sample ID	Cľ	Date	Sample ID	CI.
4/29/04	Surface 1	64	4/29/04	A @ 1½'	1056
4/29/04	Surface 2	48	4/29/04	A @ 3'	528
4/29/04	Surface 3	80	4/29/04	A @ 4½ '	1839
4/29/04	Surface 4	64	4/29/04	A @ 6'	1008
4/29/04	B @ 1½	1024	4/29/04	C @ 1½	560
4/29/04	B @ 3'	1759	4/29/04	C @ 3'	832
4/29/04	B @ 4½ '	1759	4/29/04	C @ 4½ '	1040
4/29/04	B@6'	1040	4/29/04	C @ 6'	224
4/29/04	D @ 1½'	1711	4/29/04	G @ 1½'	1264
4/29/04	D @ 3'	416	4/29/04	G @ 3'	1264
4/29/04	D @ 4½ '	336	4/29/04	G @ 4½ '	1520
4/29/04	D@6'	704	4/29/04	G @ 6'	2559

Date	Sample ID	GRO	DRO	Benzene	Toluene	Ethyl Benzene	Total Xylenes
4/29/04	G @ 1½'	<10.0	<10.0	< 0.005	< 0.005	<0.005	<0.015
4/29/04	G @ 3'	<10.0	<10.0	< 0.005	<0.005	<0.005	<0.015
4/29/04	G @ 4½ '	<10.0	<10.0	< 0.005	<0.005	<0.005	<0.015
4/29/04	G @ 6'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015

Date	Sample ID	Cľ	Date	Sample ID	Cl
5/20/04	MLMU 61/2'	1088	7/20/04	S Wall 9'	1040
5/20/04	MLMU 8'	1088	7/20/04	E Wall 9'	1024
5/20/04	MLMU 9'	1296	7/20/04	Bottom 101/2'	1104

On February 3, 2005 SESI drilled Borehole #1 to a depth of 10'. On March 17, 2005 SESI drilled Borehole # 2 to a depth of 10'. Samples were retrieved at 5' and 10' in Borehole #1 and at 10' in Borehole #2. All samples were sent under Chain of Custody to Cardinal Laboratories. The samples were analyzed for Chlorides (EPA Method 4500-Cl<sup>-</sup> B). The results of the analysis are as follows:

Date	Sample ID	CI
2/3/05	BH #1 5'	880
2/3/05	BH #1 10*	912
3/17/05	BH #2 10'	128

### VII. Request for Closure

There was no indication of the presence of TPH or BTEX at this site. The Chloride levels are under 1,000 ppm at a depth of 10' in both boreholes.

Due to the proximity of the groundwater SESI requests no further action be required at this site.

### VIII. Figures & Appendices

Figure 1 - Vicinity Map Figure 2 - Site Plan Appendix A – C-141 Appendix B - Oxy Analytical Results Appendix C - SESI Analytical Results Appendix D - Site Photos





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# Figure 2 Site Plan

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District [ 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

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Surface Ow	ner Kelly	Myers		Mineral (	Owner		<u></u>	Lease	No.		
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Type of Rela	ase Produ	ced Water					Release 260 BB	ls Volume	Recovered :	230 bb	s
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Required											
By Whom?							Iour 04-24-2004				
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Printed Nam		rby				Approved by	District Supervis	:o <b>r</b> :			
Title: HES				······		Approval Da	le:	Expiration	Date:		
E-mail Addr	ess: rick_k	aby@oxy.co	n			Conditions o			Attached	1 🗌	
Dur Anki	n.4			Dhana: 621 40					1		

# Appendix B Oxy Analytical Results

A REAL PROPERTY AND A REAL



PHONE (505) 393-2326 + 101 E. MARLAND + HOBBS, NM 88240

ANALYTICAL RESULTS FOR OXY USA WTP LP ATTN: RICK KERBY 1943 N. GRIMES #B-269 HOBBS, NM 88240 FAX TO: (505) 397-2671

Receiving Date: 04/30/04 Reporting Date: 05/03/04 Project Number: NOT GIVEN Project Name: MLMU SW WTR INJ Project Location: MLMU Analysis Date: 05/03/04 Sampling Date: 04/29/04 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: AH

LAB NUMBER SAMPLE ID

(mg/Kg)

CI<sup>--</sup>

H8653-1	G-1	1264
H8653-2	G-2	1264
H8653-3	G-3	1520
H8653-4	G-4	2559
H8653-5	C-1	560
H8653-6	C-2	832
H8653-7	C-3	1040
H8653-8	C-4	224
H8653-9	A-1 @ 1 1/2	1056
H8653-10	A-2 @ 3'	528
H8653-11	A-3 @ 4 1/2	1839
H8653-12	A-4 @ 6'	1008
Quality Control		1010
True Value QC		1000
% Recovery		101
<b>Relative Perce</b>	nt Difference	3.0

#### METHOD: Standard Methods

Note: Analyses performed on 1:4 w:v aqueous extracts.

4500-CI'B

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remote for any claim ansing, whether based in contract or fort, shall be timiled to the amount paid by client for analyses. All claims, including those for regignings and any other cause whatsower shall be deemed waived unless made in whether based by Cardinal within thirty (32) days after completion of the applicable serviced UPC advects and Cardinal be table for incidential or consequential damages, including, including, business incidents and cardinal be table for incidential or consequential damages, including, uncleant, business interruptors, loss of usine (rides of provident), is substitutioned. Unless of using and received by Cardinal within thirty (32) days after completion of the applicable artificities or incidential analysis and cardinal be table for incidential or consequential damages, including, and analysis at the activation of the applicable afflicities or incidential and the related to the performance of services note onder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (505) 393-7326 + 101 E. MARLAND + HOBBS, NM 88240

ANALYTICAL RESULTS FOR OXY USA WTP LP ATTN: RICK KERBY 1943 N. GRIMES #B-269 HOBBS, NM 88240 FAX TO: (505) 397-2671

Receiving Date: 04/30/04 Reporting Date: 05/03/04 Project Number: NOT GIVEN Project Name: MLMU SW WTR INJ Project Location: MLMU Analysis Date: 05/03/04 Sampling Date: 04/29/04 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: AH

LAB NUMBER	SAMPLE ID	CI <sup></sup> (mg/Kg)
H8653-13	<u> </u>	1024
H8653-14	B-2	1759
H8653-15	B-3	1759
H8653-16	8-4	1040
H8653-17	D-1	1711
H8653-18	D-2	416
H8653-19	D-3	336
H8653-20	<u>D-4</u>	704
H8653-21	1	64
H8653-22	2	48
H8653-23	3	80
H8653-24	4	64
Quality Control		1010
True Value QC		1000
% Recovery		101
Relative Percent I	Difference	3.0

METHOD: Standard Methods

Note: Analyses performed on 1:4 wiv aqueous extracts.

4500-CI'B

PLEASE NOTE: Lability and Damages Cardinel's liability and client's exclusive mmedy for any claim arking, whether burned in contract or fort, shall be limited to the annuant paid by slimit to analyses. All capity popularity those for metry and and any other cause whatsoever that be deemed raised unless made in whiting and received by Cardinal exchiniting (20) days after completion of the applicable set of CODULARI shall Cardinal to facts for metry conservations whatsoever that be deemed in availing and received by Cardinal exchiniting (20) days after completion of the applicable and CODULARI shall Cardinal to facts for metry conservations demanders. Including, introductions, business interpectors, to sol of sol robis of profix inclusions (client, es substrate as after as of solutions adding due to related to the performance of services hereunder by Cardinal, regardinas of whether such claim is based upon any of the above stated reasons or utherwise.



PHONE (325) 673-7001 + 2111 BEECHIVOOD + ABILENE, TX 78805 PHONE (509) 333-2328 + 101 E. MARLAND + MOBBS, NM 89240

ANALYTICAL RESULTS FOR OXY USA WTP LP ATTN: RICK KERBY 1943 N. GRIMES #8-269 HOBBS, NM 88240 FAX TO: (505) 397-2671

Receiving Date: 04/30/04 Reporting Date: 05/03/04 Project Number: NOT GIVEN Project Name: MLMU SW WTR INJ Project Location: MLMU Sampling Date: 04/29/04 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received Ey: GP Analyzed By: BC

LAB NUMBI	ER SAMPLE ID	GRO (C <sub>e</sub> -C <sub>&gt;0</sub> ) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS	DATE:	04/30/04	04/30/04	04/30/04	64/30/04	04/30/04	04/30/04
H8653-1	G-1	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H6653-2	G-2	<10.0	<10.0	<0.005	<0.005	<0 005	<0.015
H8653-3	G-3	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H8853-4	G-4	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
		k	<u> </u>				
Quality Cor	trol	737	745	0,105	0.100	0.093	0.280
True Value	QC	800	800	0.100	0.100	0.100	0.300
% Recover	y	92.2	93.3	105	99.7	1 93 1	93.4
Relative Percent Difference		6.0	7.8	0.9	2.0	5.2	3.9

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.

Date

#### H68534.XLS

PLEASE NOTE: Liability and Damages. Cantinative liability and clearts exclusive remedy for any data withing, whether based in contract or tort, shell be limited to the amount paul by clear: lot analyses. All claims. Including those for negligence and any other cause whateaber entrals be deemed whether whether whether whether within their (30) days after completion of the applicable applicable on event and Leardinate be table for includents' changes, including, without limited in writing and many data within their (30) days after completion of the applicable applicable on event and Leardinate be tabled on the contract or consequentiation data and any other sector within their (30) days after completion of the applicable applicable on event and Leardinate be tabled on the contract of carriers including, without limited in the contract of use of the contract of the applicable affiliates or successors arising out of or related to the performance of carriers by Candinati, regardless of whether such claim is based upon any of the above stated mesons to relate on the performance of carriers by Candinati, regardless of whether such claim is based upon any of the above stated mesons to relate on the performance of carriers by Candinati, regardless of whether such claim is based upon any of the above stated mesons to relate on the performance of carriers of cardinates intercomplete on the contract of the performance of carriers of the successors of whether such claim is applied to the above stated mesons of the other such claim is applied to the above stated mesons of the performance of carriers of the performance of carriers of the successors of whether such claim is applied to the above stated mesons of the performance o



PHONE (SCS) 393-2322 . 101 E. MARLAND . HOHRS, NM 88240

ANALYTICAL RESULTS FOR OXY USA WTP LP ATTN: RICK KERBY 1017 STANOLIND RD. HOBBS, NM 88240 FAX TO:

Receiving Date: 05/20/043 Reporting Date: 05/21/04 Project Number: NOT GIVEN Project Name: MLMU SW W1 Project Location: MLMU

LAB NUMBER

Analysis Date: 05/20/04 Sampling Date: 05/20/04 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: HM

SAMPLE ID

(mg/Kg)

C

H8719-1	MLMU 6 1/2'	1083
H8719-2	MLMU 8'	1088
H8719-3	MLMU S'	1296
Quality Contru		1030
True Value QC		1000
% Recovery	103	
Relative Perce	nt Difference	3.0
ETHOD: Stand	lard Methods	4500-CFB

4500-ÇFB Note: Analyses performed on 1:4 w.v aqueuos extracts.

PLEASENCTE: Liability and Camages. Cardenate Labity and dieRF# schlawe remedy for any carn alising, window in sum in contract or tori, shall be finited to the amount paid by client for annipulse. All dams, including toose for angligance and any other course whatsomer shall be deemed excised and and accessed by Cardinal within Shit (30) days that completion of the packable construction of when shall Cardinal be table to incidential or conceptential damages, including, which is not incident and accessed by Cardinal writing schedulers, business interpreters, less of user of books incident and accessed with a shit (30) days that completion of the packable and accesses and by out of or indeed to the incident of sension interpreter by Cardinal, regardless of which result dama upon any of the above stability destable to dimension.



PHONE (325) 673-7001 · 2111 BEECHWOOD · ABILENE, TX 79603

PHONE (505) 393-2325 . 101 E. MARLAND . HOBBS, NM 68240

ANALYTICAL RESULTS FOR OXY USA ATTN: RICK KERBY 1943 N. GRIMES B-269 HOBBS, NM 88240 FAX TO: (505) 397-8205

Receiving Date: 07/20/04 Reporting Date: 07/22/04 Project Number: NOT GIVEN Project Name: MLMU SW WTR INJ. Project Location: NOT GIVEN Analysis Date: 07/20/04 Sampling Date: 07/20/04 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: HM

•	LAB NUMBER	SAMPLE ID	CI <sup></sup> (mg/Kg)
-	H8929-1	SOUTH WALL 9'	1040
	H8929-2	EAST WALL 9'	1024
· · · ·	H8929-3	BOTTOM 10 1/2'	1104
	Quality Control		990
Ĺ.	True Value QC		1000
	% Recovery	99.0	
1	Relative Percent	Dilference	1.0

Note: Analyses performed on 1:4 w:v aqueous extracts.

PLEASE NOTE: Liability and Dameges. Cardinal's liability and client's exclusive remoty for any claim artsing, whether based in contract or lost, shall be illented to the anount puid by client for analyses. All claims, including hose for negligence and any other cause whatseever shall be deemed waived unless made in writing and monived by Cardinal within thirty (30) days after completion of the applicable service. Undergenerate the cardinal be liable for incidental or consequential damages, including, while all invitid the sub-constraint puid by client, its submittaines, affinates or successors analing out of or related to the performance of services hereunder by Cardinal, regardless of wrether such coim is based upon any of the above-stated reasons or otherwise.

# Appendix C SESI Analytical Results



PHONE (325) 673-7001 + 2111 BEECHWOOD + ABILENE, TX 79803

PHONE (505) 393-2326 + 101 E. MARLAND + HOBBS, NM 88240

ANALYTICAL RESULTS FOR SAFETY & ENVIRONMENTAL SOLUTIONS, INC. ATTN: BOB ALLEN 703 E. CLINTON #102 HOBBS. NM 88240 FAX TO: (505) 393-4388

Receiving Date: 02/03/05 Reporting Date: 02/04/05 Project Number: NOT GIVEN Project Name: SW WATER INJECTION TRUNK Project Location: NOT GIVEN Analysis Date: 02/04/05 Sampling Date: 02/03/05 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: AH

LAB NUMBER

SAMPLE ID

CI<sup>-</sup> (mg/Kg)

H9528-1	BH #1 5'	880	
H9528-2	BH #1 10'	912	
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Quality Control	· · · · · · · · · · · · · · · · · · ·	930	
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		1000	

Note: Analyses performed on 1:4 w:v aqueous extracts.

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive romedy for any claim anteing, whether based in contract or tork, shall be limited to the amount paid by client for analyses. At claims, structure that for any other cause whatsever shall be doemad weived unters made in witting and received by Cardinal within thinty (30) doys after completion of the appricable earliest to be appreciated in a shall cardinal be lobel for incidental or completion of the appricable all/lates or successors arising out of an earliest of the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (325) 673-7001 + 2111 BCECHWOOD + ABILENE, TX 79603

PHONE (505) 393-2326 + 101 E. MARLAND + HOBBS, NM 80240

ANALYTICAL RESULTS FOR SAFETY & ENVIRONMENTAL SOLUTIONS, INC. ATTN: BOB ALLEN 703 E. CLINTON, #102 HOBBS, NM 88240 FAX TO: (505) 393-4388

Receiving Date: 03/18/05 Reporting Date: 03/21/05 Project Number: OXY-05-002 Project Name: SW INJECTION LINE Project Location: NOT GIVEN Analysis Date: 03/18/04 Sampling Date: 03/17/05 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: GP Analyzed By: AH

LAB NUMBER	SAMPLE ID	CI <sup>–</sup> (mg/Kg)
H9638-1	BH #2 10'	128
Quality Control		970
True Value QC		1000
% Recovery	97.0	
	2.0	

#### METHOD: Std. Methods

4500-CI B

NOTE: Analysis performed on a 1:4 w:v aqueous extract.

Date

PLEASE NOTE: Liebility and Damages. Cardinal's lisbility and client's exclusive remesty for any claim arising, whether based in contract or bot, shall be finned to the amount pact by client for analysis. All charts, including lipse for negligence and any other cause whatscener shall be framed withing and received by Cardinal within thirty (30) days after completion of the apparatume service. This accurring the cause whatscener shall be framed without motes made on writing and received by Cardinal within thirty (30) days after completion of the apparatume service. This accurring the framed are consequential complexity consequentiaties of the service threaton, outries of writing and received by client, is out of the apparatume, affiliates or successore arising unit of or related to the performance of services bereander by Cardinal, regardless of writing such claim is based upon any of the above status masces or otherwise.

# Appendix D Site Photos



Subject Site facing East from Box



Installation of Borehole #2



East Half of Subject Site Facing East