

3R - 308

REPORTS

DATE:

2001

3R308



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.

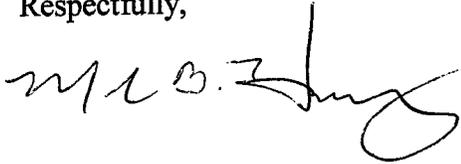
In 2001, three sites met the required remediation standards and were closed with OCD approval. The sites, listed in Table 2, achieved clean closure through a combination of contaminant source removal actions and monitored natural attenuation. Ground water cleanup objectives at each site were met in roughly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

Site Name: Chamberlain 1

Reporting Period: 2001

Location: Unit F, Sec 14, Twn 32N, Rng 12W

Canyon: Jaquez Flat

Operator: Burlington

Vulnerable Class: extended

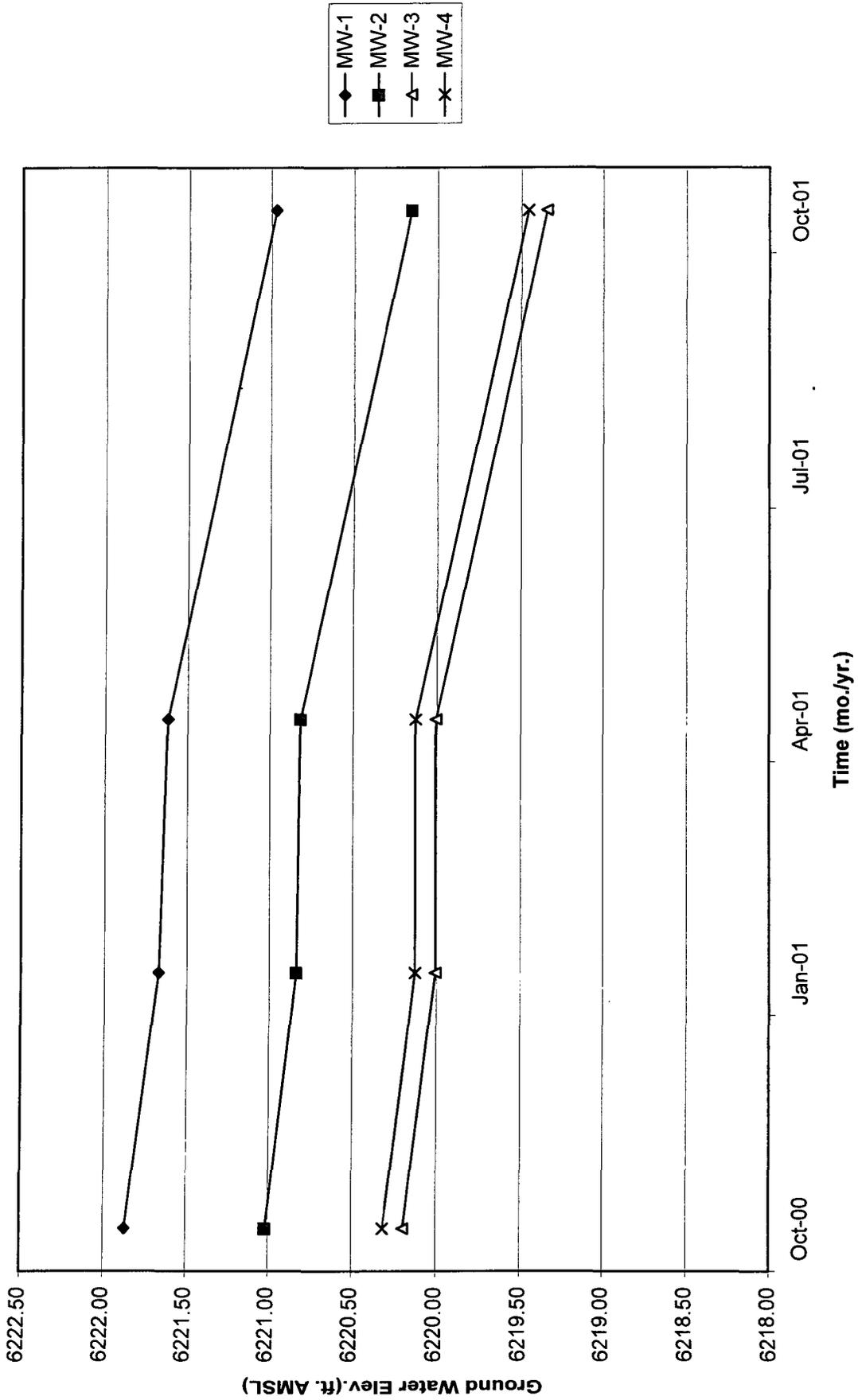
OCD Ranking: 0

Lead Agency: NMOCD

Status Narrative

This site has four monitoring wells installed, with seven quarters of ground water monitoring completed to date. Currently, only monitoring well MW-2 (located in the source area) contains contaminant concentrations in excess of WQCC standards. In the other monitoring wells, BTEX levels have remained below the method detection limit. The total BTEX level in MW-2 has decreased from 2630 ppb in November 1999 to 486 ppb in October 2001.

Chamberlain #1 Hydrograph



Analytical Data Summary

Site Name:
Chamberlain 1

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-1						
	10/19/00	151019OCT00	<1	<1	<1	<1
	1/11/01	121911JAN01	<1	<1	<1	<1
	4/10/01	112410APR01	<1	<1	<1	<1
	10/2/01	123902OCT01	<1.0	<2.0	<2.0	<2.0
MW-2						
	10/19/00	154519OCT00	1370	160	62.4	361
	1/11/01	123211JAN01	355	75.9	17.2	55.6
	4/10/01	113610APR01	509	28.1	16.1	70.1
	10/2/01	123002OCT01	370	49	22	45
MW-3						
	10/19/00	144519OCT00	<1	<1	<1	<1
	1/11/01	124411JAN01	<1	1.13	<1	1.38
	4/10/01	114610APR01	<1	<1	<1	<1
	10/2/01	124602OCT01	<1.0	<2.0	<2.0	<2.0
MW-4						
	10/19/00	140419OCT00	<1	<1	<1	<1
	1/11/01	125611JAN01	<1	<1	<1	<1
	4/10/01	115810APR01	<1	<1	<1	<1
	10/2/01	125002OCT01	<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 #: 0010669

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

DATE REPORTED: 10/26/00
 DATE COLLECTED: 10/19/00
 DATE RECEIVED: 10/21/00

PROJECT: WES/CHAMBERLAIN 1

Reference Fraction:0010669-03A

Sample ID: CHMB/-UG-MW1

Sample Matrix: WATER

Sample Date Collected: 10/19/0015:10:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	10/24/00	KKL
TOLUENE		ND	UG/L	1.0	10/24/00	KKL
ETHYLBENZENE		ND	UG/L	1.0	10/24/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	10/24/00	KKL
BFB (SURROGATE)		81	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

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 #: 0010669

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

DATE REPORTED: 10/26/00
 DATE COLLECTED: 10/19/00
 DATE RECEIVED: 10/21/00

PROJECT: WES/CHAMBERLAIN 1

Reference Fraction: 0010669-04A

Sample ID: CHMB/-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 10/19/0015:45:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		1370 D	UG/L	1.0	10/24/00	KKL
TOLUENE		160	UG/L	1.0	10/24/00	KKL
ETHYLBENZENE		62.4	UG/L	1.0	10/24/00	KKL
TOTAL XYLENES		361	UG/L	1.0	10/24/00	KKL
BFB (SURROGATE)		106	125	75		

ND=NONE DETECTED

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APPROVED BY: TERRY KOESTER

TERRY KOESTER
 LABORATORY DIRECTOR

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

LABORATORY REPORT:

REFERENCE #: 0010669

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

DATE REPORTED: 10/26/00
 DATE COLLECTED: 10/19/00
 DATE RECEIVED: 10/21/00

PROJECT: WES/CHAMBERLAIN 1

Reference Fraction:0010669-01A
 Sample ID: CHMB/-DG-MW3
 Sample Date Collected: 10/19/0014:45:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	10/24/00	KKL
TOLUENE		ND	UG/L	1.0	10/24/00	KKL
ETHYLBENZENE		ND	UG/L	1.0	10/24/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	10/24/00	KKL
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

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

LABORATORY REPORT:

REFERENCE #: 0010669

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

DATE REPORTED: 10/26/00
 DATE COLLECTED: 10/19/00
 DATE RECEIVED: 10/21/00

PROJECT: WES/CHAMBERLAIN 1

Reference Fraction:0010669-02A

Sample ID: CHMB/-DG-MW4

Sample Matrix: WATER

Sample Date Collected: 10/19/0014:04:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	10/24/00	KKL
TOLUENE		ND	UG/L	1.0	10/24/00	KKL
ETHYLBENZENE		ND	UG/L	1.0	10/24/00	KKL
TOTAL XYLENES		ND	UG/L	1.0	10/24/00	KKL
BFB (SURROGATE)		86	125	75		

N=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 #: 0101413

SENT WILLIAMS GAS PIPELINE
 TO: 187 COUNTY ROAD # 4980
 BLOOMFIELD, NM 87413
 JIM STRUHS
 PROJECT: WES/CHAMBERLAIN 1

DATE REPORTED: 01/23/01
 DATE COLLECTED: 01/11/01
 DATE RECEIVED: 01/17/01

Reference Fraction: 0101413-01A
 Sample ID: CHMB1-UG-MW1
 Sample Date Collected: 01/11/01 12:19:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	01/19/01	MB
TOLUENE		ND	UG/L	1.0	01/19/01	MB
ETHYLBENZENE		ND	UG/L	1.0	01/19/01	MB
TOTAL XYLENES		ND	UG/L	1.0	01/19/01	MB
BFB (SURROGATE)		110	125	75		

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

APPROVED BY:

Terry Koester
 TERRY KOESTER
 LABORATORY DIRECTOR
 tk

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 #: 0101413

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

DATE REPORTED: 01/23/01
 DATE COLLECTED: 01/11/01
 DATE RECEIVED: 01/17/01

PROJECT: WES/CHAMBERLAIN 1

Reference Fraction: 0101413-04A

Sample ID: CHMB1-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 01/11/01 12:32:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		355	UG/L	1.0	01/19/01	MB
TOLUENE		75.9	UG/L	1.0	01/19/01	MB
ETHYLBENZENE		17.2	UG/L	1.0	01/19/01	MB
TOTAL XYLENES		55.6	UG/L	1.0	01/19/01	MB
BFB (SURROGATE)		117	125	75		

NR=NONE DETECTED

PL=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 #: 0101413

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

DATE REPORTED: 01/23/01
 DATE COLLECTED: 01/11/01
 DATE RECEIVED: 01/17/01

PROJECT: WES/CHAMBERLAIN 1

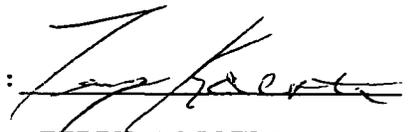
Reference Fraction: 0101413-02A
 Sample ID: CHMB1-DG-MW3
 Sample Date Collected: 01/11/01 12:44:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	01/19/01	MB
TOLUENE		1.13	UG/L	1.0	01/19/01	MB
ETHYLBENZENE		ND	UG/L	1.0	01/19/01	MB
TOTAL XYLENES		1.38	UG/L	1.0	01/19/01	MB
BFB (SURROGATE)		116	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 #: 0101413

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

DATE REPORTED: 01/23/01
 DATE COLLECTED: 01/11/01
 DATE RECEIVED: 01/17/01

PROJECT: WES/CHAMBERLAIN 1

Reference Fraction:0101413-03A

Sample ID: CHMB1-DG-MW4

Sample Matrix: WATER

Sample Date Collected: 01/11/01 12:56:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED BY
BTEX	OA1/8021B			3.0	
BENZENE		ND	UG/L	1.0	01/19/01 MB
TOLUENE		ND	UG/L	1.0	01/19/01 MB
ETHYLBENZENE		ND	UG/L	1.0	01/19/01 MB
TOTAL XYLENES		ND	UG/L	1.0	01/19/01 MB
BFB (SURROGATE)		108	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 #: 0104297

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

DATE REPORTED: 04/20/01
 DATE COLLECTED: 04/10/01
 DATE RECEIVED: 04/13/01

PROJECT: WES/CHAMBERLAIN #1

Reference Fraction: 0104297-02A

Sample ID: CHMB1-UG-MW1

Sample Matrix: WATER

Sample Date Collected: 04/10/01 11:24:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	04/17/01	MB
TOLUENE		ND	UG/L	1.0	04/17/01	MB
ETHYLBENZENE		ND	UG/L	1.0	04/17/01	MB
TOTAL XYLENES		ND	UG/L	1.0	04/17/01	MB
BFB (SURROGATE)		97	125	75		

ND=NONE DETECTED

=PRACTICAL QUANTITAION LIMIT

SS=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 #: 0104297

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

DATE REPORTED: 04/20/01
 DATE COLLECTED: 04/10/01
 DATE RECEIVED: 04/13/01

PROJECT: WES/CHAMBERLAIN #1

Reference Fraction: 0104297-01A

Sample ID: CHMB1-SA-MW2

Sample Matrix: WATER

Sample Date Collected: 04/10/01 11:36:00

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		509	UG/L	1.0	04/17/01	MB
TOLUENE		28.1	UG/L	1.0	04/17/01	MB
ETHYLBENZENE		16.1	UG/L	1.0	04/17/01	MB
TOTAL XYLENES		70.1	UG/L	1.0	04/17/01	MB
BFB (SURROGATE)		97	125	75		

N=NONE DETECTED
 P=PRACTICAL QUANTITATION 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 #: 0104297

SENT WILLIAMS GAS PIPELINE
 TO: 187 COUNTY ROAD #4980
 BLOOMFIELD, NM 87413
 JIM STRUHS
 PROJECT: WES/CHAMBERLAIN #1

DATE REPORTED: 04/20/01
 DATE COLLECTED: 04/10/01
 DATE RECEIVED: 04/13/01

Reference Fraction: 0104297-03A
 Sample ID: CHMB1-DG-MW3
 Sample Date Collected: 04/10/01 11:46:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	04/17/01	MB
TOLUENE		ND	UG/L	1.0	04/17/01	MB
ETHYLBENZENE		ND	UG/L	1.0	04/17/01	MB
TOTAL XYLENES		ND	UG/L	1.0	04/17/01	MB
BFB (SURROGATE)		91	125	75		

ND=NONE DETECTED
 =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 #: 0104297

SENT WILLIAMS GAS PIPELINE
 TO: 187 COUNTY ROAD #4980
 BLOOMFIELD, NM 87413
 JIM STRUHS
 PROJECT: WES/CHAMBERLAIN #1

DATE REPORTED: 04/20/01
 DATE COLLECTED: 04/10/01
 DATE RECEIVED: 04/13/01

Reference Fraction: 0104297-04A
 Sample ID: CHMB1-DG-MW4
 Sample Date Collected: 04/10/01 11:58:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
BTEX	OA1/8021B			3.0		
BENZENE		ND	UG/L	1.0	04/17/01	MB
TOLUENE		ND	UG/L	1.0	04/17/01	MB
ETHYLBENZENE		ND	UG/L	1.0	04/17/01	MB
TOTAL XYLENES		ND	UG/L	1.0	04/17/01	MB
BFB (SURROGATE)		96	125	75		

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

APPROVED BY: TERRY KOESTER

TERRY KOESTER
 LABORATORY DIRECTOR



ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Mile High Environmental
Collected: October 2, 2001
Received: October 5, 2001

Contact: Jim Struhs
Analyzed: October 11, 2001

Analysis Requested: SW8260B/5030A

Lab Sample ID: L47828-04A
Field Sample ID: CHMB-UG-MW1
Site ID: Chamberlain #4 / SWA-100401-03

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	< 0.0010
Toluene	0.0020	< 0.0020
Ethylbenzene	0.0020	< 0.0020
Total Xylene	0.0020	< 0.0020

(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 17, 2001

Page 1 of 1



ORGANIC ANALYSIS REPORT

Client: Mile High Environmental
Collected: October 2, 2001
Received: October 5, 2001

Contact: Jim Struhs
Analyzed: October 11, 2001

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Analysis Requested: SW8260B/5030A

Lab Sample ID: L47828-02A
Field Sample ID: CHMB-SA-MW2
Site ID: Chamberlain #4 / SWA-100401-03

463 West 3600 South
Salt Lake City, Utah
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

<u>Compound</u>	<u>Reporting Limit</u>	<u>Amount Detected</u>	
Benzene	0.0010	0.37	E
Toluene	0.0020	0.049	
Ethylbenzene	0.0020	0.022	
Total Xylene	0.0020	0.045	

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

Kyle F. Gross
Laboratory Director

Peggy McNicol
QA Officer

E - Estimated value. The amount exceeds the linear working range of the instrument.

Released by:


Laboratory Supervisor

Report Date:

October 17, 2001

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ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Mile High Environmental
Collected: October 2, 2001
Received: October 5, 2001

Contact: Jim Struhs
Analyzed: October 11, 2001

Analysis Requested: SW8260B/5030A

Lab Sample ID: L47828-03A
Field Sample ID: CHMB-DG-MW3
Site ID: Chamberlain #4 / SWA-100401-03

463 West 3600 South
Salt Lake City, Utah
84115

Analytical Results

MBTEXN/TPH-P

Units = mg/L

Final Dilution Factor: 1

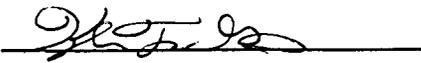
<u>Compound</u>	<u>Reporting Limit</u>	<u>Amount Detected</u>
Benzene	0.0010	< 0.0010
Toluene	0.0020	< 0.0020
Ethylbenzene	0.0020	< 0.0020
Total Xylene	0.0020	< 0.0020

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QA Officer

Released by:


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Page 1 of 1



ORGANIC ANALYSIS REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

Client: Mile High Environmental
Collected: October 2, 2001
Received: October 5, 2001

Contact: Jim Struhs
Analyzed: October 11, 2001

Analysis Requested: SW8260B/5030A

Lab Sample ID: L47828-01A
Field Sample ID: CHMB-DG-MW4
Site ID: Chamberlain #4 / SWA-100401-03

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

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