

**3R - 321**

# **REPORTS**

**DATE:**

**2001**

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312321



*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.

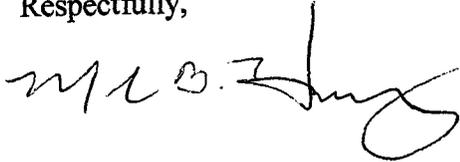
In 2001, three sites met the required remediation standards and were closed with OCD approval. The sites, listed in Table 2, achieved clean closure through a combination of contaminant source removal actions and monitored natural attenuation. Ground water cleanup objectives at each site were met in roughly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

<b>Count</b>	<b>Site Name</b>	<b>Unit Letter</b>	<b>Section</b>	<b>Township</b>	<b>Range</b>	<b>Longitude</b>	<b>Latitude</b>	<b>OCD Initial Notification</b>	<b>Status</b>
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:** Honolulu Line Drip

**Reporting Period:** 2001

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**Location:** Unit B, Sec 15, Twn 26N, Rng 4W

**Canyon:** Tapicito

**Operator:** Williams

**Vulnerable Class:** sensitive

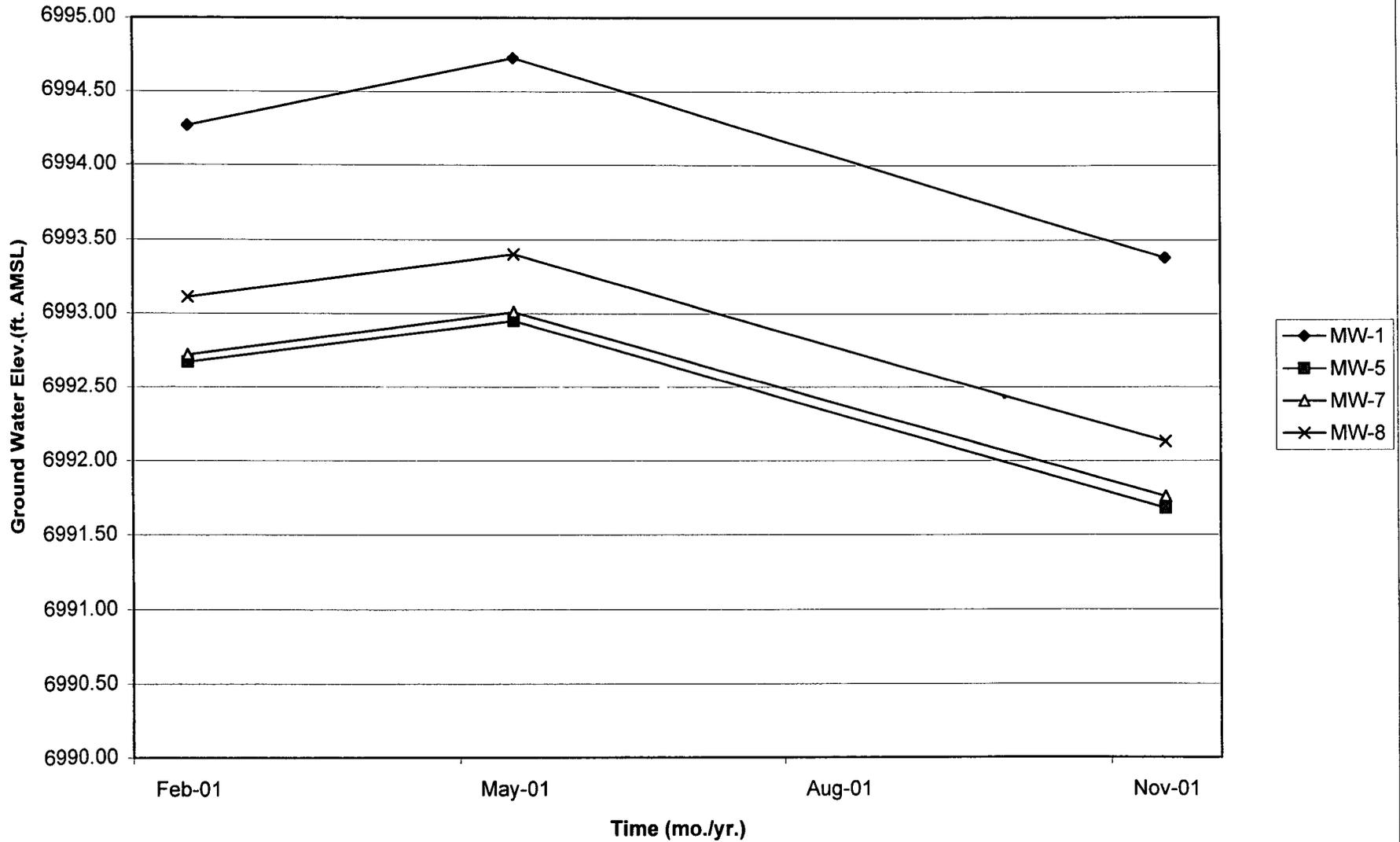
**OCD Ranking:** 40

**Lead Agency:** NMOCD / JAEPO

### Status Narrative

This site has six monitoring wells, with nineteen quarters of monitoring completed to date. Four wells (MW-5, MW-7, MW-12 and MW-13) contained BTEX concentrations in excess of federal drinking water standards in past years. In the fourth quarter of this period, these wells were below the standards for the first time. If these levels are maintained during 2002, this site will be eligible for closure.

### Honolulu Line Drip Hydrograph



# Analytical Data Summary

Site Name:  
Honolulu Drip

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
<b>MW-1</b>						
	2/19/01	173119FEB01	<1.0	<1.0	<1.0	<1.0
	5/2/01	110602MAY01	<1	<1	<1	<1
	11/1/01	134001NOV01	<1.0	<2.0	<2.0	<2.0
<b>MW-12</b>						
	2/13/01	115813FEB01	6.91	2.03	<1	<1
	5/2/01	110102MAY01	8.86	1.86	<1	<1
	11/1/01	134601NOV01	3.9	<2.0	<2.0	<2.0
<b>MW-13</b>						
	2/13/01	120413FEB01	3.21	<1	<1	<1
	5/2/01	114302MAY01	4.28	<1	<1	2.31
	11/1/01	135301NOV01	<1.0	<2.0	<2.0	<2.0
<b>MW-5</b>						
	2/13/01	121113FEB01	79.0	<1	<1	<1
	5/2/01	111102MAY01	197	<1	<1	2.07
	11/1/01	140001NOV01	<1.0	3.3	<2.0	<2.0
<b>MW-7</b>						
	2/13/01	122013FEB01	2.86	<1	<1	1.63
	5/2/01	111902MAY01	5.49	<1	<1	<1
	11/1/01	140401NOV01	<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 #: 0102507

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

DATE REPORTED: 02/23/01  
 DATE COLLECTED: 02/19/01  
 DATE RECEIVED: 02/21/01  
 P.O. #: SWA-022001-01

Sample ID: HON-UG-MW1  
 Collection Date: 02/19/01 17:31:00

Sample Matrix: WATER

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYZED	EXTRACTED
BTEX	OA1/8021B			3.0		
BENZENE	71-43-2	ND	UG/L	1.0	02/22/01KKL	
TOLUENE	108-88-3	ND	UG/L	1.0	02/22/01KKL	
ETHYLBENZENE	100-41-4	ND	UG/L	1.0	02/22/01KKL	
TOTAL XYLENES	1330-20-7	ND	UG/L	1.0	02/22/01KKL	
BFB (SURROGATE)	-	88	125	75		

ND=NONE DETECTED  
 PQL=PRACTICAL QUANTITATION LIMIT  
 SU=STANDARD UNITS  
 \*BACKGROUND CONTAMINATION  
 SUR=SURROGATE  
 Q=OUTSIDE LIMITS  
 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 #: 0102450

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

DATE REPORTED: 02/22/01  
 DATE COLLECTED: 02/13/01  
 DATE RECEIVED: 02/16/01

PROJECT: WES/HONULULU

Reference Fraction: 0102450-03A

Sample ID: HON-DG-MW5

Sample Matrix: WATER

Sample Date Collected: 02/13/01 12:11:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		79.0	UG/L	1.0	02/19/01	MB
TOLUENE		ND	UG/L	1.0	02/19/01	MB
ETHYLBENZENE		ND	UG/L	1.0	02/19/01	MB
TOTAL XYLENES		ND	UG/L	1.0	02/19/01	MB
BFB (SURROGATE)		89	125	75		

N=NONE DETECTED  
 L=PRACTICAL QUANTITAION LIMIT  
 SU=STANDARD UNITS  
 B=DETECTED IN METHOD BLANK

APPROVED BY:   
 TERRY KOESTER  
 LABORATORY DIRECTOR  
 Q1

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

LABORATORY REPORT:

REFERENCE #: 0102450

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

DATE REPORTED: 02/22/01  
DATE COLLECTED: 02/13/01  
DATE RECEIVED: 02/16/01

PROJECT: WES/HONULULU

Reference Fraction: 0102450-01A

Sample ID: HON-DG-MW7

Sample Matrix: WATER

Sample Date Collected: 02/13/01 12:20:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		2.86	UG/L	1.0	02/19/01	MB
TOLUENE		ND	UG/L	1.0	02/19/01	MB
ETHYLBENZENE		ND	UG/L	1.0	02/19/01	MB
TOTAL XYLENES		1.63	UG/L	1.0	02/19/01	MB
BFB (SURROGATE)		93	125	75		

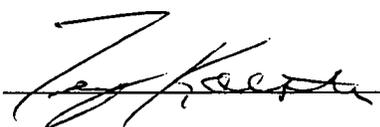
ND=NONE DETECTED

=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:



TERRY KOESTER  
LABORATORY DIRECTOR



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

LABORATORY REPORT:

REFERENCE #: 0102450

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

DATE REPORTED: 02/22/01  
 DATE COLLECTED: 02/13/01  
 DATE RECEIVED: 02/16/01

PROJECT: WES/HONULULU

Reference Fraction: 0102450-04A

Sample ID: HON-DG-MW12

Sample Matrix: WATER

Sample Date Collected: 02/13/01 11:58:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		6.91	UG/L	1.0	02/19/01	MB
TOLUENE		2.03	UG/L	1.0	02/19/01	MB
ETHYLBENZENE		ND	UG/L	1.0	02/19/01	MB
TOTAL XYLENES		ND	UG/L	1.0	02/19/01	MB
BFB (SURROGATE)		83	125	75		

ND=NONE DETECTED

=PRACTICAL QUANTITAION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

*Terry Koester*  
 TERRY KOESTER  
 LABORATORY DIRECTOR

*AK*

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 #: 0102450

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

DATE REPORTED: 02/22/01  
 DATE COLLECTED: 02/13/01  
 DATE RECEIVED: 02/16/01

PROJECT: WES/HONULULU

Reference Fraction: 0102450-02A

Sample ID: HON-DG-MW13

Sample Matrix: WATER

Sample Date Collected: 02/13/01 12:04:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		3.21	UG/L	1.0	02/19/01	MB
TOLUENE		ND	UG/L	1.0	02/19/01	MB
ETHYLBENZENE		ND	UG/L	1.0	02/19/01	MB
TOTAL XYLENES		ND	UG/L	1.0	02/19/01	MB
BFB (SURROGATE)		86	125	75		

ND-NONE DETECTED  
 PL-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 #: 0105206

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

DATE REPORTED: 05/15/01  
 DATE COLLECTED: 05/02/01  
 DATE RECEIVED: 05/08/01

PROJECT: WES/HONOLULU LINE DRIP

Reference Fraction: 0105206-03A

Sample ID: HON-DG-MW1

Sample Matrix: WATER

Sample Date Collected: 05/02/01 11:06:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	05/09/01	MB
TOLUENE		ND	UG/L	1.0	05/09/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/09/01	MB
TOTAL XYLENES		ND	UG/L	1.0	05/09/01	MB
BFB (SURROGATE)		99	125	75		

ND=NONE DETECTED

=PRACTICAL QUANTITAION 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 #: 0105206

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

DATE REPORTED: 05/15/01  
 DATE COLLECTED: 05/02/01  
 DATE RECEIVED: 05/08/01

PROJECT: WES/HONOLULU LINE DRIP

Reference Fraction: 0105206-02A

Sample ID: HON-DG-MW5

Sample Matrix: WATER

Sample Date Collected: 05/02/01 11:11:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		197	UG/L	1.0	05/09/01	MB
TOLUENE		ND	UG/L	1.0	05/09/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/09/01	MB
TOTAL XYLENES		2.07	UG/L	1.0	05/09/01	MB
BFB (SURROGATE)		114	125	75		

ND=NONE DETECTED

=PRACTICAL QUANTITATION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:



TERRY KOESTER  
 LABORATORY DIRECTOR

*DK*

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 #: 0105206

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

DATE REPORTED: 05/15/01  
 DATE COLLECTED: 05/02/01  
 DATE RECEIVED: 05/08/01

PROJECT: WES/HONOLULU LINE DRIP

Reference Fraction: 0105206-01A

Sample ID: HON-DG-MW7

Sample Matrix: WATER

Sample Date Collected: 05/02/01 11:19:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		5.49	UG/L	1.0	05/09/01	MB
TOLUENE		ND	UG/L	1.0	05/09/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/09/01	MB
TOTAL XYLENES		ND	UG/L	1.0	05/09/01	MB
BFB (SURROGATE)		103	125	75		

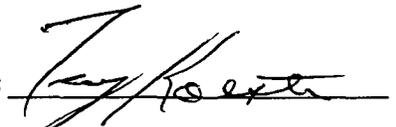
ND=NONE DETECTED

PL=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 #: 0105206

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

DATE REPORTED: 05/15/01  
 DATE COLLECTED: 05/02/01  
 DATE RECEIVED: 05/08/01

PROJECT: WES/HONOLULU LINE DRIP

Reference Fraction: 0105206-04A

Sample ID: HON-DG-MW12

Sample Matrix: WATER

Sample Date Collected: 05/02/01 11:01:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		8.86	UG/L	1.0	05/09/01	MB
TOLUENE		1.86	UG/L	1.0	05/09/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/09/01	MB
TOTAL XYLENES		ND	UG/L	1.0	05/09/01	MB
BFB (SURROGATE)		97	125	75		

ND=NONE DETECTED  
 P=PRACTICAL QUANTITAION 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 #: 0105206

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

DATE REPORTED: 05/15/01  
 DATE COLLECTED: 05/02/01  
 DATE RECEIVED: 05/08/01

PROJECT: WES/HONOLULU LINE DRIP

Reference Fraction: 0105206-05A

Sample ID: HON-DG-MW13

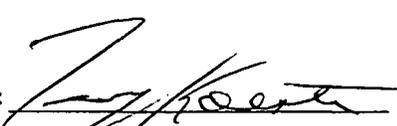
Sample Matrix: WATER

Sample Date Collected: 05/02/01 11:43:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		4.28	UG/L	1.0	05/09/01	MB
TOLUENE		ND	UG/L	1.0	05/09/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/09/01	MB
TOTAL XYLENES		2.31	UG/L	1.0	05/09/01	MB
BFB (SURROGATE)		98	125	75		

ND-NONE DETECTED  
 PRACTICAL QUANTITATION LIMIT  
 SU-STANDARD UNITS  
 B=DETECTED IN METHOD BLANK

APPROVED BY:



TERRY KOESTER  
 LABORATORY DIRECTOR





ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: November 1, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48277-01A  
Field Sample ID: HON-UG-MW1  
Site ID: Honolulu Drip/JPS-110501-02

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

Compound

Reporting  
Limit

Amount  
Detected

Benzene

0.0010

< 0.0010

Toluene

0.0020

< 0.0020

Ethylbenzene

0.0020

< 0.0020

Total Xylene

0.0020

< 0.0020

Surr: Surr 1,2-Dichloroethane

71-136

101 %

Surr: Surr Toluene-d8

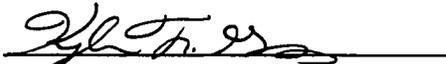
87-111

99.6 %

(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: November 19, 2001 Page 1 of 1



# ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: November 1, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48277-02A  
Field Sample ID: HON-DG-MW5  
Site ID: Honolulu Drip/JPS-110501-02

463 West 3600 South  
Salt Lake City, Utah  
84115

## Analytical Results

## MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

### Compound

Reporting Limit	Amount Detected
-----------------	-----------------

Benzene

0.0010 < 0.0010

Toluene

0.0020 **0.0033**

Ethylbenzene

0.0020 < 0.0020

Total Xylene

0.0020 < 0.0020

Surr: Surr 1,2-Dichloroethane

71-136 **102 %**

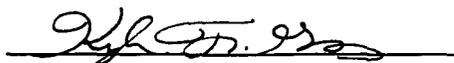
Surr: Surr Toluene-d8

87-111 **101 %**

(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: November 19, 2001 Page 1 of 1



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: November 1, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48277-03A  
Field Sample ID: HON-DG-MW7  
Site ID: Honolulu Drip/JPS-110501-02

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

Compound

Reporting Limit      Amount Detected

Benzene      0.0010      < 0.0010

Toluene      0.0020      < 0.0020

Ethylbenzene      0.0020      < 0.0020

Total Xylene      0.0020      < 0.0020

Surr: Surr 1,2-Dichloroethane      71-136      99.5 %

Surr: Surr Toluene-d8      87-111      98.5 %

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Kyle F. Gross  
Laboratory Director

Peggy McNicol  
QA Officer

Released by:   
Laboratory Supervisor

Report Date: November 19, 2001      Page 1 of 1



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: November 1, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48277-04A  
Field Sample ID: HON-UG-MW12  
Site ID: Honolulu Drip/JPS-110501-02

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

Compound

Reporting  
Limit

Amount  
Detected

Benzene

0.0010

0.0039

Toluene

0.0020

< 0.0020

Ethylbenzene

0.0020

< 0.0020

Total Xylene

0.0020

< 0.0020

Surr: Surr 1,2-Dichloroethane

71-136

97.0 %

Surr: Surr Toluene-d8

87-111

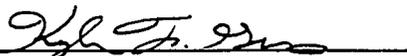
96.8 %

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Kyle F. Gross  
Laboratory Director

Peggy McNicol  
QA Officer

Released by:

  
Laboratory Supervisor

Report Date: November 19, 2001 Page 1 of 1



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: November 1, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48277-05A  
Field Sample ID: HON-DG-MW13  
Site ID: Honolulu Drip/JPS-110501-02

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

Compound

Reporting  
Limit

Amount  
Detected

Benzene

0.0010

< 0.0010

Toluene

0.0020

< 0.0020

Ethylbenzene

0.0020

< 0.0020

Total Xylene

0.0020

< 0.0020

Surr: Surr 1,2-Dichloroethane

71-136

95.2 %

Surr: Surr Toluene-d8

87-111

96.3 %

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Page 1 of 1