

3R - 337

# REPORTS

DATE:

2001

32337



*Environmental Services*  
187 County Road 4980  
Bloomfield, New Mexico 87413  
(505) 632-4409 (office)  
(505) 632-4405 (fax)

March 20, 2002

Mr. William Olson  
Hydrologist  
Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

RECEIVED

APR 04 2002

ENVIRONMENTAL BUREAU  
OIL CONSERVATION DIVISION

**RE: 2001 GROUND WATER SUMMARY REPORT**

Dear Mr. Olson:

Enclosed for your review is the 2001 Ground Water Summary Report. The report presents monitoring data for eighteen sites having petroleum hydrocarbon impacted ground water, which resulted from the past use of unlined surface impoundments. The sites included in the report are listed in Table 1.

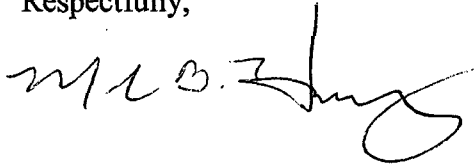
In 2001, three sites met the required remediation standards and were closed with OCD approval. The sites, listed in Table 2, achieved clean closure through a combination of contaminant source removal actions and monitored natural attenuation. Ground water cleanup objectives at each site were met in roughly three years, or less.

Of the eighteen active sites, five have accumulations of LNAPL in one or more monitoring well. In December 2001, the LNAPL accumulations were removed from these wells to evaluate LNAPL recovery rates and to augment the natural attenuation process. In 2002, passive LNAPL collection devices will be deployed or manual LNAPL removal events will be scheduled at some of the sites.

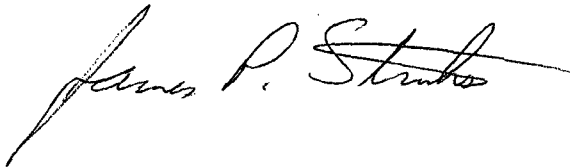
The remaining thirteen active sites either contain concentrations of dissolved BTEX in excess of cleanup standards or have met cleanup standards but have not yet demonstrated four consecutive clean quarters. Pursuant to discussions on the subject with OCD, Williams intends to implement various methods to accelerate the attenuation at select sites. These augmentation methods will be incorporated into an addendum to the Ground Water Management plan.

Thank you for your time to review this submittal. If you have any questions regarding the report, you may call me at (505) 632-4409 or Jim Struhs at (505) 632-4457.

Respectfully,



Mark B. Harvey  
Project Coordinator  
Mark.Harvey@Williams.com



James P. Struhs  
Project Hydrogeologist  
Jim.Struhs@Williams.com

Attachment  
Enclosure

c: Denny Foust, OCD Aztec District Office  
Bill Liess, BLM Farmington District Office

**Table 1. List of Active Sites for 2001 Report**

Count	Site Name	Unit Letter	Section	Township	Range	Longitude	Latitude	OCD Initial Notification
1	Blanco Wash Drip	J	31	27N	8W	-107.721574	36.530995	19-Feb-99
2	Chamberlain 1	F	14	32N	12W	-108.068853	36.990549	30-Sep-99
3	Davis 1	E	11	31N	12W	-108.068919	36.916257	2-Mar-99
4	Dogie East Pit	D	4	25N	6W	-107.478874	36.434196	7-Jul-97
5	Dogie North Pit	D	4	25N	6W	-107.479158	36.435784	7-Jul-97
6	Florance 124	C	27	29N	9W	-107.76698	36.70209	12-Aug-96
7	Florance 40	G	21	30N	8W	-107.67775	36.800088	27-Jan-97
8	Florance M 47X	G	5	30N	9W	-107.799823	36.843166	27-Jan-97
9	Grenier 4A	M	7	31N	11W	-108.036001	36.910167	18-Oct-99
10	Honolulu Drip	B	15	26N	4W	-107.238469	36.492341	18-Jun-96
11	Ice Canyon Drip	J	13	26N	7W	-107.52226	36.484972	1-Dec-97
12	Jicarilla Contract 147-6	C	6	25N	5W	-107.402363	36.433963	13-Aug-98
13	Kaufman 1	H	33	31N	13W	-108.202128	36.860121	9-Mar-00
14	O' Shea 1M	F	3	31N	13W	-108.193596	36.932228	6-Jun-98
15	Patterson A Com A1	G	2	31N	12W	-108.061165	36.930755	2-Mar-99
16	Pritchard 2	J	6	30N	8W	-107.712068	36.837817	22-Feb-99
17	Wilmerding 1M	C	10	31N	13W	-108.193158	36.91846	5-Jun-98
18	Zachry 18E	O	11	28N	10W	-107.860007	36.670885	6-Sep-96

**Table 2. List of Sites Closed in 2001**

Count	Site Name	Unit Letter	Section	Township	Range	Longitude	Latitude	OCD Initial Notification	Status
1	Albright #4 Drip	F	22	29N	10W	-107.868451	36.715299	9-Jul-99	Approved; Wells Abandoned
2	Miles Federal 1E Drip	N	5	26N	7W	-107.602489	36.510939	23-Jun-97	Approved; Wells Abandoned
3	Randleman 1	K	13	31N	11W	-107.945067	36.896329	9-May-97	Pending OCD Approval

## Site Summary Report

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**Site Name:** O'Shea 1M

**Reporting Period:** 2001

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**Location:** Unit F, Sec 3, Twn 31N, Rng 13W

**Canyon:** La Plata River

**Operator:** Chateau

**Vulnerable Class:** original

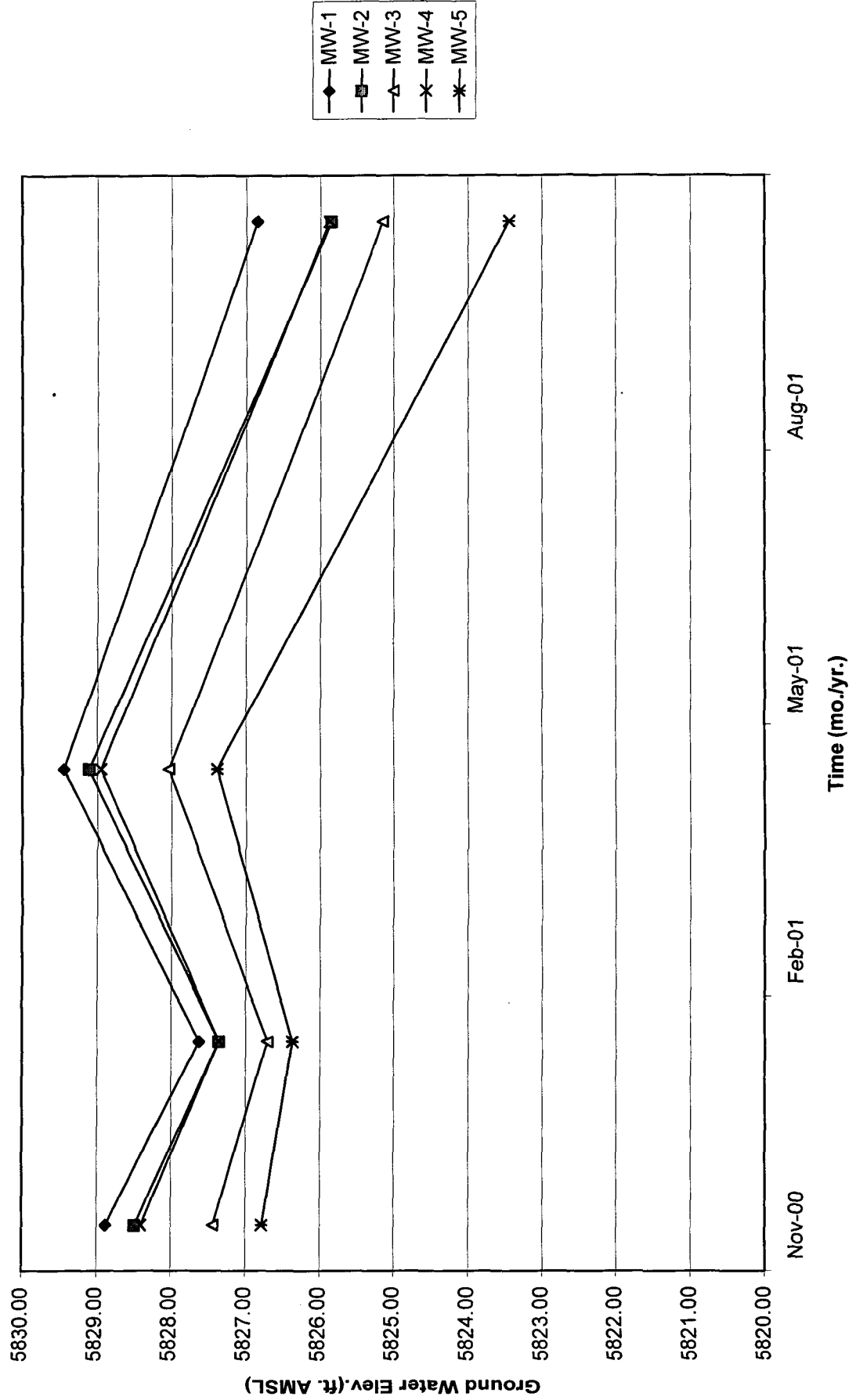
**OCD Ranking:** 40

**Lead Agency:** NMOCD

### Status Narrative

This site has five monitoring wells, with nine quarters of ground water monitoring completed to date. In the year 2000, only monitoring wells MW-2 and MW-3 contained BTEX at levels above WQCC standards. Total BTEX levels in MW-2 decreased from 4528.5 ug/l in November 2000 to 435.7 ug/l in October 2001. Currently, BTEX constituents are below WQCC standards in both MW-2 and MW-3.

# O'Shea 1M Hydrograph



# Analytical Data Summary

Site Name:

O' Shea 1M

Reporting Period:

7/1/00 To 12/31/01

Well ID	Sample Date	Sample ID	Benzene ug/l	Toluene ug/l	Ethylbenzene ug/l	Xylene (Total) ug/l
MW-2						
	11/1/00	110801NOV00	96.3	52.2	370	4010
	11/1/00	102701NOV00	89.9	46.5	333	3050
	1/3/01	115503JAN01	26.9	58.8	311	2680
	4/5/01	133105APR01	12.4	39.8	182	846
	10/1/01	130001OCT01	3.7	<2.0	71	360
MW-3						
	11/1/00	105201NOV00	3.78	<1	10.4	5.65
	1/3/01	121503JAN01	4.23	45.1	1.92	20.8
	4/5/01	134005APR01	1.85	19.2	5.81	7.37
	10/1/01	124601OCT01	<1.0	<2.0	<2.0	<2.0



## Q W A L L A B O R A T O R I E S, I N C.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 0011126

SENT WILLIAMS FIELD SERVICES  
TO: 187 CNTY RD #4980  
BLOOMFIELD, NM 87413  
JIM STRUHS

DATE REPORTED: 11/09/00  
DATE COLLECTED: 11/01/00  
DATE RECEIVED: 11/04/00

PROJECT: FLORANE 124 &amp; O'SHEA 1M

Reference Fraction: 0011126-04A

Sample ID: OSHEA1M-SA-NP-MW2

Sample Matrix: WATER

Sample Date Collected: 11/01/00 10:27:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		89.9	UG/L	10	11/09/00	KKL
TOLUENE		46.5	UG/L	10	11/09/00	KKL
ETHYLBENZENE		333	UG/L	10	11/09/00	KKL
TOTAL XYLENES		3050	UG/L	10	11/09/00	KKL
BFB (SURROGATE)		115	125	75		

ND=NONE DETECTED

P=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

Q W A L L A B O R A T O R I E S, I N C.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT:

REFERENCE #: 0011126

SENT WILLIAMS FIELD SERVICES  
TO: 187 CNTY RD #4980  
BLOOMFIELD, NM 87413  
JIM STRUHS

DATE REPORTED: 11/09/00  
DATE COLLECTED: 11/01/00  
DATE RECEIVED: 11/04/00

PROJECT: FLORANE 124 & O'SHEA 1M

Reference Fraction: 0011126-06A

Sample ID: OSHEA1M-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 11/01/00 11:08:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		96.3	UG/L	10	11/09/00	KKL
TOLUENE		52.2	UG/L	10	11/09/00	KKL
ETHYLBENZENE		370	UG/L	10	11/09/00	KKL
TOTAL XYLENES		4010	UG/L	10	11/09/00	KKL
BFB (SURROGATE)		109	125	75		

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2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT:

REFERENCE #: 0011126

SENT WILLIAMS FIELD SERVICES  
TO: 187 CNTY RD #4980  
BLOOMFIELD, NM 87413  
JIM STRUHS

DATE REPORTED: 11/09/00  
DATE COLLECTED: 11/01/00  
DATE RECEIVED: 11/04/00

PROJECT: FLORANE 124 & O'SHEA 1M

Reference Fraction:0011126-05A

Sample ID: OSHEA1M-DG-MW3

Sample Matrix: WATER

Sample Date Collected: 11/01/0010:52:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		3.78	UG/L	1.0	11/08/00	KKL
TOLUENE		ND	UG/L	1.0	11/08/00	KKL
ETHYLBENZENE		10.4	UG/L	1.0	11/08/00	KKL
TOTAL XYLENES		5.65	UG/L	1.0	11/08/00	KKL
BFB (SURROGATE)		115	125	75		

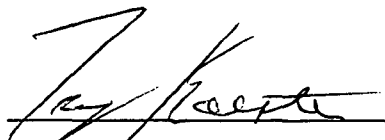
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TERRY KOESTER  
LABORATORY DIRECTOR

# Q W A L L A B O R A T O R I E S , I N C .

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 0101172

SENT WILLIAMS GAS PIPELINE  
TO: 187 COUNTY ROAD # 4980  
BLOOMFIELD, NM 87413  
JIM STRUHS

DATE REPORTED: 02/08/01  
DATE COLLECTED: 01/03/01  
DATE RECEIVED: 01/09/01

PROJECT: WES/OSHEA IM-GRN4A-DVSI

Reference Fraction: 0101172-01A

Sample ID: OSHEA IM-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 01/03/01 11:55:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		26.9	UG/L	10	01/10/01	MB
TOLUENE		58.8	UG/L	10	01/10/01	MB
ETHYLBENZENE		311	UG/L	10	01/10/01	MB
TOTAL XYLENES		2680	UG/L	10	01/10/01	MB
BFB (SURROGATE)		108	125	75		

NR=NONE DETECTED

=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

## Q W A L L A B O R A T O R I E S, I N C.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 0101172

SENT WILLIAMS GAS PIPELINE  
TO: 187 COUNTY ROAD # 4980  
BLOOMFIELD, NM 87413  
JIM STRUHS

DATE REPORTED: 02/08/01  
DATE COLLECTED: 01/03/01  
DATE RECEIVED: 01/09/01

PROJECT: WES/OSHEA IM-GRN4A-DVSI

Reference Fraction: 0101172-02A

Sample ID: OSHEA IM-DG-MW3

Sample Matrix: WATER

Sample Date Collected: 01/03/01 12:15:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		4.23	UG/L	1.0	01/10/01	MB
TOLUENE		45.1	UG/L	1.0	01/10/01	MB
ETHYLBENZENE		1.92	UG/L	1.0	01/10/01	MB
TOTAL XYLENES		20.8	UG/L	1.0	01/10/01	MB
BFB (SURROGATE)		89	125	75		

ND=NONE DETECTED

=PRACTICAL QUANTITATION LIMIT

=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

## Q W A L L A B O R A T O R I E S, I N C.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

## LABORATORY REPORT:

REFERENCE #: 0104186

SENT WILLIAMS GAS PIPELINE  
TO: 187 COUNTY ROAD #4980  
BLOOMFIELD, NM 87413  
JIM STRUHS  
PROJECT: WES/OSHOA IM

DATE REPORTED: 04/16/01  
DATE COLLECTED: 04/05/01  
DATE RECEIVED: 04/10/01

Reference Fraction: 0104186-02A

Sample ID: OSHEA-IM-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 04/05/01 13:31:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		12.4	UG/L	1.0	04/12/01	MB
TOLUENE		39.8	UG/L	1.0	04/12/01	MB
ETHYLBENZENE		182	UG/L	1.0	04/12/01	MB
TOTAL XYLENES		846	UG/L	1.0	04/12/01	MB
BFB (SURROGATE)		95	125	75		

ND=NONE DETECTED

P=PRACTICAL QUANTITATION LIMIT

S=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

Q W A L L A B O R A T O R I E S , I N C .

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT:

REFERENCE #: 0104186

SENT WILLIAMS GAS PIPELINE  
 TO: 187 COUNTY ROAD #4980  
 BLOOMFIELD, NM 87413  
 JIM STRUHS  
 PROJECT: WES/OSHOA IM

DATE REPORTED: 04/16/01  
 DATE COLLECTED: 04/05/01  
 DATE RECEIVED: 04/10/01

Reference Fraction: 0104186-01A

Sample ID: OSHEA-IM-DG-MW3

Sample Matrix: WATER

Sample Date Collected: 04/05/01 13:40:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		1.85	UG/L	1.0	04/12/01	MB
TOLUENE		19.2	UG/L	1.0	04/12/01	MB
ETHYLBENZENE		5.81	UG/L	1.0	04/12/01	MB
TOTAL XYLENES		7.37	UG/L	1.0	04/12/01	MB
BFB (SURROGATE)		112	125	75		

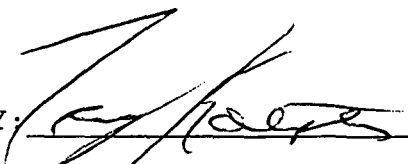
NR=NONE DETECTED

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SU=STANDARD UNITS

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APPROVED BY:

  
 TERRY KOESTER  
 LABORATORY DIRECTOR



## ORGANIC ANALYSIS REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Mile High Environmental  
Collected: October 1, 2001  
Received: October 5, 2001

Contact: Jim Struhs  
Analyzed: October 11, 2001

Analysis Requested: SW8260B/5030A

Lab Sample ID: L47827-02A

Field Sample ID: O'Shea-SA-MW2

Site ID: O'Shea 1M / SWA-100401-02

463 West 3600 South  
Salt Lake City, Utah  
84115

### Analytical Results

### MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

#### Compound

<u>Reporting Limit</u>	<u>Amount Detected</u>
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Benzene

0.0010	0.0037
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Toluene

0.0020	< 0.0020
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Ethylbenzene

0.0020	0.071
--------	-------

Total Xylene


0.0020	0.36
--------	------

(801) 263-8686  
Toll Free (888) 263-8686  
Fax (801) 263-8687  
e-mail: awal@xmission.com

Kyle F. Gross  
Laboratory Director

Peggy McNicol  
QA Officer

Released by:

  
Laboratory Supervisor

Report Date:

October 19, 2001

Page 1 of 1





## ORGANIC ANALYSIS REPORT

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Client: Mile High Environmental  
Collected: October 1, 2001  
Received: October 5, 2001

Contact: Jim Struhs  
Analyzed: October 11, 2001

Analysis Requested: SW8260B/5030A

Lab Sample ID: L47827-01A  
Field Sample ID: O'Shea-DG-MW3  
Site ID: O'Shea 1M / SWA-100401-02

463 West 3600 South  
Salt Lake City, Utah  
84115

### Analytical Results

### MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

#### Compound

<u>Reporting Limit</u>	<u>Amount Detected</u>
0.0010	< 0.0010
0.0020	< 0.0020
0.0020	< 0.0020
0.0020	< 0.0020

Benzene

Toluene

Ethylbenzene

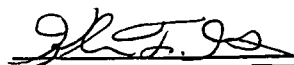
Total Xylene

(801) 263-8686  
Toll Free (888) 263-8686  
Fax (801) 263-8687  
E-mail: awal@xmission.com

Kyle F. Gross  
Laboratory Director

Peggy McNicol  
QA Officer

Released by:

  
Laboratory Supervisor

Report Date:

October 19, 2001

Page 1 of 1