

3R - 312

# REPORTS

DATE:

2001

302312



*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.

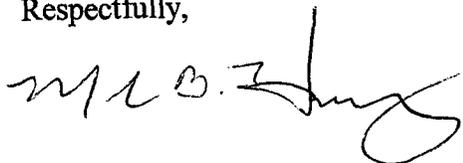
In 2001, three sites met the required remediation standards and were closed with OCD approval. The sites, listed in Table 2, achieved clean closure through a combination of contaminant source removal actions and monitored natural attenuation. Ground water cleanup objectives at each site were met in roughly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

Reporting Period: 2001

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Location: Unit D, Sec 4, Twn 25N, Rng 6W

Canyon: Largo

Operator: Williams

Vulnerable Class: original

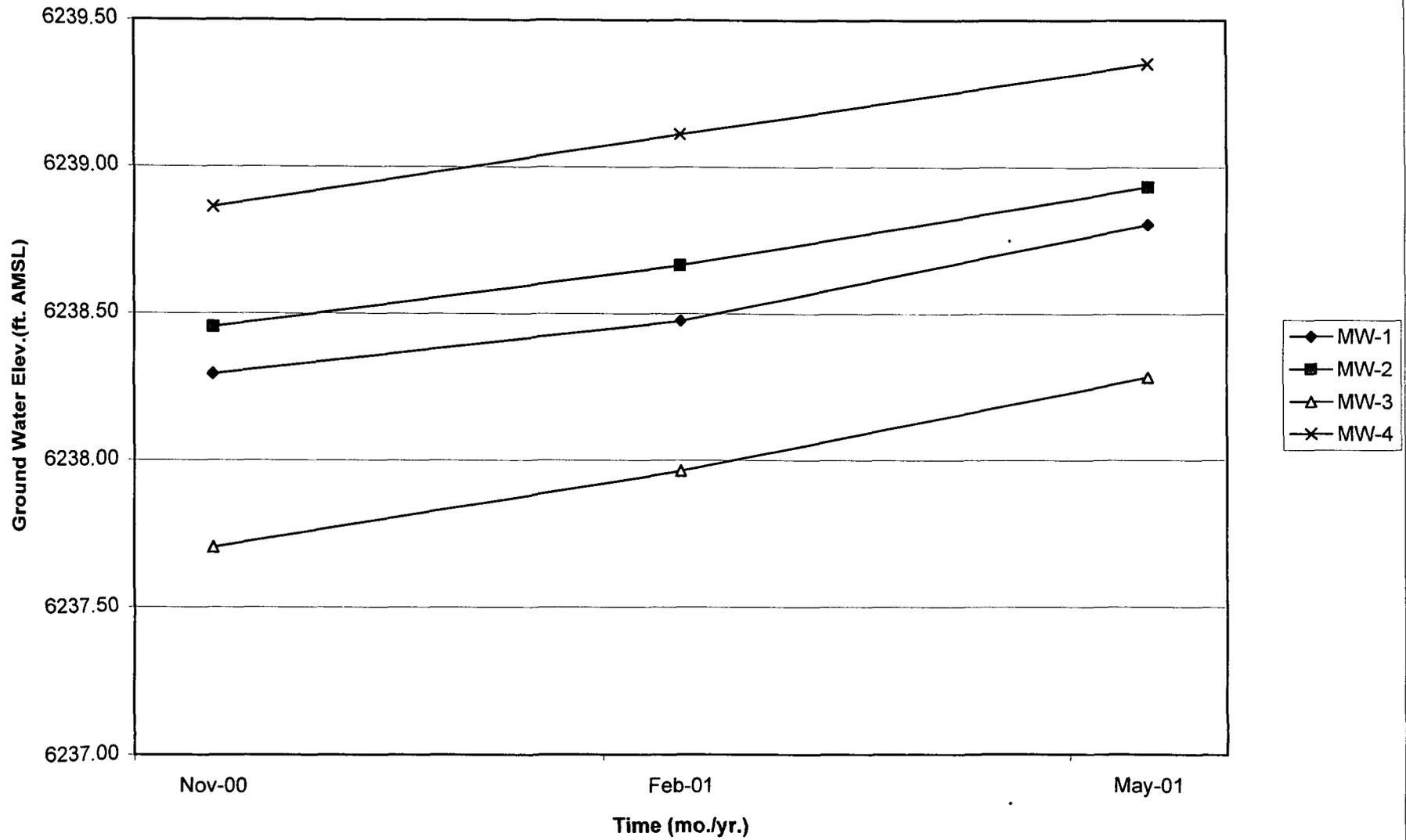
OCD Ranking: 40

Lead Agency: NMOCD

### Status Narrative

This site has eight monitoring wells installed, with thirteen quarters of ground water monitoring completed to date. Contaminant levels remain above WQCC standards at the northeastern edge of the plume. Total BTEX levels in MW-2 demonstrated a decreasing trend and are now below WQCC standards. Downgradient wells MW-3, MW-4 and MW-6 remain above WQCC standards and have not demonstrated any trend. The sentinel well, MW-8, has had no detectable BTEX.

### Dogie East Pit Hydrograph



# Analytical Data Summary

Site Name:  
Dogie East Pit

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-2</b>						
	11/2/00	153102NOV00	16.8	<1	2.07	<1
	2/16/01	111516FEB01	2.97	6.91	<1	<1
	5/10/01	110710MAY01	3.76	4.46	<1	<1
	10/31/01	110831OCT01	5.9	<2.0	<2.0	<2.0
<b>MW-3</b>						
	11/3/00	132103NOV00	277	3270	552	4350
	2/16/01	113216FEB01	148	2470	328	2580
	5/10/01	113710MAY01	205	3080	593	5820
<b>MW-4</b>						
	11/2/00	151402NOV00	257	332	19.0	196
	2/16/01	112116FEB01	54.0	17.8	1.01	19.8
	5/10/01	111810MAY01	2660	2130	34.6	792
	10/31/01	104631OCT01	210	420	10	260
<b>MW-5</b>						
	11/2/00	163802NOV00	30.9	92.2	37.3	225
	2/16/01	113716FEB01	39.4	210	83.0	509
	5/10/01	114610MAY01	<1	439	218	1180
	10/31/01	114131OCT01	<1.0	16	44	110
<b>MW-6</b>						
	11/3/00	131003NOV00	2570	109	226	1690
	2/16/01	112716FEB01	171	11.0	12.5	33.5
	5/10/01	112710MAY01	506	23.2	122	384
	10/31/01	112731OCT01	1900	120	160	480
<b>MW-7</b>						
	11/3/00	125403NOV00	2.62	<1	<1	<1
	2/22/01	145822FEB01	13.0	1.16	1.40	2.97
	5/10/01	120710MAY01	23.4	<1	2.63	3.74
	10/31/01	120531OCT01	6.2	<2.0	<2.0	<2.0
<b>MW-8</b>						
	11/2/00	164702NOV00	<1	<1	<1	<1
	2/16/01	114216FEB01	<1	<1	<1	<1
	5/10/01	115710MAY01	<1	<1	<1	<1
	10/31/01	115231OCT01	<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 #: 0011125

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

DATE REPORTED: 11/09/00  
DATE COLLECTED: 11/02/00  
DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-07A

Sample ID: DOGE-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 11/02/0015:31:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		16.8	UG/L	1.0	11/07/00	KKL
TOLUENE		ND	UG/L	1.0	11/07/00	KKL
ETHYLBENZENE		2.07	UG/L	1.0	11/07/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	11/07/00	KKL
BFB (SURROGATE)		82	125	75		

ND=NONE DETECTED

=PRACTICAL QUANTITAION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR

OK

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 #: 0011125

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

DATE REPORTED: 11/09/00  
 DATE COLLECTED: 11/03/00  
 DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-03A

Sample ID: DOGE-DG-MW3

Sample Matrix: WATER

Sample Date Collected: 11/03/0013:21:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED BY
BTEX	OA1/8021B			3.0	
BENZENE		277	UG/L	10	11/07/00 KKL
TOLUENE		3270	UG/L	10	11/07/00 KKL
ETHYLBENZENE		552	UG/L	10	11/07/00 KKL
TOTAL XYLENES		4350	UG/L	10	11/07/00 KKL
BFB (SURROGATE)		113	125	75	

NR=NONE DETECTED

P=PRACTICAL QUANTITAION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

*Terry Koester*  
 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 #: 0011125

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

DATE REPORTED: 11/09/00  
 DATE COLLECTED: 11/02/00  
 DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-06A

Sample ID: DOGE-CG-MW4

Sample Matrix: WATER

Sample Date Collected: 11/02/0015:14:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		257	UG/L	1.0	11/07/00	KKL
TOLUENE		332	UG/L	1.0	11/07/00	KKL
ETHYLBENZENE		19.0	UG/L	1.0	11/07/00	KKL
TOTAL XYLENES		196	UG/L	1.0	11/07/00	KKL
BFB (SURROGATE)		94	125	75		

ND=NONE DETECTED  
 =PRACTICAL QUANTITAION LIMIT  
 S=STANDARD UNITS  
 B=DETECTED IN METHOD BLANK

APPROVED BY:   
 TERRY KOESTER  
 LABORATORY DIRECTOR  
 PK

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 #: 0011125

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

DATE REPORTED: 11/09/00  
 DATE COLLECTED: 11/02/00  
 DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-05A

Sample ID: DOGE-DG-MW5

Sample Matrix: WATER

Sample Date Collected: 11/02/0016:38:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		30.9	UG/L	10	11/07/00	KKL
TOLUENE		92.2	UG/L	10	11/07/00	KKL
ETHYLBENZENE		37.3	UG/L	10	11/07/00	KKL
TOTAL XYLENES		225	UG/L	10	11/07/00	KKL
BFB (SURROGATE)		80	125	75		

ND=NONE DETECTED  
 PL=PRACTICAL QUANTITAION LIMIT  
 SU=STANDARD UNITS  
 B=DETECTED IN METHOD BLANK

APPROVED BY:

*Terry Koester*  
 TERRY KOESTER  
 LABORATORY DIRECTOR  
 PK

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 #: 0011125

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

DATE REPORTED: 11/09/00  
 DATE COLLECTED: 11/03/00  
 DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-01A

Sample ID: DOGE-CG-MW6

Sample Matrix: WATER

Sample Date Collected: 11/03/0013:10:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		2570	UG/L	10	11/09/00	KKL
TOLUENE		109	UG/L	10	11/09/00	KKL
ETHYLBENZENE		226	UG/L	10	11/09/00	KKL
TOTAL XYLENES		1690	UG/L	10	11/09/00	KKL
BFB (SURROGATE)		121	125	75		

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 #: 0011125

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

DATE REPORTED: 11/09/00  
DATE COLLECTED: 11/03/00  
DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-02A

Sample ID: DOGE-DG-MW7

Sample Matrix: WATER

Sample Date Collected: 11/03/0012:54:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		2.62	UG/L	1.0	11/07/00	KKL
TOLUENE		ND	UG/L	1.0	11/07/00	KKL
ETHYLBENZENE		ND	UG/L	1.0	11/07/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	11/07/00	KKL
BFB (SURROGATE)		78	125	75		

ND=NONE DETECTED

L=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 #: 0011125

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

DATE REPORTED: 11/09/00  
DATE COLLECTED: 11/02/00  
DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

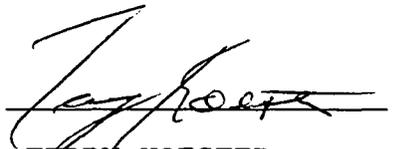
Reference Fraction:0011125-04A  
Sample ID: DOGE-DG-MW8  
Sample Date Collected: 11/02/0016:47:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	11/07/00	KKL
TOLUENE		ND	UG/L	1.0	11/07/00	KKL
ETHYLBENZENE		ND	UG/L	1.0	11/07/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	11/07/00	KKL
BFB (SURROGATE)		77	125	75		

ND=NONE DETECTED  
=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 #: 0102506

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

DATE REPORTED: 02/26/01  
 DATE COLLECTED: 02/16/01  
 DATE RECEIVED: 02/21/01

Reference Fraction: 0102506-01A  
 Sample ID: DOGE-SA-MW-2  
 Sample Date Collected: 02/16/01 11:15:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		2.97	UG/L	1.0	02/22/01	KKL
TOLUENE		6.91	UG/L	1.0	02/22/01	KKL
ETHYLBENZENE		ND	UG/L	1.0	02/22/01	KKL
TOTAL XYLENES		ND	UG/L	1.0	02/22/01	KKL
BFB (SURROGATE)		91	125	75		

N=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 #: 0102506

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

DATE REPORTED: 02/26/01  
 DATE COLLECTED: 02/16/01  
 DATE RECEIVED: 02/21/01

PROJECT: WES/DOGIE EAST PIT

Reference Fraction:0102506-03A

Sample ID: DOGE-CG-MW-3

Sample Matrix: WATER

Sample Date Collected: 02/16/0111:32:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		148	UG/L	10	02/23/01	KKL
TOLUENE		2470	UG/L	10	02/23/01	KKL
ETHYLBENZENE		328	UG/L	10	02/23/01	KKL
TOTAL XYLENES		2580	UG/L	10	02/23/01	KKL
BFB (SURROGATE)		111	125	75		

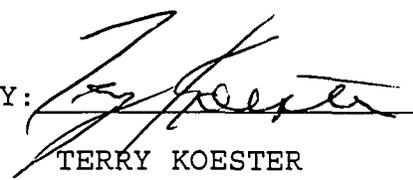
ND=NONE DETECTED

=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 #: 0102506

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

DATE REPORTED: 02/26/01  
 DATE COLLECTED: 02/16/01  
 DATE RECEIVED: 02/21/01

Reference Fraction: 0102506-02A  
 Sample ID: DOGE-CG-MW-4  
 Sample Date Collected: 02/16/01 11:21:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		54.0	UG/L	1.0	02/22/01	KKL
TOLUENE		17.8	UG/L	1.0	02/22/01	KKL
ETHYLBENZENE		1.01	UG/L	1.0	02/22/01	KKL
TOTAL XYLENES		19.8	UG/L	1.0	02/22/01	KKL
BFB (SURROGATE)		94	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 #: 0102506

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

DATE REPORTED: 02/26/01  
DATE COLLECTED: 02/16/01  
DATE RECEIVED: 02/21/01

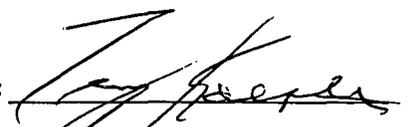
Reference Fraction: 0102506-05A  
Sample ID: DOGE-DG-MW-5  
Sample Date Collected: 02/16/01 11:37:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		39.4	UG/L	1.0	02/23/01	KKL
TOLUENE		210	UG/L	1.0	02/23/01	KKL
ETHYLBENZENE		83.0	UG/L	1.0	02/23/01	KKL
TOTAL XYLENES		509	UG/L	1.0	02/23/01	KKL
BFB (SURROGATE)		111	125	75		

ND=NONE DETECTED  
PQL=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 #: 0102506

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

DATE REPORTED: 02/26/01  
 DATE COLLECTED: 02/16/01  
 DATE RECEIVED: 02/21/01

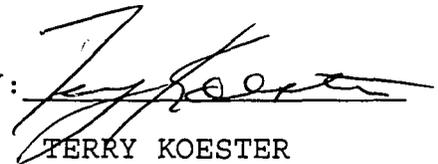
Reference Fraction:0102506-04A  
 Sample ID: DOGE-CG-MW-6  
 Sample Date Collected: 02/16/0111:27:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		171	UG/L	1.0	02/22/01	KKL
TOLUENE		11.0	UG/L	1.0	02/22/01	KKL
ETHYLBENZENE		12.5	UG/L	1.0	02/22/01	KKL
TOTAL XYLENES		33.5	UG/L	1.0	02/22/01	KKL
BFB (SURROGATE)		92	125	75		

NR=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 #: 0102506

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

DATE REPORTED: 02/26/01  
 DATE COLLECTED: 02/16/01  
 DATE RECEIVED: 02/21/01

PROJECT: WES/DOGIE EAST PIT

Reference Fraction: 0102506-06A

Sample ID: DOGE-DG-MW-8

Sample Matrix: WATER

Sample Date Collected: 02/16/01 11:42:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	02/22/01	KKL
TOLUENE		ND	UG/L	1.0	02/22/01	KKL
ETHYLBENZENE		ND	UG/L	1.0	02/22/01	KKL
TOTAL XYLENES		ND	UG/L	1.0	02/22/01	KKL
BFB (SURROGATE)		90	125	75		

ND=NONE DETECTED  
 =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 #: 0105416

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

DATE REPORTED: 05/22/01  
 DATE COLLECTED: 05/10/01  
 DATE RECEIVED: 05/15/01

PROJECT: WES/DOGIE EAST

Reference Fraction: 0105416-07A

Sample ID: DOGE-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 05/10/01 11:07:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		3.76	UG/L	1.0	05/17/01	MB
TOLUENE		4.46	UG/L	1.0	05/17/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/17/01	MB
TOTAL XYLENES		ND	UG/L	1.0	05/17/01	MB
BFB (SURROGATE)		90	125	75		

ND=NONE DETECTED

PQL=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 #: 0105416

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

DATE REPORTED: 05/22/01  
 DATE COLLECTED: 05/10/01  
 DATE RECEIVED: 05/15/01

Reference Fraction: 0105416-02A  
 Sample ID: DOGE-DG-MW3  
 Sample Date Collected: 05/10/01 11:37:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		205	UG/L	10	05/17/01	MB
TOLUENE		3080	UG/L	10	05/17/01	MB
ETHYLBENZENE		593	UG/L	10	05/17/01	MB
TOTAL XYLENES		5820	UG/L	10	05/17/01	MB
BFB (SURROGATE)		89	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 #: 0105416

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

DATE REPORTED: 05/22/01  
DATE COLLECTED: 05/10/01  
DATE RECEIVED: 05/15/01

PROJECT: WES/DOGIE EAST

Reference Fraction: 0105416-06A

Sample ID: DOGE-SA-MW4

Sample Matrix: WATER

Sample Date Collected: 05/10/01 11:18:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		2660	UG/L	10	05/17/01	MB
TOLUENE		2130	UG/L	10	05/17/01	MB
ETHYLBENZENE		34.6	UG/L	10	05/17/01	MB
TOTAL XYLENES		792	UG/L	10	05/17/01	MB
BFB (SURROGATE)		91	125	75		

NR=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 #: 0105416

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

DATE REPORTED: 05/22/01  
 DATE COLLECTED: 05/10/01  
 DATE RECEIVED: 05/15/01

PROJECT: WES/DOGIE EAST

Reference Fraction:0105416-03A

Sample ID: DOGE-DG-MW5

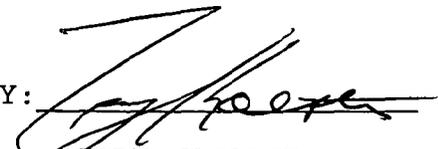
Sample Matrix: WATER

Sample Date Collected: 05/10/0111:46:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	05/18/01	MB
TOLUENE		439	UG/L	1.0	05/18/01	MB
ETHYLBENZENE		218	UG/L	1.0	05/18/01	MB
TOTAL XYLENES		1180	UG/L	1.0	05/18/01	MB
BFB (SURROGATE)		105	125	75		

ND=NONE DETECTED  
 =PRACTICAL QUANTITAION LIMIT  
 S=STANDARD UNITS  
 B=DETECTED IN METHOD BLANK

APPROVED BY:

  
 PERRY 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 #: 0105416

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

DATE REPORTED: 05/22/01  
DATE COLLECTED: 05/10/01  
DATE RECEIVED: 05/15/01

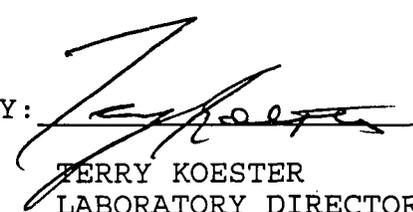
Reference Fraction: 0105416-01A  
Sample ID: DOGE-CG-MW6  
Sample Date Collected: 05/10/01 11:27:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		506	UG/L	10	05/17/01	MB
TOLUENE		23.2	UG/L	10	05/17/01	MB
ETHYLBENZENE		122	UG/L	10	05/17/01	MB
TOTAL XYLENES		384	UG/L	10	05/17/01	MB
BFB (SURROGATE)		105	125	75		

ND=NONE DETECTED  
PQL=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 #: 0105416

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

DATE REPORTED: 05/22/01  
 DATE COLLECTED: 05/10/01  
 DATE RECEIVED: 05/15/01

PROJECT: WES/DOGIE EAST

Reference Fraction:0105416-05A

Sample ID: DOGE-DG-MW7

Sample Matrix: WATER

Sample Date Collected: 05/10/0112:07:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		23.4	UG/L	1.0	05/17/01	MB
TOLUENE		ND	UG/L	1.0	05/17/01	MB
ETHYLBENZENE		2.63	UG/L	1.0	05/17/01	MB
TOTAL XYLENES		3.74	UG/L	1.0	05/17/01	MB
BFB (SURROGATE)		84	125	75		

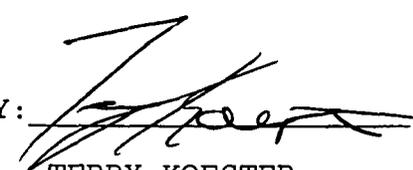
ND=NONE DETECTED

PQL=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 #: 0105416

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

DATE REPORTED: 05/22/01  
DATE COLLECTED: 05/10/01  
DATE RECEIVED: 05/15/01

PROJECT: WES/DOGIE EAST

Reference Fraction:0105416-04A

Sample ID: DOGE-DG-MW8

Sample Matrix: WATER

Sample Date Collected: 05/10/0111:57:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	05/17/01	MB
TOLUENE		ND	UG/L	1.0	05/17/01	MB
ETHYLBENZENE		ND	UG/L	1.0	05/17/01	MB
TOTAL XYLENES		ND	UG/L	1.0	05/17/01	MB
BFB (SURROGATE)		99	125	75		

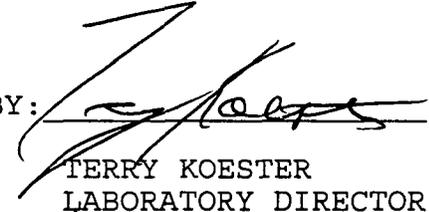
ND=NONE DETECTED

PQL=PRACTICAL QUANTITAION LIMIT

SU=STANDARD UNITS

B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48279-01A  
Field Sample ID: **DOGE-SA-MW-2**  
Site ID: Dogie East/JPS-110501-3

463 West 3600 South  
Salt Lake City, Utah  
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

Compound

Reporting      Amount  
Limit          Detected

Benzene	0.0010	0.0059
Toluene	0.0020	< 0.0020
Ethylbenzene	0.0020	< 0.0020
Total Xylene	0.0020	< 0.0020
Surr: Surr 1,2-Dichloroethane	71-136	97.3 %
Surr: Surr Toluene-d8	87-111	97.9 %

(801) 263-8686  
Toll Free (888) 263-8686  
Fax (801) 263-8687  
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: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48279-03A  
Field Sample ID: **DOGE-CG-MW-4**  
Site ID: Dogie East/JPS-110501-3

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      0.21

Toluene

0.010      0.42 \*

Ethylbenzene

0.0020      0.010

Total Xylene

0.0020      0.26

Surr: Surr 1,2-Dichloroethane

71-136      97.8 %

Surr: Surr Toluene-d8

87-111      104 %

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e-mail: awal@xmission.com

Kyle F. Gross  
Laboratory Director

Peggy McNicol  
QA Officer

\* This analyte was obtained from a 1:5 dilution.

Released by:

Laboratory Supervisor

Report Date:

November 19, 2001

Page 1 of 1



# ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48279-04A  
Field Sample ID: **DOGE-DG-MW-5**  
Site ID: Dogie East/JPS-110501-3

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>
------------------------	------------------------

Benzene

0.0010 < 0.0010

Toluene

0.0020 **0.016**

Ethylbenzene

0.0020 **0.044**

Total Xylene

0.0020 **0.11**

Surr: Surr 1,2-Dichloroethane

71-136 **97.3 %**

Surr: Surr Toluene-d8

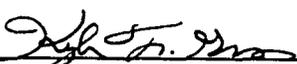
87-111 **101 %**

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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: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48279-05A  
Field Sample ID: DOGE-CG-MW-6  
Site ID: Dogie East/JPS-110501-3

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      0.020      1.9 \*

Toluene      0.0020      0.12

Ethylbenzene      0.0020      0.16

Total Xylene      0.0020      0.48

Surr: Surr 1,2-Dichloroethane      71-136      91.6 %

Surr: Surr Toluene-d8      87-111      99.2 %

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e-mail: awal@xmission.com

Kyle F. Gross  
Laboratory Director

Peggy McNicol  
QA Officer

\* This analyte was obtained from a 1:20 dilution.

Released by: Jim Struhs  
Laboratory Supervisor

Report Date: November 19, 2001      Page 1 of 1



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48279-06A  
Field Sample ID: **DOGE-DG-MW-7**  
Site ID: Dogie East/JPS-110501-3

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      **0.0062**

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      **98.0 %**

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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

All analysis applicable to the CWA, SDWA and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached Chain-of-Custody. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other for the addressee will be granted only on contact. This company accepts no responsibility, except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48279-07A

Field Sample ID: **DOGE-DG-MW-8**

Site ID: Dogie East/JPS-110501-3

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

98.1 %

Surr: Surr Toluene-d8

87-111

99.7 %

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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

3R312



*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.

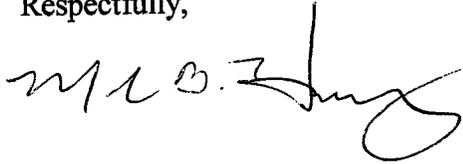
In 2001, three sites met the required remediation standards and were closed with OCD approval. The sites, listed in Table 2, achieved clean closure through a combination of contaminant source removal actions and monitored natural attenuation. Ground water cleanup objectives at each site were met in roughly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

**Reporting Period:** 2001

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**Location:** Unit D, Sec 4, Twn 25N, Rng 6W

**Canyon:** Largo

**Operator:** Williams

**Vulnerable Class:** original

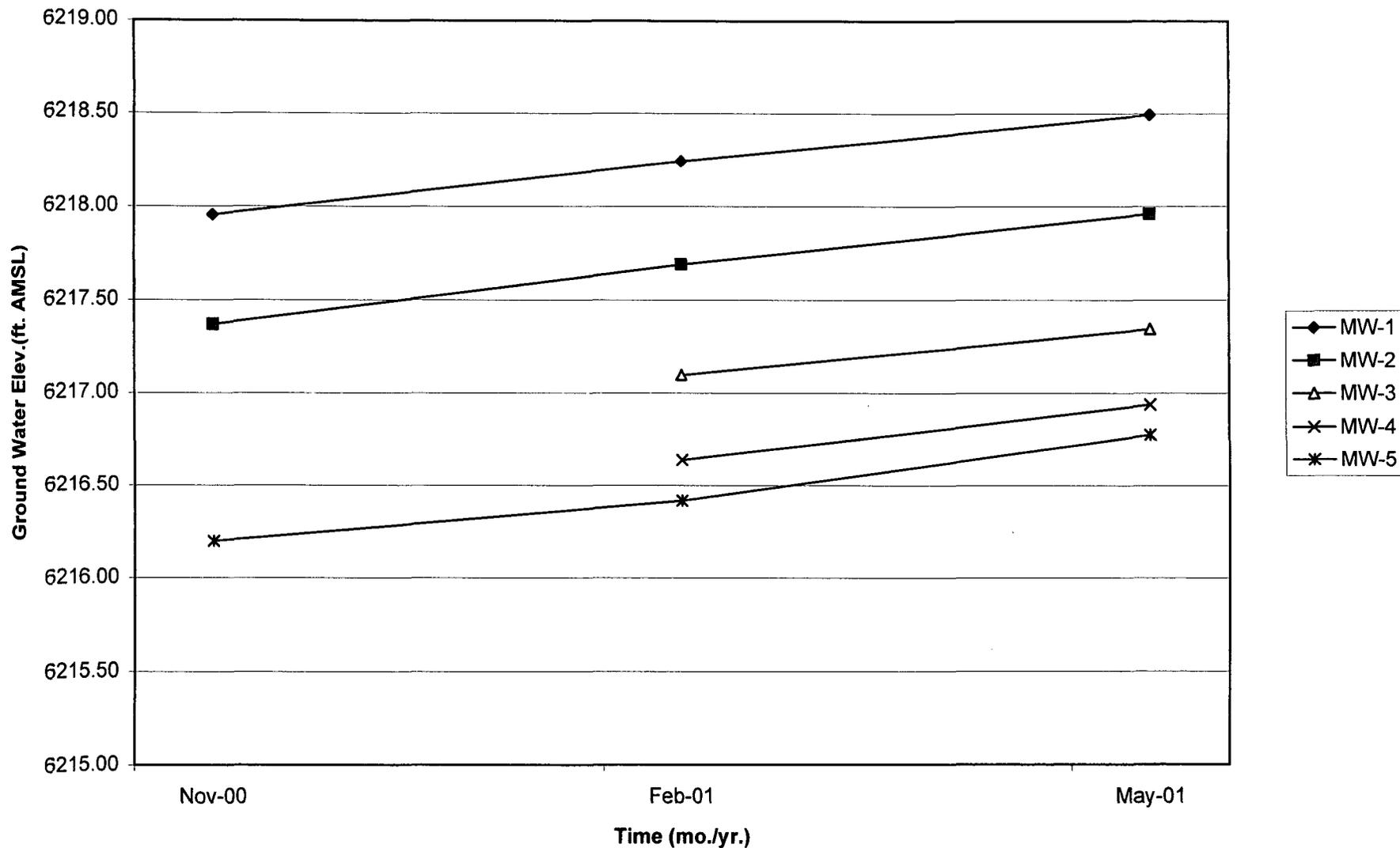
**OCD Ranking:** 40

**Lead Agency:** NMOCD

### Status Narrative

This site has five monitoring wells and one temporary water-point installed, with sixteen quarters of ground water monitoring completed to date. Well MW-2, the source area well, had BTEX levels below WQCC standards for the first two quarters of the period. In the third quarter, Benzene exceeded the standard at 15.8 ppb. In the last quarter, the BTEX levels were once again below WQCC standards. All the other monitoring wells have been below WQCC standards for more than four consecutive quarters.

### Dogie North Pit Hydrograph



# Analytical Data Summary

Site Name:  
Dogie North Pit

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						
	11/3/00	134803NOV00	<1	<1	<1	<1
	2/16/01	133916FEB01	3.89	1.17	<1.0	2.23
	5/10/01	131310MAY01	15.8	2.08	1.78	6.37
	10/31/01	131031OCT01	2.1	<2.0	<2.0	2.3

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 #: 0011125

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

DATE REPORTED: 11/09/00  
 DATE COLLECTED: 11/03/00  
 DATE RECEIVED: 11/04/00

PROJECT: WES/DOGIE EAST PIT-NORTH PIT

Reference Fraction:0011125-08A

Sample ID: DOGN-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 11/03/0013:48:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		1.17	UG/L	1.0	11/07/00	KKL
TOLUENE		ND	UG/L	1.0	11/07/00	KKL
ETHYLBENZENE		ND	UG/L	1.0	11/07/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	11/07/00	KKL
BFB (SURROGATE)		75	125	75		

ND=NONE DETECTED

=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 #: 0102508

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

DATE REPORTED: 02/23/01  
 DATE COLLECTED: 02/16/01  
 DATE RECEIVED: 02/21/01  
 P.O. #: SWA-022001-02

Sample ID: DOGN-SA-MW2  
 Collection Date: 02/16/01 13:39:00

Sample Matrix: WATER

TEST	METHOD-CAS #	RESULT	UNITS	PQL	ANALYZED	EXTRACTED
BTEX	OA1/8021B			3.0		
BENZENE	71-43-2	3.89	UG/L	1.0	02/22/01KKL	
TOLUENE	108-88-3	1.17	UG/L	1.0	02/22/01KKL	
ETHYLBENZENE	100-41-4	ND	UG/L	1.0	02/22/01KKL	
TOTAL XYLENES	1330-20-7	2.23	UG/L	1.0	02/22/01KKL	
BFB (SURROGATE)	-	90	125	75		

N=NONE DETECTED  
 P=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 #: 0105415

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

DATE REPORTED: 05/22/01  
DATE COLLECTED: 05/10/01  
DATE RECEIVED: 05/15/01

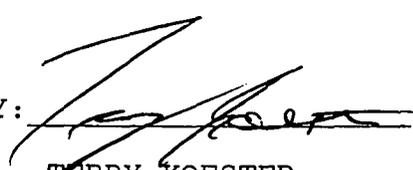
Reference Fraction:0105415-01A  
Sample ID: DOGN-SA-MW2  
Sample Date Collected: 05/10/0113:13:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		15.8	UG/L	1.0	05/18/01	MB
TOLUENE		2.08	UG/L	1.0	05/18/01	MB
ETHYLBENZENE		1.78	UG/L	1.0	05/18/01	MB
TOTAL XYLENES		6.37	UG/L	1.0	05/18/01	MB
BFB (SURROGATE)		94	125	75		

ND=NONE DETECTED  
P=PRACTICAL QUANTITAION LIMIT  
SU=STANDARD UNITS  
B=DETECTED IN METHOD BLANK

APPROVED BY:

  
TERRY KOESTER  
LABORATORY DIRECTOR



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental  
Collected: October 31, 2001  
Received: November 6, 2001

Contact: Jim Struhs  
Analyzed: November 14, 2001

AMERICAN  
WEST  
ANALYTICAL  
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L48278-01A

Field Sample ID: **DOGN-SA-MW-2**

Site ID: Dogie North/JPS-110501-4

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

**0.0021**

Toluene

0.0020

< 0.0020

Ethylbenzene

0.0020

< 0.0020

Total Xylene

0.0020

**0.0023**

Surr: Surr 1,2-Dichloroethane

71-136

**100 %**

Surr: Surr Toluene-d8

87-111

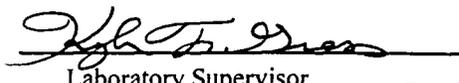
**99.3 %**

(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