AP - 49

ANNUAL MONITORING REPORT

YEAR(S):
2004

Highlander Environmental Corp.

Midland, Texas

CERTIFIED MAIL
RETURN RECEIPT NO. 7004 1160 0000 4840 9462

March 21, 2005

Mr. Wayne Price
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Re: 2004 Annual Summary of Monitor Well Sampling, Rice Operating Company, Justis Saltwater Disposal System (SWD) Well #H-2, Unit H, Section 2, T-26-S, R-37-E, Lea County, New Mexico
NMOCD CASE #1R0423-01

Dear Mr. Price:

Highlander Environmental Corp. (Highlander) takes this opportunity to submit the 2004 Annual Monitor Well Sampling Report for the Rice Operating Company (ROC) Justis SWD Well #H-2 site located in the Justis Salt Water Disposal System.

Background

In January 2002, Rice had installed the three monitor wells to evaluate groundwater in the vicinity of the H-2 injection facility. Soil samples were collected during tank replacement and sample results prompted the placement of the monitor wells. Originally, two monitor wells, MW-1 and MW-2 showed elevated chloride levels. After several quarterly sampling events, MW-2 continued to show elevated chloride levels. As a result, Rice installed two additional monitor wells in February 2004.

Monitor Well Sampling

On March 11, June 28, September 23 and December 21, 2004, Highlander personnel traveled to the location for quarterly sampling. Prior to sampling, the wells were gauged for static water levels. All monitor well caps were opened and water level measurements were taken from the top of the casing. The measurements were taken to the nearest 0.01 feet.

Each well was purged using a portable submersible pump. Approximately three casing volumes of water were purged from each well prior to sampling. Between wells, the pump and associated tubing were decontaminated with a laboratory grade detergent and rinsed with deionized water. Cumulative water level measurements and purge volumes for the monitor wells are shown in Table 1.

Each well was inspected for the presence of phase-separated hydrocarbons (PSH). Groundwater samples were collected as soon as possible after the groundwater returned to its static level.

Groundwater samples were collected using clean disposable polyethylene bailers and disposable line. The samples were transferred into labeled and preserved containers provided by the laboratory. All of the samples were delivered under proper chain-of-custody control to Environmental Labs of Texas, Inc., Odessa, Texas. The groundwater samples were analyzed for major anions, by methods 310.1, 9253 and 375.4, cations by method 6010B, Total Dissolved Solids (TDS) by method 160.1 and Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) by method EPA 8021B. Copies of the laboratory reports are enclosed in Appendix A. Cumulative analytical data is summarized in Table 2.

Water table maps were generated for all four quarterly sampling events, using the water level measurement data and are included as Figures 3-6. The general hydraulic gradient appears to be consistently towards the north-northwest.

Sample Results

Referring to Table 2, chloride concentrations from monitor wells MW-1, MW-3, MW-4 and MW-5 were all below the New Mexico Water Quality Control Commission (WQCC) standards of 250 mg/L during the last two quarters of 2004. Only MW-2 exceeded the WQCC standard for all four quarters. Benzene levels in all of the monitor wells have fluctuated between near or slightly above WQCC standards to below method detection limits for the past several quarterly sampling events.

Hydrographs representing fluctuations in groundwater levels and benzene concentration graphs were prepared for all of the monitoring wells and are included in Appendix B. The hydrographs of all monitor wells show a general decline in water levels in the past four quarters, although throughout this period there has been significant precipitation. Benzene levels have fluctuated up and down during this decline and do not show a distinct correlation between water level and benzene concentration at this time. Chloride levels have been consistently elevated in MW-2. Chloride concentrations in MW-1 spiked in the first two quarters, but declined to below WQCC standards in the final two quarters. Chloride concentrations in the remaining monitor wells have remained at or below the WQCC standards, with the exception of the second quarter sample from MW-5, which was slightly above the standard (310 mg/L).

Conclusions

Hydrographs of the monitor wells are showing a distinct decline in water levels during 2004, at a time when significant precipitation has occurred in this region. The hydraulic gradient continues to trend towards the north-northwest, although the regional hydraulic gradient is towards the southeast. Both of these issues tend to indicate outside interference with the localized water table, possibly from irrigation wells located to the north of the site. Fluctuations in benzene levels cannot be correlated to water level fluctuations at this time. Benzene levels in MW-2 and MW-3 were slightly above the WQCC standard of 0.01 mg/L in 2004. Chloride levels have been consistently elevated in MW-2. Chloride concentrations in MW-1 spiked in the first two quarters, but declined to below WQCC standards in the final two quarters. Chloride concentrations in the remaining monitor wells have remained at or below the WQCC standards, with the exception of the second quarter sample from MW-5, which was slightly above the standard (310 mg/L).

NMOCD may soon expect a Corrective Action Plan (CAP) submission for this site by Highlander.

Respectfully Submitted,
HIGHLANDER ENVIRONMENTAL CORP.

Tim Reed

Timothy M. Reed, P.G.
Vice President

cc: ROC, Chris Williams
NMOCD, District I Office
1625 N. French Drive
Hobbs, NM 88240

FIGURES

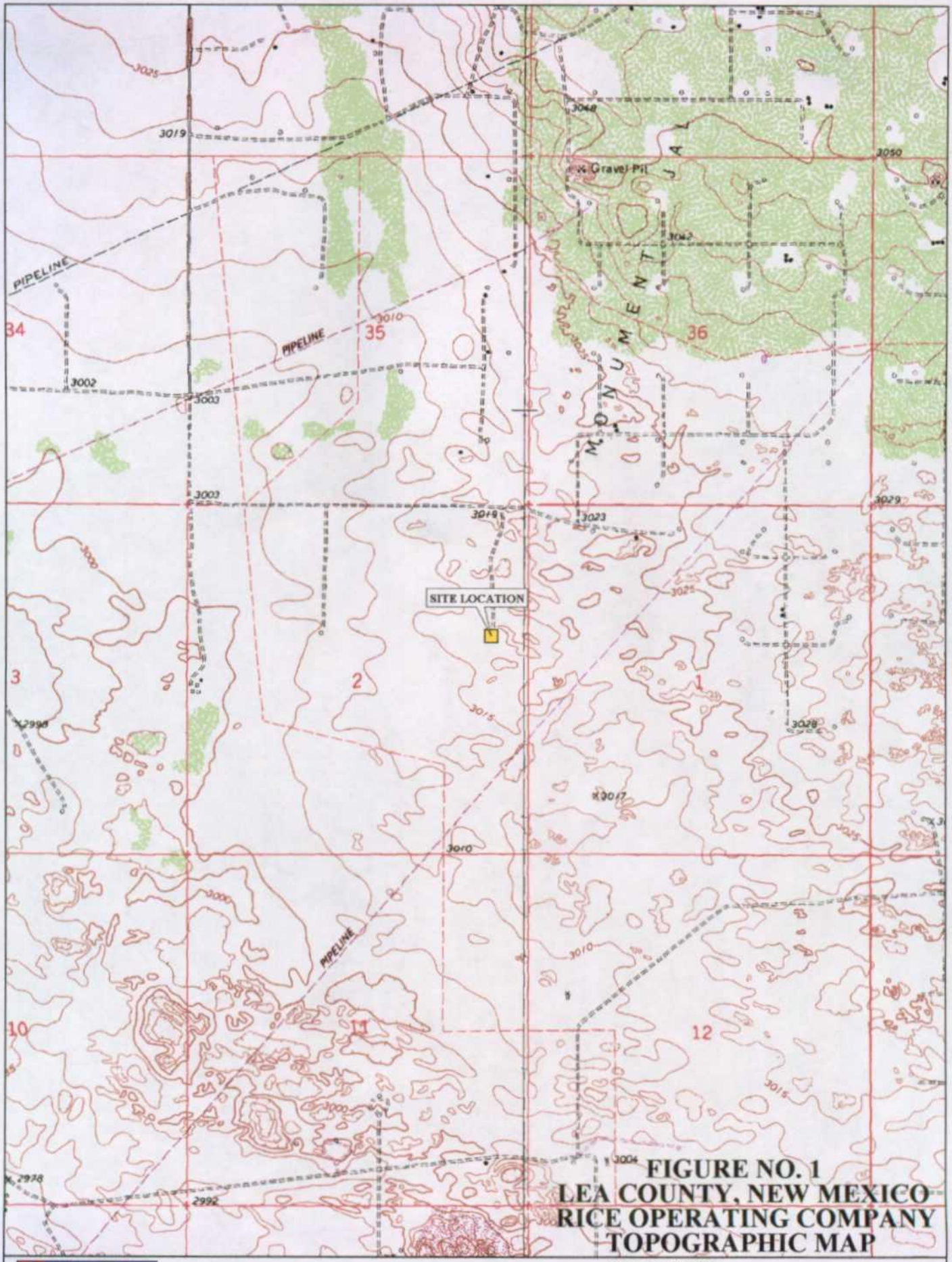
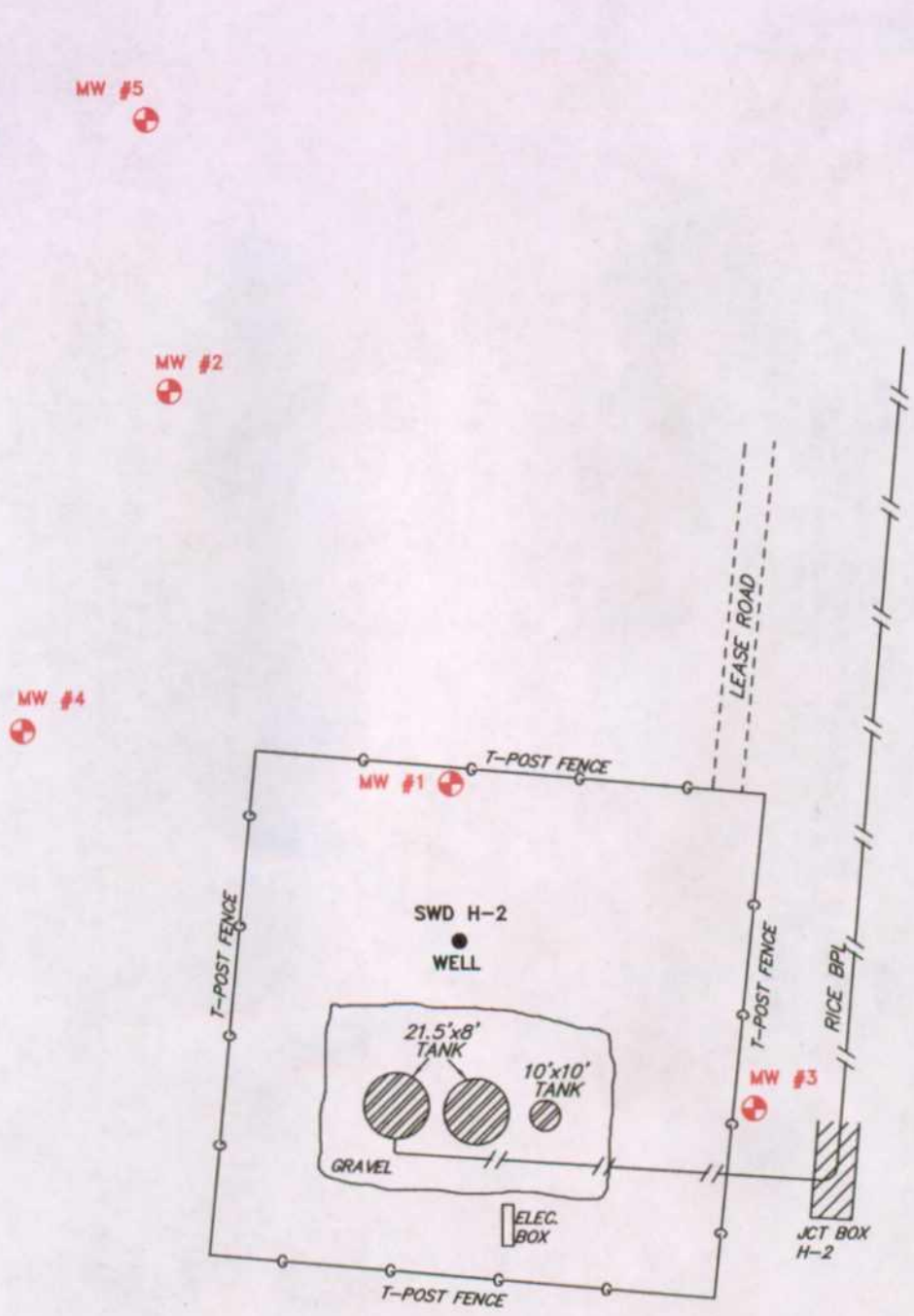


FIGURE NO. 1
LEA COUNTY, NEW MEXICO
RICE OPERATING COMPANY
TOPOGRAPHIC MAP

Scale 1 : 24,000
1" = 2000 ft

TN
MN
9.6°E



WELL#	ELEVATION
MW #1	3023.52'
MW #2	3023.03' (TOP STEEL LID), 3022.83' (TOC)
MW #3	3020.13' (TOP BRASS CAP)
MW #4	3023.17'
MW #5	3021.08'

MONITOR WELL LOCATION

SCALE: 1"=60'

60 0 60

FIGURE NO. 2

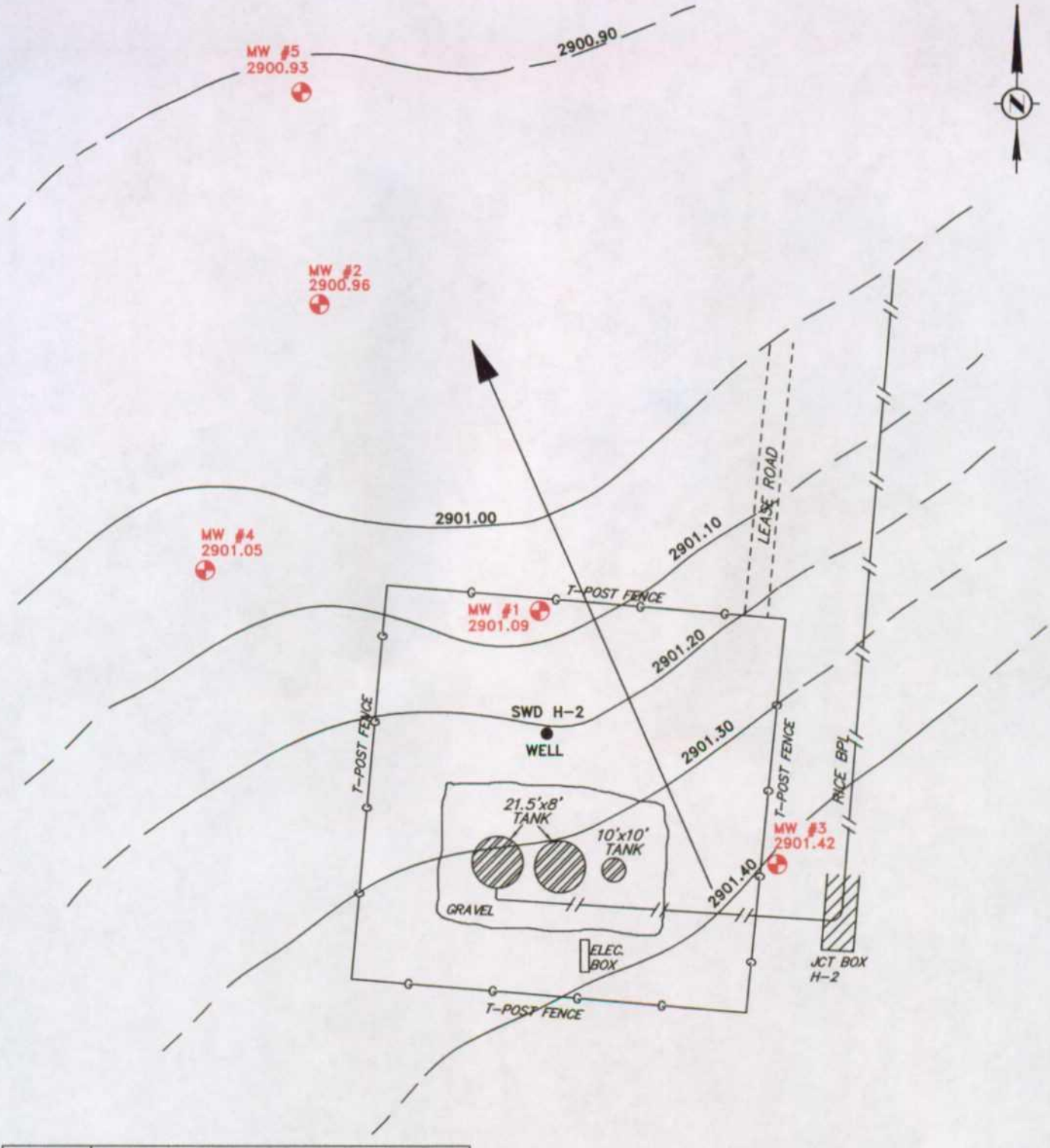
LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

SITE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 4/30/04
DWG. BY: JJ
FILE: C:\RICE\SITE MAP JUSTIS



WELL#	ELEVATION
MW #1	3023.52'
MW #2	3023.03' (TOP STEEL LID), 3022.83' (TOC)
MW #3	3020.13' (TOP BRASS CAP)
MW #4	3023.17'
MW #5	3021.08'

MONITOR WELL LOCATION

SCALE: 1"=60'

60 0 60

FIGURE NO. 3

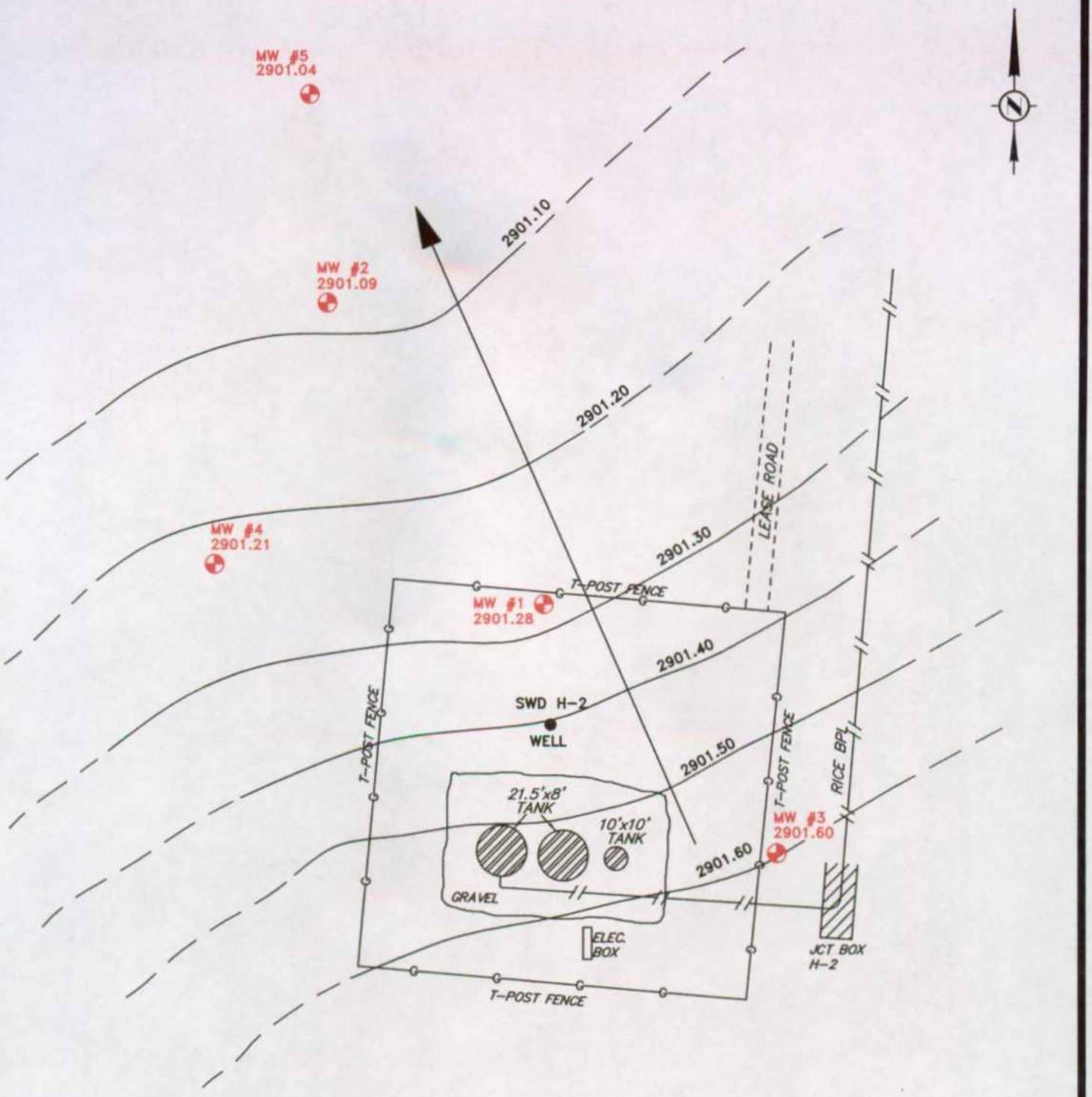
LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

3/11/04 WATER TABLE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 9/13/04
DWG. BY: JJ
FILE: C:\RICE\WTM 3-11 JJ.STS



WELL#	ELEVATION
MW #1	3023.52'
MW #2	3023.03' (TOP STEEL LID), 3022.83' (TOC)
MW #3	3020.13' (TOP BRASS CAP)
MW #4	3023.17'
MW #5	3021.08'

MONITOR WELL LOCATION

SCALE: 1"=60'

60 0 60

FIGURE NO. 4

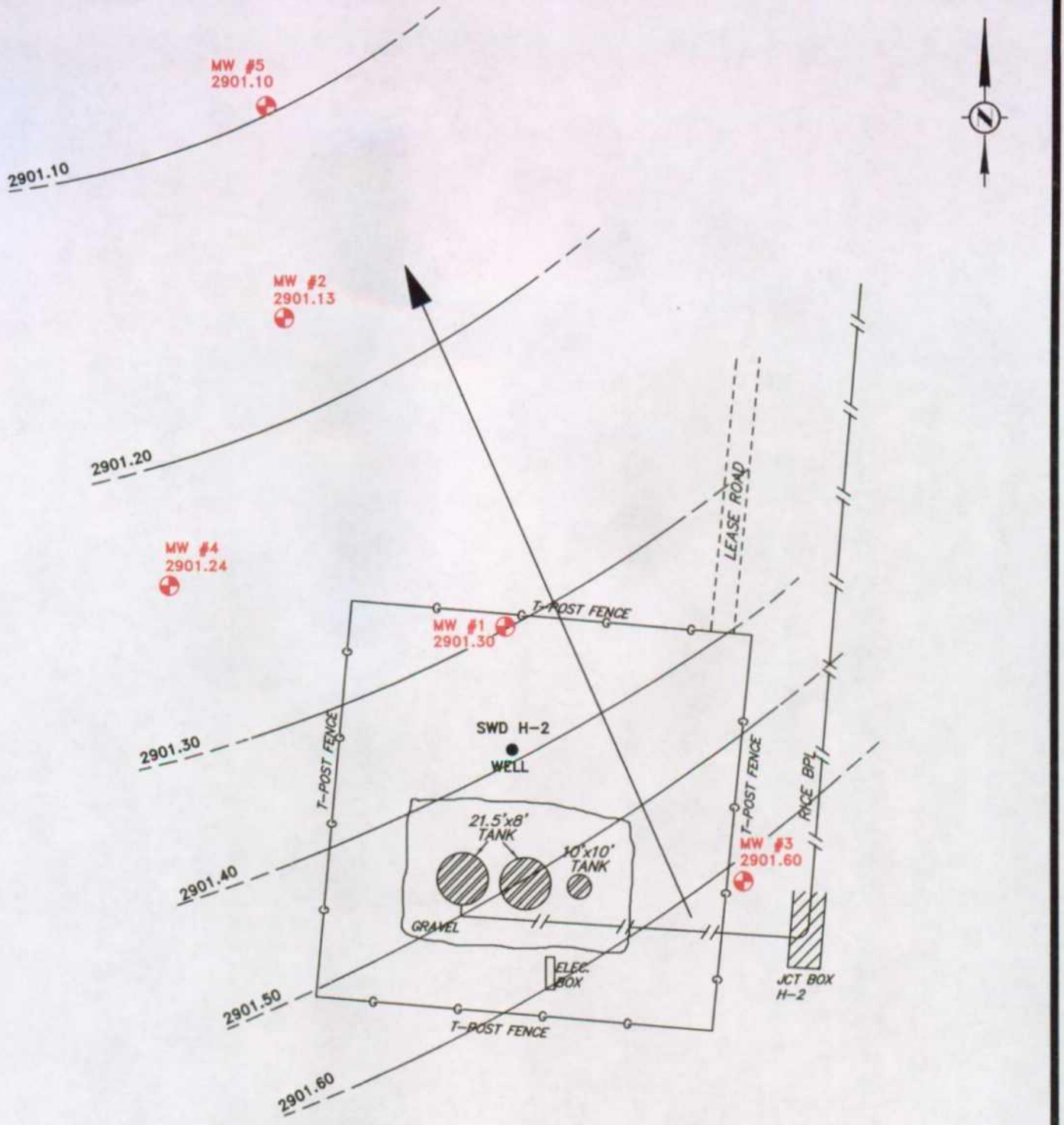
LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

6/28/04 WATER TABLE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 9/13/04
DWG. BY: JJ
FILE: C:\RICE\WTM 6-28 JUSTIS



WELL#	ELEVATION
MW #1	3023.52'
MW #2	3023.03' (TOP STEEL LID), 3022.83' (TOC)
MW #3	3020.13' (TOP BRASS CAP)
MW #4	3023.17'
MW #5	3021.08'

MONITOR WELL LOCATION

SCALE: 1"=60'

60 0 60

FIGURE NO. 5

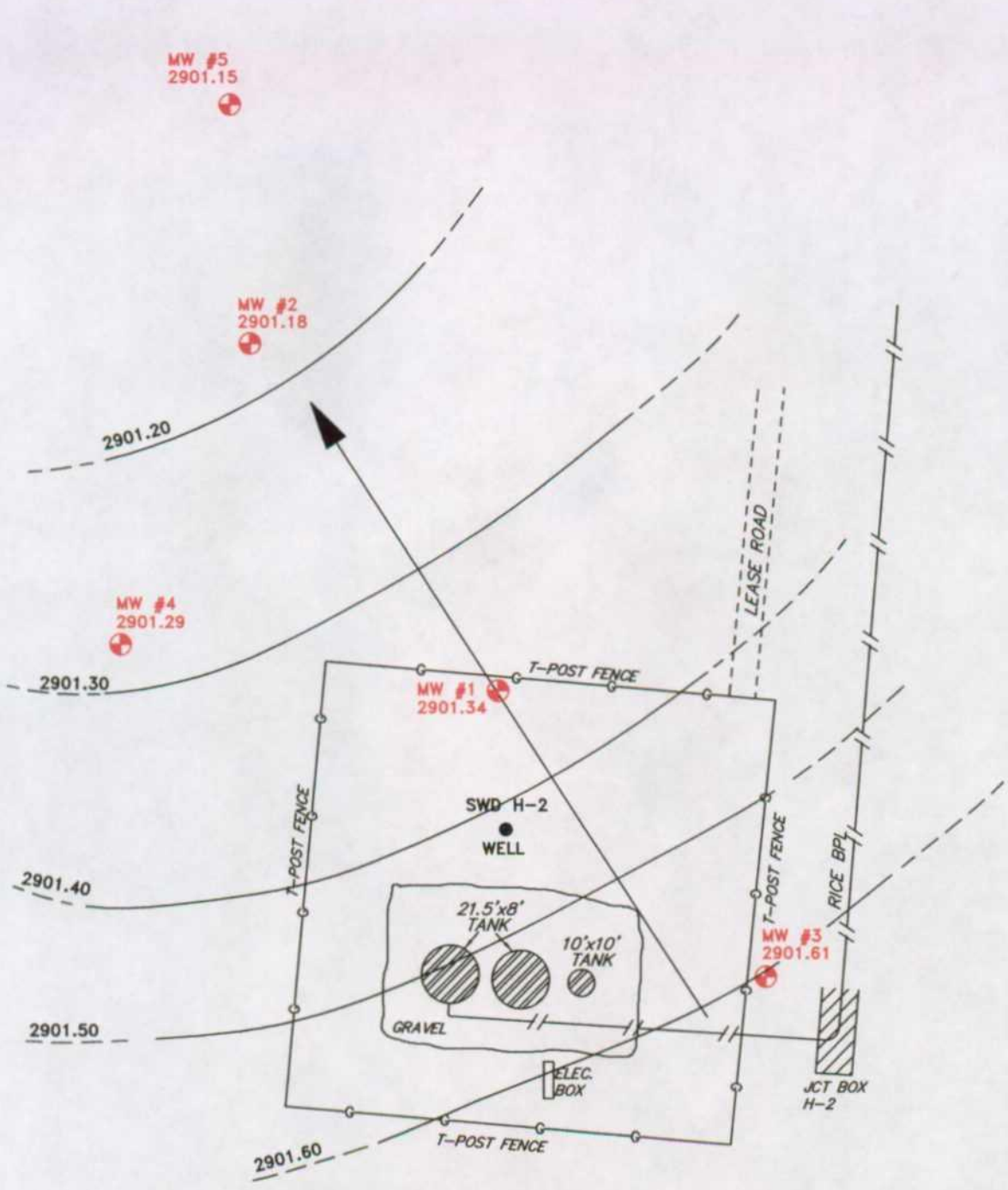
LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

9/18/04 WATER TABLE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 10/29/04
DWG. BY: JJ
FILE: C:\RICE\WTM 9-04 JJ.STS



WELL#	ELEVATION
MW #1	3023.52'
MW #2	3023.03' (TOP STEEL LID), 3022.83' (TOC)
MW #3	3020.13' (TOP BRASS CAP)
MW #4	3023.17'
MW #5	3021.08'

MONITOR WELL LOCATION

SCALE: 1"=60'

60 0 60

FIGURE NO. 6

LEA COUNTY, NEW MEXICO

RICE OPERATING COMPANY

12/21/04 WATER TABLE MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 3/11/05
DWG. BY: JJ
FILE: C:\RICE\MTH 12-04 JJ.MTS

TABLES

Table 1

Rice Operating Co.
Justis SWD #H-2
Sample Analysis

MW#	Sample Date	Total Depth (TOC) (feet)	Depth to Water (TOC) (feet)	Purge Volume (gallons)
MW-1	8/16/2002	137	116.20	66
	11/12/2002	144*	123.32	60
	2/13/2003	144*	122.95	70
	5/20/2003	144*	123.34	70
	9/16/2003	144*	122.94	70
	12/16/2003	144*	123.19	70
	3/11/2004	144*	122.43	70
	6/28/2004	144*	122.24	70
	9/23/2004	144*	122.22	70
	12/21/2004	144*	122.18	68
MW-2	8/16/2002	142	121.85	25
	11/12/2002	142	122.10	25
	2/13/2003	142	121.71	25
	5/20/2003	142	122.08	25
	9/16/2003	142	121.70	25
	12/16/2003	142	122.00	30
	3/11/2004	142	121.87	30
	6/28/2004	142	121.74	30
	9/23/2004	142	121.70	25
	12/21/2004	142	121.65	10
MW-3	8/16/2003	133	118.68	20
	11/12/2002	133	118.90	25
	2/13/2003	133	118.53	25
	5/20/2003	133	118.87	25
	9/16/2003	133	118.53	25
	12/16/2003	133	118.79	30
	3/11/2004	133	118.71	30
	6/28/2004	133	118.53	30
	9/23/2004	133	118.52	25
	12/21/2004	133	118.52	7
MW-4	3/11/2004	137	122.12	30
	6/28/2004	137	121.96	30
	9/23/2004	137	121.93	25
	12/21/2004	137	121.88	8
MW-5	3/11/2004	135	120.15	30
	6/28/2004	135	120.04	30
	9/23/2004	135	119.98	25
	12/21/2004	135	119.93	8

* Denotes new TD measurement due to monitor well pipe extension

Table 2
Rice Operating Co.
Justis SWD #H-2
Sample Analysis (in mg/L)

MW#	Sample Date	Chloride	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes
MW-1 (5")	3/1/2002	301	971	-	-	-	-
	6/10/2002	173	-	0.001	0.008	0.01	0.066
	8/16/2002	111	619	<0.001	<0.001	<0.001	<0.001
	11/12/2002	257	971	<0.001	0.001	<0.001	<0.001
	2/13/2003	97.5	647	<0.001	<0.001	<0.001	<0.001
	5/20/2003	102	682	<0.001	<0.001	<0.001	<0.001
	9/16/2003	594	1920	<0.001	<0.001	<0.001	<0.001
	12/16/2003	81.5	587	0.013	<0.001	<0.001	<0.001
	3/11/2004	727	2060	<0.001	<0.001	<0.001	<0.001
	6/28/2004	1030	3230	0.0056	<0.001	<0.001	<0.001
	9/23/2004	106	749	<0.001	<0.001	<0.001	<0.001
	12/21/2004	93.1	858*	<0.001	<0.001	<0.001	0.00108
MW-2	3/1/2002	700	1780	-	-	-	-
	5/23/2002	904	2710	<0.001	<0.001	<0.001	<0.001
	8/16/2002	1040	3390	<0.001	<0.001	<0.001	<0.001
	11/12/2002	1130	2600	0.002	0.003	<0.001	<0.002
	2/13/2003	1110	2780	<0.001	<0.001	<0.001	<0.001
	5/20/2003	1130	3600	<0.001	<0.001	<0.001	<0.001
	9/16/2003	1070	3540	<0.001	<0.001	<0.001	<0.001
	12/16/2003	1230	2490	0.032	0.003	<0.001	<0.001
	3/11/2004	1200	3660	<0.001	<0.001	<0.001	<0.001
	6/28/2004	2570	6290	0.0112	<0.001	<0.001	<0.001
	9/23/2004	1130	3760	<0.001	<0.001	<0.001	<0.001
	12/21/2004	1150	2877*	0.0055	<0.001	<0.001	<0.001
MW-3	3/1/2002	37.2	561	-	-	-	-
	5/16/2002	35.4	570	<0.001	<0.001	<0.001	<0.001
	8/16/2002	93.1	631	<0.001	<0.001	<0.001	<0.001
	11/12/2002	97.5	688	0.030	0.014	0.002	0.003
	2/13/2003	102	666	<0.001	<0.001	<0.001	<0.001
	5/20/2003	168	885	<0.001	<0.001	<0.001	<0.001
	9/16/2003	204	568	<0.001	<0.001	<0.001	<0.001
	12/16/2003	40.8	517	0.013	<0.001	<0.001	<0.001
	3/11/2004	65	666	<0.001	<0.001	<0.001	<0.001
	6/28/2004	124	735	0.0124	<0.001	<0.001	<0.001
	9/23/2004	115	703	0.00113	<0.001	<0.001	<0.001
	12/21/2004	154	1057*	0.0127	<0.001	0.00144	<0.001

NOTE: - denotes not analyzed

Table 2
Rice Operating Co.
Justis SWD #H-2
Sample Analysis (in mg/L)

MW#	Sample Date	Chloride	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes
MW-4	3/1/2002	-	-	-	-	-	-
	6/10/2002	-	-	-	-	-	-
	8/16/2002	-	-	-	-	-	-
	11/12/2002	-	-	-	-	-	-
	2/13/2003	-	-	-	-	-	-
	5/20/2003	-	-	-	-	-	-
	9/16/2003	-	-	-	-	-	-
	12/16/2003	-	-	-	-	-	-
	3/11/2004	35.4	610	<0.001	<0.001	<0.001	<0.001
	6/28/2004	57.6	596	0.00749	<0.001	<0.001	<0.001
	9/23/2004	53.2	648	<0.001	<0.001	<0.001	<0.001
	12/21/2004	59.1	865*	0.00275	<0.001	<0.001	<0.001
MW-5	3/1/2002	-	-	-	-	-	-
	5/23/2002	-	-	-	-	-	-
	8/16/2002	-	-	-	-	-	-
	11/12/2002	-	-	-	-	-	-
	2/13/2003	-	-	-	-	-	-
	5/20/2003	-	-	-	-	-	-
	9/16/2003	-	-	-	-	-	-
	12/16/2003	-	-	-	-	-	-
	3/11/2004	195	894	<0.001	<0.001	<0.001	<0.001
	6/28/2004	310	1130	0.0105	<0.001	0.00108	<0.001
	9/23/2004	160	792	<0.001	<0.001	<0.001	<0.001
	12/21/2004	165	1072*	0.00292	<0.001	<0.001	<0.001

NOTE: - denotes not analyzed

APPENDIX A

Lab Analysis

Lab Report: 3/19/04

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Rice/Justis SWD Well H-2

Project Number: 1863

Location: Lea County, NM

Lab Order Number: 4C12015

Report Date: 03/19/04

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	03/19/04 14:15

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4C12015-01	Water	03/11/04 10:15	03/12/04 17:20
MW-2	4C12015-02	Water	03/11/04 11:50	03/12/04 17:20
MW-3	4C12015-03	Water	03/11/04 11:15	03/12/04 17:20
MW-4	4C12015-04	Water	03/11/04 13:15	03/12/04 17:20
MW-5	4C12015-05	Water	03/11/04 12:45	03/12/04 17:20

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	03/19/04 14:15

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4C12015-01)									
Benzene	J [0.000757]	0.00100	mg/L	1	EC41830	03/16/04	03/16/04	EPA 8021B	J
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*114 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*84.5 %*	*80-120*		"	"	"	"	
MW-2 (4C12015-02)									
Benzene	J [0.000864]	0.00100	mg/L	1	EC41830	03/16/04	03/16/04	EPA 8021B	J
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*119 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*85.0 %*	*80-120*		"	"	"	"	
MW-3 (4C12015-03)									
Benzene	J [0.000960]	0.00100	mg/L	1	EC41830	03/16/04	03/16/04	EPA 8021B	J
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*112 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.0 %*	*80-120*		"	"	"	"	
MW-4 (4C12015-04)									
Benzene	ND	0.00100	mg/L	1	EC41830	03/16/04	03/16/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*116 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.0 %*	*80-120*		"	"	"	"	

Environmental Lab of Texas

The results in this report apply to the samples analyzed in accordance with the samples received in the laboratory.. This analytical report must be reproduced in its entirety, with written approval of Environmental Lab of Texas.

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	03/19/04 14:15

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4C12015-05)									
Benzene	J [0.000868]	0.00100	mg/L	1	EC41830	03/16/04	03/16/04	EPA 8021B	J
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*110 %*		*80-120*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.0 %*		*80-120*	"	"	"	"	

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	03/19/04 14:15

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4C12015-01)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41818	03/15/04	03/15/04	EPA 310.2M	
Bicarbonate Alkalinity	**150**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**727**	5.00	"	"	EC41820	03/15/04	03/15/04	SW 846 9253	
Total Dissolved Solids	**2060**	5.00	"	"	EC41604	03/16/04	03/16/04	EPA 160.1	
Sulfate	**227**	2.50	"	5	EC41814	03/15/04	03/15/04	EPA 375.4	
MW-2 (4C12015-02)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41818	03/15/04	03/15/04	EPA 310.2M	
Bicarbonate Alkalinity	**134**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**1200**	5.00	"	"	EC41820	03/15/04	03/15/04	SW 846 9253	
Total Dissolved Solids	**3660**	5.00	"	"	EC41604	03/16/04	03/16/04	EPA 160.1	
Sulfate	**164**	1.25	"	2.5	EC41814	03/15/04	03/15/04	EPA 375.4	
MW-3 (4C12015-03)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41818	03/15/04	03/15/04	EPA 310.2M	
Bicarbonate Alkalinity	**160**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**65.0**	5.00	"	"	EC41820	03/15/04	03/15/04	SW 846 9253	
Total Dissolved Solids	**666**	5.00	"	"	EC41604	03/16/04	03/16/04	EPA 160.1	
Sulfate	**203**	2.50	"	5	EC41814	03/15/04	03/15/04	EPA 375.4	
MW-4 (4C12015-04)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41818	03/15/04	03/15/04	EPA 310.2M	
Bicarbonate Alkalinity	**164**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**35.4**	5.00	"	"	EC41820	03/15/04	03/15/04	SW 846 9253	
Total Dissolved Solids	**610**	5.00	"	"	EC41604	03/16/04	03/16/04	EPA 160.1	
Sulfate	**174**	2.50	"	5	EC41814	03/15/04	03/15/04	EPA 375.4	
MW-5 (4C12015-05)									
Carbonate Alkalinity	ND	0.100	mg/L	1	EC41818	03/15/04	03/15/04	EPA 310.2M	
Bicarbonate Alkalinity	**134**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**195**	5.00	"	"	EC41820	03/15/04	03/15/04	SW 846 9253	
Total Dissolved Solids	**894**	5.00	"	"	EC41604	03/16/04	03/16/04	EPA 160.1	
Sulfate	**198**	2.50	"	5	EC41814	03/15/04	03/15/04	EPA 375.4	

Environmental Lab of Texas

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	03/19/04 14:15

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Roland K Tuttle

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	03/19/04 14:15

Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4C12015-01)									
Calcium	**158**	1.00	mg/L	100	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**83.6**	0.0100	"	10	"	"	03/19/04	"	
Potassium	**12.8**	0.500	"	"	"	"	"	"	
Sodium	**198**	1.00	"	100	"	"	03/19/04	"	
MW-2 (4C12015-02)									
Calcium	**332**	1.00	mg/L	100	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**169**	0.100	"	"	"	"	"	"	
Potassium	**15.2**	0.500	"	10	"	"	03/19/04	"	
Sodium	**182**	1.00	"	100	"	"	03/19/04	"	
MW-3 (4C12015-03)									
Calcium	**59.5**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**30.1**	0.0100	"	"	"	"	"	"	
Potassium	**10.1**	0.500	"	"	"	"	"	"	
Sodium	**99.4**	0.100	"	"	"	"	03/19/04	"	
MW-4 (4C12015-04)									
Calcium	**50.5**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**26.2**	0.0100	"	"	"	"	03/19/04	"	
Potassium	**10.6**	0.0500	"	1	"	"	03/19/04	"	
Sodium	**80.5**	0.100	"	10	"	"	03/19/04	"	
MW-5 (4C12015-05)									
Calcium	**83.0**	0.100	mg/L	10	EC41905	03/16/04	03/19/04	EPA 6010B	
Magnesium	**41.5**	0.0100	"	"	"	"	"	"	
Potassium	**8.43**	0.500	"	"	"	"	"	"	
Sodium	**99.0**	0.100	"	"	"	"	"	"	

Environmental Lab of Texas

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Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC41830 - EPA 5030C (GC)										
Blank (EC41830-BLK1)				Prepared & Analyzed: 03/16/04						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*23.4*		*ug/l*	*20.0*		*117*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*16.7*		*"*	*20.0*		*83.5*	*80-120*			
LCS (EC41830-BS1)				Prepared & Analyzed: 03/16/04						
Benzene	86.3		ug/l	100		86.3	80-120			
Toluene	87.4		"	100		87.4	80-120			
Ethylbenzene	87.6		"	100		87.6	80-120			
Xylene (p/m)	182		"	200		91.0	80-120			
Xylene (o)	92.3		"	100		92.3	80-120			
Surrogate: a,a,a-Trifluorotoluene	*16.8*		*"*	*20.0*		*84.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*16.7*		*"*	*20.0*		*83.5*	*80-120*			
Calibration Check (EC41830-CCV1)				Prepared & Analyzed: 03/16/04						
Benzene	89.6		ug/l	100		89.6	80-120			
Toluene	92.5		"	100		92.5	80-120			
Ethylbenzene	92.8		"	100		92.8	80-120			
Xylene (p/m)	190		"	200		95.0	80-120			
Xylene (o)	99.1		"	100		99.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	*19.7*		*"*	*20.0*		*98.5*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*17.3*		*"*	*20.0*		*86.5*	*80-120*			
Duplicate (EC41830-DUP1)		**Source: 4C12012-03**		Prepared: 03/16/04 Analyzed: 03/18/04						
Benzene	0.0204	0.00100	mg/L		0.0250			20.3	20	
Toluene	ND	0.00100	"		ND				20	
Ethylbenzene	0.00265	0.00100	"		0.00290			9.01	20	
Xylene (p/m)	0.00190	0.00100	"		0.00180			5.41	20	
Xylene (o)	ND	0.00100	"		ND				20	
Surrogate: a,a,a-Trifluorotoluene	*21.6*		*ug/l*	*20.0*		*108*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*16.5*		*"*	*20.0*		*82.5*	*80-120*			

Environmental Lab of Texas

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Quality Assurance Review

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC41830 - EPA 5030C (GC)										
Matrix Spike (EC41830-MS1)	**Source: 4C12012-05**			Prepared: 03/16/04		Analyzed: 03/18/04				
Benzene	88.6		ug/l	100	ND	88.6	80-120			
Toluene	89.6		"	100	ND	89.6	80-120			
Ethylbenzene	93.4		"	100	ND	93.4	80-120			
Xylene (p/m)	184		"	200	ND	92.0	80-120			
Xylene (o)	94.1		"	100	ND	94.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	*22.5*		"	*20.0*		*112*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*18.8*		"	*20.0*		*94.0*	*80-120*			

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC41604 - General Preparation (WetChem)										
Blank (EC41604-BLK1)				Prepared & Analyzed: 03/16/04						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EC41604-DUP1)		**Source: 4C12015-01**		Prepared & Analyzed: 03/16/04						
Total Dissolved Solids	2060	5.00	mg/L		2060			0.00	20	
Batch EC41814 - General Preparation (WetChem)										
Blank (EC41814-BLK1)				Prepared & Analyzed: 03/15/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EC41814-CCV1)				Prepared & Analyzed: 03/15/04						
Sulfate	48.0		mg/L	50.0		96.0	80-120			
Duplicate (EC41814-DUP1)		**Source: 4C12015-01**		Prepared & Analyzed: 03/15/04						
Sulfate	222	2.50	mg/L		227			2.23	20	
Batch EC41818 - General Preparation (WetChem)										
Blank (EC41818-BLK1)				Prepared & Analyzed: 03/15/04						
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							
Duplicate (EC41818-DUP1)		**Source: 4C12015-01**		Prepared & Analyzed: 03/15/04						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	149	2.00	"		150			0.669	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC41818 - General Preparation (WetChem)										
Reference (EC41818-SRM1)				Prepared & Analyzed: 03/15/04						
Carbonate Alkalinity	0.0496		mg/L	0.0500		99.2	80-200			
Batch EC41820 - General Preparation (WetChem)										
Blank (EC41820-BLK1)				Prepared & Analyzed: 03/15/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EC41820-MS1)		Source: 4C12015-01		Prepared & Analyzed: 03/15/04						
Chloride	1220	5.00	mg/L	500	727	98.6	80-120			
Matrix Spike Dup (EC41820-MSD1)		Source: 4C12015-01		Prepared & Analyzed: 03/15/04						
Chloride	1210	5.00	mg/L	500	727	96.6	80-120	0.823	20	
Reference (EC41820-SRM1)				Prepared & Analyzed: 03/15/04						
Chloride	4960		mg/L	5000		99.2	80-120			

Quality Assurance Review

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EC41905 - General Preparation (Metals)										
Blank (EC41905-BLK1)				Prepared: 03/16/04 Analyzed: 03/19/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EC41905-CCV1)				Prepared: 03/16/04 Analyzed: 03/19/04						
Calcium	1.93		mg/L	2.00		96.5	85-115			
Magnesium	1.98		"	2.00		99.0	85-115			
Potassium	1.73		"	2.00		86.5	85-115			
Sodium	1.78		"	2.00		89.0	85-115			
Duplicate (EC41905-DUP1)	**Source: 4C12015-01**			Prepared: 03/16/04 Analyzed: 03/19/04						
Calcium	159	1.00	mg/L		158			0.631	20	
Magnesium	83.8	0.0100	"		83.6			0.239	20	
Potassium	12.9	0.500	"		12.8			0.778	20	
Sodium	202	1.00	"		198			2.00	20	

Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Quality Assurance Review

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Highlander

Date/Time: 3-12-04 1720

Order #: 4C 12015

Initials: KA

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	3.0 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	~~Not present~~
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Rice

SITE MANAGER: Ike Tavarez

PROJECT NO.: 1863

PROJECT NAME: Rice/Justis SWD well #H-2 Lea County, NM

4C12015

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Ions (Cations/Anions) TDS
01	3/11/04	10:15	W		X	MW-1	3	N	X		X		X																	X
02	3/11/04	11:50	W		X	MW-2	3	N	X		X		X																	X
03	3/11/04	11:15	W		X	MW-3	3	N	X		X		X																	X
04	3/11/04	1:15	W		X	MW-4	3	N	X		X		X																	X
05	3/11/04	12:45	W		X	MW-5	3	N	X		X		X																	X

RELINQUISHED BY: (Signature) Date: 3/12/04 Time: 5:20 — RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: — RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: — RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Mary Taylor & Jeremy Ford Date: 3/12/04 Time: 10:30

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: Environmental Lab of Texas

ADDRESS:

CITY: Odessa STATE: TX ZIP:

CONTACT: PHONE:

RECEIVED BY: (Signature)

DATE: 3/12/04 TIME: 5:20

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: 3°C 2 VOC Glass 500 plastic

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Enviromental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Lab Report: 7/09/04

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez
Highlander Environmental Corp.
1910 N. Big Spring St.
Midland, TX 79705

Project: Rice/Justis SWD Well H-2
Project Number: 1863
Location: Lea County, NM

Lab Order Number: 4F28008

Report Date: 07/09/04

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4F28008-01	Water	06/28/04 10:15	06/28/04 16:55
MW-2	4F28008-02	Water	06/28/04 11:30	06/28/04 16:55
MW-3	4F28008-03	Water	06/28/04 11:00	06/28/04 16:55
MW-4	4F28008-04	Water	06/28/04 12:45	06/28/04 16:55
MW-5	4F28008-05	Water	06/28/04 12:10	06/28/04 16:55

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4F28008-01) Water									
Benzene	**0.00560**	0.00100	mg/L	1	EG40702	07/06/04	07/06/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*116 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.0 %*	*80-120*		"	"	"	"	
MW-2 (4F28008-02) Water									
Benzene	**0.0112**	0.00100	mg/L	1	EG40702	07/06/04	07/06/04	EPA 8021B	
Toluene	**J [0.000625]**	0.00100	"	"	"	"	"	"	J
Ethylbenzene	**J [0.000974]**	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	**J [0.000484]**	0.00100	"	"	"	"	"	"	J
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*115 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92.5 %*	*80-120*		"	"	"	"	
MW-3 (4F28008-03) Water									
Benzene	**0.0124**	0.00100	mg/L	1	EG40702	07/06/04	07/06/04	EPA 8021B	
Toluene	**J [0.000722]**	0.00100	"	"	"	"	"	"	J
Ethylbenzene	**J [0.000950]**	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	**J [0.000468]**	0.00100	"	"	"	"	"	"	J
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*108 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*94.0 %*	*80-120*		"	"	"	"	
MW-4 (4F28008-04) Water									
Benzene	**0.00749**	0.00100	mg/L	1	EG40702	07/06/04	07/06/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	**J [0.000658]**	0.00100	"	"	"	"	"	"	J
Xylene (p/m)	**J [0.000372]**	0.00100	"	"	"	"	"	"	J
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*109 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.0 %*	*80-120*		"	"	"	"	

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4F28008-05) Water									
Benzene	**0.0105**	0.00100	mg/L	1	EG40702	07/06/04	07/06/04	EPA 8021B	
Toluene	**J [0.000654]**	0.00100	"	"	"	"	"	"	J
Ethylbenzene	**0.00108**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**J [0.000281]**	0.00100	"	"	"	"	"	"	J
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*108 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.5 %*	*80-120*		"	"	"	"	

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Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4F28008-01) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EG40614	06/30/04	06/30/04	EPA 310.2M	
Bicarbonate Alkalinity	**157**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**1030**	5.00	"	"	EF43007	06/29/04	06/29/04	EPA 325.3M	
Total Dissolved Solids	**3230**	5.00	"	"	EG40612	07/01/04	07/02/04	EPA 160.1	
Sulfate	**349**	0.500	"	"	EG40613	07/02/04	07/02/04	EPA 375.4	
MW-2 (4F28008-02) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EG40614	06/30/04	06/30/04	EPA 310.2M	
Bicarbonate Alkalinity	**132**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**2570**	5.00	"	"	EF43007	06/29/04	06/29/04	EPA 325.3M	
Total Dissolved Solids	***6290***	5.00	"	"	EG40612	07/01/04	07/02/04	EPA 160.1	
Sulfate	**208**	0.500	"	"	EG40613	07/02/04	07/02/04	EPA 375.4	
MW-3 (4F28008-03) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EG40614	06/30/04	06/30/04	EPA 310.2M	
Bicarbonate Alkalinity	**176**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**124**	5.00	"	"	EF43007	06/29/04	06/29/04	EPA 325.3M	
Total Dissolved Solids	**735**	5.00	"	"	EG40612	07/01/04	07/02/04	EPA 160.1	
Sulfate	**295**	0.500	"	"	EG40613	07/02/04	07/02/04	EPA 375.4	
MW-4 (4F28008-04) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EG40614	06/30/04	06/30/04	EPA 310.2M	
Bicarbonate Alkalinity	**183**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**57.6**	5.00	"	"	EF43007	06/29/04	06/29/04	EPA 325.3M	
Total Dissolved Solids	**596**	5.00	"	"	EG40612	07/01/04	07/02/04	EPA 160.1	
Sulfate	**225**	0.500	"	"	EG40613	07/02/04	07/02/04	EPA 375.4	

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Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4F28008-05) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EG40614	06/30/04	06/30/04	EPA 310.2M	
Bicarbonate Alkalinity	**145**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**310**	5.00	"	"	EF43007	06/29/04	06/29/04	EPA 325.3M	
Total Dissolved Solids	**1130**	5.00	"	"	EG40612	07/01/04	07/02/04	EPA 160.1	
Sulfate	**238**	0.500	"	"	EG40613	07/02/04	07/02/04	EPA 375.4	

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Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4F28008-01) Water									
Calcium	**244**	1.00	mg/L	100	EG40211	07/01/04	07/01/04	EPA 6010B	
Magnesium	**137**	0.100	"	"	"	"	"	"	
Potassium	**17.8**	0.500	"	10	"	"	"	"	
Sodium	**316**	1.00	"	100	"	"	"	"	
MW-2 (4F28008-02) Water									
Calcium	**560**	1.00	mg/L	100	EG40211	07/01/04	07/01/04	EPA 6010B	
Magnesium	**294**	0.100	"	"	"	"	"	"	
Potassium	**33.6**	0.500	"	10	"	"	"	"	
Sodium	**559**	1.00	"	100	"	"	"	"	
MW-3 (4F28008-03) Water									
Calcium	**127**	1.00	mg/L	100	EG40211	07/01/04	07/01/04	EPA 6010B	
Magnesium	**64.2**	0.0100	"	10	"	"	"	"	
Potassium	**16.3**	0.500	"	"	"	"	"	"	
Sodium	**172**	1.00	"	100	"	"	"	"	
MW-4 (4F28008-04) Water									
Calcium	**57.8**	0.100	mg/L	10	EG40211	07/01/04	07/01/04	EPA 6010B	
Magnesium	**31.0**	0.0100	"	"	"	"	"	"	
Potassium	**7.19**	0.500	"	"	"	"	"	"	
Sodium	**92.8**	0.100	"	"	"	"	"	"	
MW-5 (4F28008-05) Water									
Calcium	**128**	1.00	mg/L	100	EG40211	07/01/04	07/01/04	EPA 6010B	
Magnesium	**60.8**	0.0100	"	10	"	"	"	"	
Potassium	**11.5**	0.500	"	"	"	"	"	"	
Sodium	**122**	1.00	"	100	"	"	"	"	

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Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG40702 - EPA 5030C (GC)										
Blank (EG40702-BLK1)				Prepared & Analyzed: 07/06/04						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*23.3*		*ug/l*	*20.0*		*116*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*19.4*		"	*20.0*		*97.0*	*80-120*			
LCS (EG40702-BS1)				Prepared & Analyzed: 07/06/04						
Benzene	94.2		ug/l	100		94.2	80-120			
Toluene	101		"	100		101	80-120			
Ethylbenzene	103		"	100		103	80-120			
Xylene (p/m)	216		"	200		108	80-120			
Xylene (o)	101		"	100		101	80-120			
Surrogate: a,a,a-Trifluorotoluene	*21.1*		"	*20.0*		*106*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*18.6*		"	*20.0*		*93.0*	*80-120*			
Calibration Check (EG40702-CCV1)				Prepared & Analyzed: 07/06/04						
Benzene	85.5		ug/l	100		85.5	80-120			
Toluene	93.4		"	100		93.4	80-120			
Ethylbenzene	87.9		"	100		87.9	80-120			
Xylene (p/m)	186		"	200		93.0	80-120			
Xylene (o)	87.1		"	100		87.1	80-120			
Surrogate: a,a,a-Trifluorotoluene	*18.6*		"	*20.0*		*93.0*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*17.8*		"	*20.0*		*89.0*	*80-120*			
Matrix Spike (EG40702-MS1)	**Source: 4F28004-06**			Prepared & Analyzed: 07/06/04						
Benzene	114		ug/l	100	ND	114	80-120			
Toluene	117		"	100	ND	117	80-120			
Ethylbenzene	118		"	100	ND	118	80-120			
Xylene (p/m)	239		"	200	ND	120	80-120			
Xylene (o)	116		"	100	ND	116	80-120			
Surrogate: a,a,a-Trifluorotoluene	*23.0*		"	*20.0*		*115*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*22.0*		"	*20.0*		*110*	*80-120*			

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG40702 - EPA 5030C (GC)										
Matrix Spike (EG40702-MS2)	**Source: 4F28005-01**			Prepared & Analyzed: 07/06/04						
Benzene	112		ug/l	100	ND	112	80-120			
Toluene	114		"	100	ND	114	80-120			
Ethylbenzene	114		"	100	ND	114	80-120			
Xylene (p/m)	233		"	200	ND	116	80-120			
Xylene (o)	108		"	100	ND	108	80-120			
Surrogate: a,a,a-Trifluorotoluene	*23.3*		"	*20.0*		*116*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*19.6*		"	*20.0*		*98.0*	*80-120*			
Matrix Spike Dup (EG40702-MSD1)	**Source: 4F28004-06**			Prepared & Analyzed: 07/06/04						
Benzene	103		ug/l	100	ND	103	80-120	10.1	20	
Toluene	110		"	100	ND	110	80-120	6.17	20	
Ethylbenzene	106		"	100	ND	106	80-120	10.7	20	
Xylene (p/m)	216		"	200	ND	108	80-120	10.5	20	
Xylene (o)	102		"	100	ND	102	80-120	12.8	20	
Surrogate: a,a,a-Trifluorotoluene	*22.5*		"	*20.0*		*112*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*21.0*		"	*20.0*		*105*	*80-120*			
Matrix Spike Dup (EG40702-MSD2)	**Source: 4F28005-01**			Prepared & Analyzed: 07/06/04						
Benzene	112		ug/l	100	ND	112	80-120	0.00	20	
Toluene	117		"	100	ND	117	80-120	2.60	20	
Ethylbenzene	116		"	100	ND	116	80-120	1.74	20	
Xylene (p/m)	235		"	200	ND	118	80-120	1.71	20	
Xylene (o)	114		"	100	ND	114	80-120	5.41	20	
Surrogate: a,a,a-Trifluorotoluene	*23.0*		"	*20.0*		*115*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*23.6*		"	*20.0*		*118*	*80-120*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF43007 - General Preparation (WetChem)										
Blank (EF43007-BLK1)				Prepared & Analyzed: 06/29/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EF43007-MS1)	Source: 4F28008-03			Prepared & Analyzed: 06/29/04						
Chloride	603	5.00	mg/L	500	124	95.8	80-120			
Matrix Spike Dup (EF43007-MSD1)	Source: 4F28008-03			Prepared & Analyzed: 06/29/04						
Chloride	612	5.00	mg/L	500	124	97.6	80-120	1.48	20	
Reference (EF43007-SRM1)				Prepared & Analyzed: 06/29/04						
Chloride	5320		mg/L	5000		106	80-120			
Batch EG40612 - Filtration Preparation										
Blank (EG40612-BLK1)				Prepared: 07/01/04 Analyzed: 07/02/04						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EG40612-DUP1)	Source: 4F30001-07			Prepared: 07/01/04 Analyzed: 07/02/04						
Total Dissolved Solids	567	5.00	mg/L		579			2.09	20	
Batch EG40613 - General Preparation (WetChem)										
Blank (EG40613-BLK1)				Prepared & Analyzed: 07/02/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EG40613-CCV1)				Prepared & Analyzed: 07/02/04						
Sulfate	56.1		mg/L	50.0		112	80-120			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG40613 - General Preparation (WetChem)										
Duplicate (EG40613-DUP1)		**Source: 4F28008-01**		Prepared & Analyzed: 07/02/04						
Sulfate	350	0.500	mg/L		349			0.286	20	
Batch EG40614 - General Preparation (WetChem)										
Blank (EG40614-BLK1)				Prepared & Analyzed: 06/30/04						
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							
Duplicate (EG40614-DUP1)		**Source: 4F30001-08**		Prepared & Analyzed: 06/30/04						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	158	2.00	"		186			16.3	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EG40614-SRM1)				Prepared & Analyzed: 06/30/04						
Carbonate Alkalinity	0.0575		mg/L	0.0500		115	80-120			

Highlander Environmental Corp.	Project: Rice/Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	07/09/04 10:50

Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EG40211 - General Preparation (Metals)										
Blank (EG40211-BLK1)				Prepared & Analyzed: 07/01/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
LCS (EG40211-BS1)				Prepared: 07/01/04 Analyzed: 07/07/04						
Calcium	2.07	0.0100	mg/L	2.00		104	85-115			
Magnesium	2.03	0.00100	"	2.00		102	85-115			
Potassium	1.80	0.0500	"	2.00		90.0	85-115			
Sodium	1.92	0.0100	"	2.00		96.0	85-115			
LCS Dup (EG40211-BSD1)				Prepared: 07/01/04 Analyzed: 07/07/04						
Calcium	2.02	0.0100	mg/L	2.00		101	85-115	2.44	20	
Magnesium	2.00	0.00100	"	2.00		100	85-115	1.49	20	
Potassium	1.72	0.0500	"	2.00		86.0	85-115	4.55	20	
Sodium	1.89	0.0100	"	2.00		94.5	85-115	1.57	20	
Calibration Check (EG40211-CCV1)				Prepared & Analyzed: 07/01/04						
Calcium	2.02		mg/L	2.00		101	85-115			
Magnesium	2.00		"	2.00		100	85-115			
Potassium	1.72		"	2.00		86.0	85-115			
Sodium	1.89		"	2.00		94.5	85-115			

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Notes and Definitions

J	Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 7-09-04

Raland K. Tuttle, QA Officer
Celey D. Keene, Lab Director, Org. Tech Director
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sara Molina, Chemist
Sandra Biezugbe, Lab Tech.

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Highlander Envir

Date/Time: 8/28/04

Order #: _____

Initials: JLH

Sample Receipt Checklist

Temperature of container/cooler?	(Yes)	No	4°C C
Shipping container/cooler in good condition?	(Yes)	No	
Custody Seals intact on shipping container/cooler?	(Yes)	No	Not present
Custody Seals intact on sample bottles?	(Yes)	No	Not present
Chain of custody present?	(Yes)	No	
Sample Instructions complete on Chain of Custody?	(Yes)	No	
Chain of Custody signed when relinquished and received?	(Yes)	No	
Chain of custody agrees with sample label(s)	(Yes)	No	
Container labels legible and intact?	(Yes)	No	
Sample Matrix and properties same as on chain of custody?	(Yes)	No	
Samples in proper container/bottle?	(Yes)	No	
Samples properly preserved?	(Yes)	No	
Sample bottles intact?	(Yes)	No	
Preservations documented on Chain of Custody?	(Yes)	No	
Containers documented on Chain of Custody?	(Yes)	No	
Sufficient sample amount for indicated test?	(Yes)	No	
All samples received within sufficient hold time?	(Yes)	No	
VOC samples have zero headspace?	(Yes)	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: - _____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

_____

_____

_____

_____

_____

_____

_____

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Rice operating SITE MANAGER: Ike Tavarez

PROJECT NO.: 1863 PROJECT NAME: Rice/Justis SWD well #H-2 Lea county, NM

LAB I.D. NUMBER 4F28008	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST (Circle or Specify Method No.): BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	ECI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Ions	TDS
01	6/28/04	10:15	W		X	MW - 1	3	N	X		X		X																	X	X
02	↓	11:30	W		X	MW - 2	3	N	X		X		X																	X	X
03		11:00	W		X	MW - 3	3	N	X		X		X																	X	X
04		12:45	W		X	MW - 4	3	N	X		X		X																	X	X
05		12:10	W		X	MW - 5	3	N	X		X		X																	X	X

RELINQUISHED BY: (Signature) Date: 6/28/04 Time: 4:55 RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Mary Taylor & Jeremy Jones Date: 6/28/04 Time: 1:50

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: Environmental Lab of Texas RECEIVED BY: (Signature) Rolando Nuno

ADDRESS: CITY: Odessa STATE: TX ZIP: CONTACT: PHONE: DATE: 6-28-04 TIME: 1655

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 4°C

MATRIX: (W-Water) A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: 2-VOA's each 1-1L Poly each

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

Lab Report: 10/04/04

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez
Highlander Environmental Corp.
1910 N. Big Spring St.
Midland, TX 79705

Project: Rice/ Justis SWD Well H-2
Project Number: 1863
Location: None Given

Lab Order Number: 4I24017

Report Date: 10/04/04

Highlander Environmental Corp.	Project: Rice/ Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	10/04/04 18:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4I24017-01	Water	09/23/04 11:25	09/24/04 15:50
MW-2	4I24017-02	Water	09/23/04 11:55	09/24/04 15:50
MW-3	4I24017-03	Water	09/23/04 10:30	09/24/04 15:50
MW-4	4I24017-04	Water	09/23/04 12:35	09/24/04 15:50
MW-5	4I24017-05	Water	09/23/04 13:00	09/24/04 15:50

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4I24017-01) Water									
Benzene	ND	0.00100	mg/L	1	EJ40413	09/30/04	10/04/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*88.3 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*86.5 %*	*80-120*		"	"	"	"	
MW-2 (4I24017-02) Water									
Benzene	ND	0.00100	mg/L	1	EJ40413	09/30/04	10/01/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*81.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*81.6 %*	*80-120*		"	"	"	"	
MW-3 (4I24017-03) Water									
Benzene	**0.00113**	0.00100	mg/L	1	EJ40413	09/30/04	10/01/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*87.3 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.5 %*	*80-120*		"	"	"	"	
MW-4 (4I24017-04) Water									
Benzene	ND	0.00100	mg/L	1	EJ40413	09/30/04	10/04/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*89.1 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*92.5 %*	*80-120*		"	"	"	"	

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4I24017-05) Water									
Benzene	ND	0.00100	mg/L	1	EJ40413	09/30/04	10/04/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*87.2 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*87.4 %*	*80-120*		"	"	"	"	

Highlander Environmental Corp.	Project: Rice/ Justis SWD Well H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	10/04/04 18:51

General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4I24017-01) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI42806	09/24/04	09/24/04	EPA 310.2M	
Bicarbonate Alkalinity	**174**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**106**	5.00	"	"	EI42801	09/28/04	09/28/04	EPA 325.3M	
Total Dissolved Solids	**749**	5.00	"	"	EJ40417	09/29/04	09/30/04	EPA 160.1	
Sulfate	**175**	1.25	"	2.5	EI42706	09/27/04	09/27/04	EPA 375.4	
MW-2 (4I24017-02) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI42806	09/24/04	09/24/04	EPA 310.2M	
Bicarbonate Alkalinity	**130**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**1130**	5.00	"	"	EI42801	09/28/04	09/28/04	EPA 325.3M	
Total Dissolved Solids	**3760**	5.00	"	"	EJ40417	09/29/04	09/30/04	EPA 160.1	
Sulfate	**198**	2.50	"	5	EI42706	09/27/04	09/27/04	EPA 375.4	
MW-3 (4I24017-03) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI42806	09/24/04	09/24/04	EPA 310.2M	
Bicarbonate Alkalinity	**153**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**115**	5.00	"	"	EI42801	09/28/04	09/28/04	EPA 325.3M	
Total Dissolved Solids	**703**	5.00	"	"	EJ40417	09/29/04	09/30/04	EPA 160.1	
Sulfate	**242**	2.50	"	5	EI42706	09/27/04	09/27/04	EPA 375.4	
MW-4 (4I24017-04) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI42806	09/24/04	09/24/04	EPA 310.2M	
Bicarbonate Alkalinity	**162**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**53.2**	5.00	"	"	EI42801	09/28/04	09/28/04	EPA 325.3M	
Total Dissolved Solids	**648**	5.00	"	"	EJ40417	09/29/04	09/30/04	EPA 160.1	
Sulfate	**180**	1.25	"	2.5	EI42706	09/27/04	09/27/04	EPA 375.4	

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General Chemistry Parameters by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4I24017-05) Water									
Carbonate Alkalinity	ND	0.100	mg/L	1	EI42806	09/24/04	09/24/04	EPA 310.2M	
Bicarbonate Alkalinity	**146**	2.00	"	"	"	"	"	"	
Hydroxide Alkalinity	ND	0.100	"	"	"	"	"	"	
Chloride	**160**	5.00	"	"	EI42801	09/28/04	09/28/04	EPA 325.3M	
Total Dissolved Solids	**792**	5.00	"	"	EJ40417	09/29/04	09/30/04	EPA 160.1	
Sulfate	**224**	2.50	"	5	EI42706	09/27/04	09/27/04	EPA 375.4	

Total Metals by EPA / Standard Methods
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4I24017-01) Water									
Calcium	**75.5**	0.200	mg/L	20	EJ40408	09/30/04	09/30/04	EPA 6010B	
Magnesium	**31.8**	0.0100	"	10	"	"	"	"	
Potassium	**6.51**	0.500	"	"	"	"	"	"	
Sodium	**83.3**	0.200	"	20	"	"	"	"	
MW-2 (4I24017-02) Water									
Calcium	**336**	1.00	mg/L	100	EJ40408	09/30/04	09/30/04	EPA 6010B	
Magnesium	**168**	0.100	"	"	"	"	"	"	
Potassium	**14.9**	0.500	"	10	"	"	"	"	
Sodium	**174**	1.00	"	100	"	"	"	"	
MW-3 (4I24017-03) Water									
Calcium	**58.1**	0.100	mg/L	10	EJ40408	09/30/04	09/30/04	EPA 6010B	
Magnesium	**29.4**	0.0100	"	"	"	"	"	"	
Potassium	**6.26**	0.500	"	"	"	"	"	"	
Sodium	**104**	1.00	"	100	"	"	"	"	
MW-4 (4I24017-04) Water									
Calcium	**52.0**	0.100	mg/L	10	EJ40408	09/30/04	09/30/04	EPA 6010B	
Magnesium	**28.1**	0.0100	"	"	"	"	"	"	
Potassium	**6.66**	0.500	"	"	"	"	"	"	
Sodium	**86.3**	0.200	"	20	"	"	"	"	
MW-5 (4I24017-05) Water									
Calcium	**69.0**	0.200	mg/L	20	EJ40408	09/30/04	09/30/04	EPA 6010B	
Magnesium	**37.2**	0.0100	"	10	"	"	"	"	
Potassium	**7.16**	0.500	"	"	"	"	"	"	
Sodium	**85.7**	0.200	"	20	"	"	"	"	

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ40413 - EPA 5030C (GC)										
Blank (EJ40413-BLK1)				Prepared & Analyzed: 09/30/04						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*91.8*		*ug/l*	*100*		*91.8*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*80.5*		"	*100*		*80.5*	*80-120*			
LCS (EJ40413-BS1)				Prepared & Analyzed: 09/30/04						
Benzene	101		ug/l	100		101	80-120			
Toluene	102		"	100		102	80-120			
Ethylbenzene	91.2		"	100		91.2	80-120			
Xylene (p/m)	201		"	200		100	80-120			
Xylene (o)	94.0		"	100		94.0	80-120			
Surrogate: a,a,a-Trifluorotoluene	*114*		"	*100*		*114*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*111*		"	*100*		*111*	*80-120*			
Calibration Check (EJ40413-CCV1)				Prepared: 09/30/04 Analyzed: 10/04/04						
Benzene	98.7		ug/l	100		98.7	80-120			
Toluene	90.4		"	100		90.4	80-120			
Ethylbenzene	82.8		"	100		82.8	80-120			
Xylene (p/m)	182		"	200		91.0	80-120			
Xylene (o)	86.6		"	100		86.6	80-120			
Surrogate: a,a,a-Trifluorotoluene	*111*		"	*100*		*111*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*110*		"	*100*		*110*	*80-120*			
Matrix Spike (EJ40413-MS1)	**Source: 4129005-04**			Prepared: 09/30/04 Analyzed: 10/04/04						
Benzene	89.7		ug/l	100	ND	89.7	80-120			
Toluene	90.5		"	100	ND	90.5	80-120			
Ethylbenzene	87.6		"	100	ND	87.6	80-120			
Xylene (p/m)	196		"	200	ND	98.0	80-120			
Xylene (o)	95.7		"	100	ND	95.7	80-120			
Surrogate: a,a,a-Trifluorotoluene	*104*		"	*100*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*119*		"	*100*		*119*	*80-120*			

Organics by GC - Quality Control
Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ40413 - EPA 5030C (GC)										
Matrix Spike Dup (EJ40413-MSD1)	**Source: 4I29005-04**			Prepared: 09/30/04	Analyzed: 10/04/04					
Benzene	89.7		ug/l	100	ND	89.7	80-120	0.00	20	
Toluene	90.5		"	100	ND	90.5	80-120	0.00	20	
Ethylbenzene	87.6		"	100	ND	87.6	80-120	0.00	20	
Xylene (p/m)	196		"	200	ND	98.0	80-120	0.00	20	
Xylene (o)	95.7		"	100	ND	95.7	80-120	0.00	20	
Surrogate: a,a,a-Trifluorotoluene	*104*		"	*100*		*104*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*119*		"	*100*		*119*	*80-120*			

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI42706 - General Preparation (WetChem)										
Blank (EI42706-BLK1)				Prepared & Analyzed: 09/27/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EI42706-CCV1)				Prepared & Analyzed: 09/27/04						
Sulfate	48.8		mg/L	50.0		97.6	80-120			
Duplicate (EI42706-DUP1)	**Source: 4I24017-01**			Prepared & Analyzed: 09/27/04						
Sulfate	172	1.25	mg/L		175			1.73	20	
Batch EI42801 - General Preparation (WetChem)										
Blank (EI42801-BLK1)				Prepared & Analyzed: 09/28/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EI42801-MS1)	**Source: 4I24017-01**			Prepared & Analyzed: 09/28/04						
Chloride	354	5.00	mg/L	250	106	99.2	90-110			
Matrix Spike Dup (EI42801-MSD1)	**Source: 4I24017-01**			Prepared & Analyzed: 09/28/04						
Chloride	359	5.00	mg/L	250	106	101	90-110	1.40	20	
Reference (EI42801-SRM1)				Prepared & Analyzed: 09/28/04						
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EI42806 - General Preparation (WetChem)										
Blank (EI42806-BLK1)				Prepared & Analyzed: 09/24/04						
Carbonate Alkalinity	ND	0.100	mg/L							
Bicarbonate Alkalinity	ND	2.00	"							
Hydroxide Alkalinity	ND	0.100	"							

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EI42806 - General Preparation (WetChem)										
Duplicate (EI42806-DUP1)		**Source: 4I24017-01**		Prepared & Analyzed: 09/24/04						
Carbonate Alkalinity	0.00	0.100	mg/L		0.00				20	
Bicarbonate Alkalinity	173	2.00	"		174			0.576	20	
Hydroxide Alkalinity	0.00	0.100	"		0.00				20	
Reference (EI42806-SRM1)				Prepared & Analyzed: 09/24/04						
Carbonate Alkalinity	0.0501		mg/L	0.0500		100	80-120			
Batch EJ40417 - Filtration Preparation										
Blank (EJ40417-BLK1)				Prepared: 09/29/04 Analyzed: 09/30/04						
Total Dissolved Solids	ND	5.00	mg/L							
Duplicate (EJ40417-DUP1)		**Source: 4I24017-01**		Prepared: 09/29/04 Analyzed: 09/30/04						
Total Dissolved Solids	675	5.00	mg/L		749			10.4	20	

Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ40408 - 6010B/No Digestion										
Blank (EJ40408-BLK1)				Prepared & Analyzed: 09/30/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EJ40408-CCV1)				Prepared & Analyzed: 09/30/04						
Calcium	2.08		mg/L	2.00		104	85-115			
Magnesium	2.17		"	2.00		108	85-115			
Potassium	1.78		"	2.00		89.0	85-115			
Sodium	1.79		"	2.00		89.5	85-115			
Duplicate (EJ40408-DUP1)		**Source: 4I21005-01**		Prepared & Analyzed: 09/30/04						
Calcium	31.3	0.100	mg/L		35.6			12.9	20	
Magnesium	11.8	0.0100	"		13.6			14.2	20	
Potassium	13.5	0.500	"		15.7			15.1	20	
Sodium	117	1.00	"		114			2.60	20	

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K Tuttle Date: 10-04-04

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Biezugbe, Lab Tech.

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Highlander Env.

Date/Time: 09-24-04 @ 1620

Order #: 4I24017

Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	2.5 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

_____

_____

_____

Variance Documentation:

Contact Person: -_____ Date/Time: _____ Contacted by: _____

Regarding:

_____

_____

_____

Corrective Action Taken:

_____

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_____

_____

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_____

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Analysis Request and Chain of Custody Record

PAGE: 1 OF: 1

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(432) 682-4559 Fax (432) 682-3946

CLIENT NAME: RICE | SITE MANAGER: Ike Tavarez

PROJECT NO.: 1863 | PROJECT NAME: Rice / Justis SWD Well #H-2

LAB I.D. NUMBER 4I24017	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST: BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Ions	TDS
-01	9/23/04	11:25	W			MW - 1	3	N	X		X		X																	X	X
-02	9/23/04	11:55	W			MW - 2	3	N	X		X		X																	X	X
-03	9/23/04	10:30	W			MW - 3	3	N	X		X		X																	X	X
-04	9/23/04	12:35	W			MW - 4	3	N	X		X		X																	X	X
-05	9/23/04	1:00	W			MW - 5	3	N	X		X		X																	X	X

RELINQUISHED BY: (Signature) Date: 9/24/04 Time: 3:30 p.m. | RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: | RECEIVED BY: (Signature) Date: Time:

RELINQUISHED BY: (Signature) Date: Time: | RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Ray Taylor Ike Tavarez Date: 9/24/04 Time: 11:00

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL #: HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: Environmental Lab of Texas
ADDRESS:
CITY: Odessa STATE: TX ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Joane McCreary
DATE: 9-24-4 TIME: 1551

HIGHLANDER CONTACT PERSON: Ike Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED: 2.5°C

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: (1) 1L HDPE unpreserved (2) 40mL glass w/HCl each on ice

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromental Corp. – Project Manager retains pink copy – Accounting receives Gold copy.

Lab Report: 1/03/05

ENVIRONMENTAL LAB OF

12600 West I-20 East - Odessa, Texas 79765

Analytical Report

Prepared for:

Ike Tavarez

Highlander Environmental Corp.

1910 N. Big Spring St.

Midland, TX 79705

Project: Rice/ Justis H-2

Project Number: 1863

Location: Lea County, NM

Lab Order Number: 4L22020

Report Date: 01/03/05

Highlander Environmental Corp.	Project: Rice/ Justis H-2	Fax: (432) 682-3946
1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/03/05 17:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	4L22020-01	Water	12/21/04 12:40	12/22/04 15:13
MW-2	4L22020-02	Water	12/21/04 14:25	12/22/04 15:13
MW-3	4L22020-03	Water	12/21/04 11:40	12/22/04 15:13
MW-4	4L22020-04	Water	12/21/04 13:50	12/22/04 15:13
MW-5	4L22020-05	Water	12/21/04 13:20	12/22/04 15:13

12600 West I-20 East - Odessa, Texas 79705 - (432) 563-1800 - Fax (432) 563-1713

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1910 N. Big Spring St.	Project Number: 1863	**Reported:**
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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4L22020-01) Water									
Benzene	ND	0.00100	mg/L	1	EL43007	12/29/04	12/30/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	**0.00108**	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*83.5 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.1 %*	*80-120*		"	"	"	"	
MW-2 (4L22020-02) Water									
Benzene	**0.00550**	0.00100	mg/L	1	EL43007	12/29/04	12/30/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*98.0 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*106 %*	*80-120*		"	"	"	"	
MW-3 (4L22020-03) Water									
Benzene	**0.0127**	0.00100	mg/L	1	EL43007	12/29/04	12/30/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	**0.00144**	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*100 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*98.9 %*	*80-120*		"	"	"	"	
MW-4 (4L22020-04) Water									
Benzene	**0.00275**	0.00100	mg/L	1	EL43007	12/29/04	12/30/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.8 %*	*80-120*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*107 %*	*80-120*		"	"	"	"	

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Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-5 (4L22020-05) Water									
Benzene	**0.00292**	0.00100	mg/L	1	EL43007	12/29/04	12/30/04	EPA 8021B	
Toluene	ND	0.00100	"	"	"	"	"	"	
Ethylbenzene	ND	0.00100	"	"	"	"	"	"	
Xylene (p/m)	ND	0.00100	"	"	"	"	"	"	
Xylene (o)	ND	0.00100	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*97.5 %*		*80-120*		"	"	"	
Surrogate: 4-Bromofluorobenzene		*101 %*		*80-120*		"	"	"	

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1910 N. Big Spring St.	Project Number: 1863	**Reported:**
Midland TX, 79705	Project Manager: Ike Tavarez	01/03/05 17:54

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4L22020-01) Water									
Total Alkalinity	**172**	2.00	mg/L	1	EL42911	12/29/04	12/29/04	EPA 310.2M	
Chloride	**93.1**	5.00	"	"	EL42908	12/29/04	12/29/04	EPA 325.3M	
Total Dissolved Solids	**3450**	5.00	mg/kg	"	EL42801	12/27/04	12/28/04	EPA 160.1	
Sulfate	**215**	2.50	mg/L	5	EL42909	12/29/04	12/29/04	EPA 375.4	
MW-2 (4L22020-02) Water									
Total Alkalinity	**136**	2.00	mg/L	1	EL42911	12/29/04	12/29/04	EPA 310.2M	
Chloride	**1150**	5.00	"	"	EL42908	12/29/04	12/29/04	EPA 325.3M	
Total Dissolved Solids	**5630**	5.00	mg/kg	"	EL42801	12/27/04	12/28/04	EPA 160.1	
Sulfate	**210**	2.50	mg/L	5	EL42909	12/29/04	12/29/04	EPA 375.4	
MW-3 (4L22020-03) Water									
Total Alkalinity	**154**	2.00	mg/L	1	EL42911	12/29/04	12/29/04	EPA 310.2M	
Chloride	**154**	5.00	"	"	EL42908	12/29/04	12/29/04	EPA 325.3M	
Total Dissolved Solids	**3470**	5.00	mg/kg	"	EL42801	12/27/04	12/28/04	EPA 160.1	
Sulfate	**272**	2.50	mg/L	5	EL42909	12/29/04	12/29/04	EPA 375.4	
MW-4 (4L22020-04) Water									
Total Alkalinity	**167**	2.00	mg/L	1	EL42911	12/29/04	12/29/04	EPA 310.2M	
Chloride	**59.1**	5.00	"	"	EL42908	12/29/04	12/29/04	EPA 325.3M	
Total Dissolved Solids	**3300**	5.00	mg/kg	"	EL42801	12/27/04	12/28/04	EPA 160.1	
Sulfate	**210**	2.50	mg/L	5	EL42909	12/29/04	12/29/04	EPA 375.4	
MW-5 (4L22020-05) Water									
Total Alkalinity	**148**	2.00	mg/L	1	EL42911	12/29/04	12/29/04	EPA 310.2M	
Chloride	**165**	5.00	"	"	EL42908	12/29/04	12/29/04	EPA 325.3M	
Total Dissolved Solids	**3470**	5.00	mg/kg	"	EL42801	12/27/04	12/28/04	EPA 160.1	
Sulfate	**224**	2.50	mg/L	5	EL42909	12/29/04	12/29/04	EPA 375.4	

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Total Metals by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (4L22020-01) Water									
Calcium	**187**	1.00	mg/L	100	EA50301	12/29/04	12/30/04	EPA 6010B	
Magnesium	**56.6**	0.100	"	"	"	"	"	"	
Potassium	**7.90**	0.500	"	10	"	"	"	"	
Sodium	**126**	1.00	"	100	"	"	"	"	
MW-2 (4L22020-02) Water									
Calcium	**741**	1.00	mg/L	100	EA50301	12/29/04	12/30/04	EPA 6010B	
Magnesium	**309**	0.100	"	"	"	"	"	"	
Potassium	**18.3**	0.500	"	10	"	"	"	"	
Sodium	**313**	1.00	"	100	"	"	"	"	
MW-3 (4L22020-03) Water									
Calcium	**207**	1.00	mg/L	100	EA50301	12/29/04	12/30/04	EPA 6010B	
Magnesium	**65.5**	0.100	"	"	"	"	"	"	
Potassium	**10.6**	0.500	"	10	"	"	"	"	
Sodium	**194**	1.00	"	100	"	"	"	"	
MW-4 (4L22020-04) Water									
Calcium	**195**	1.00	mg/L	100	EA50301	12/29/04	12/30/04	EPA 6010B	
Magnesium	**60.5**	0.100	"	"	"	"	"	"	
Potassium	**8.74**	0.500	"	10	"	"	"	"	
Sodium	**165**	1.00	"	100	"	"	"	"	
MW-5 (4L22020-05) Water									
Calcium	**251**	1.00	mg/L	100	EA50301	12/29/04	12/30/04	EPA 6010B	
Magnesium	**82.4**	0.100	"	"	"	"	"	"	
Potassium	**10.4**	0.500	"	10	"	"	"	"	
Sodium	**191**	1.00	"	100	"	"	"	"	

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL43007 - EPA 5030C (GC)										
Blank (EL43007-BLK1)				Prepared: 12/29/04 Analyzed: 12/30/04						
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	"							
Ethylbenzene	ND	0.00100	"							
Xylene (p/m)	ND	0.00100	"							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	*90.9*		*ug/l*	*100*		*90.9*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*80.2*		"	*100*		*80.2*	*80-120*			
LCS (EL43007-BS1)				Prepared: 12/29/04 Analyzed: 12/30/04						
Benzene	87.9		ug/l	100		87.9	80-120			
Toluene	88.5		"	100		88.5	80-120			
Ethylbenzene	97.5		"	100		97.5	80-120			
Xylene (p/m)	219		"	200		110	80-120			
Xylene (o)	111		"	100		111	80-120			
Surrogate: a,a,a-Trifluorotoluene	*109*		"	*100*		*109*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*119*		"	*100*		*119*	*80-120*			
Calibration Check (EL43007-CCV1)				Prepared: 12/29/04 Analyzed: 12/30/04						
Benzene	87.8		ug/l	100		87.8	80-120			
Toluene	89.0		"	100		89.0	80-120			
Ethylbenzene	95.3		"	100		95.3	80-120			
Xylene (p/m)	213		"	200		106	80-120			
Xylene (o)	104		"	100		104	80-120			
Surrogate: a,a,a-Trifluorotoluene	*113*		"	*100*		*113*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*116*		"	*100*		*116*	*80-120*			
Matrix Spike (EL43007-MS1)	**Source: 4L22009-05**			Prepared: 12/29/04 Analyzed: 12/30/04						
Benzene	88.6		ug/l	100	ND	88.6	80-120			
Toluene	85.4		"	100	ND	85.4	80-120			
Ethylbenzene	87.9		"	100	ND	87.9	80-120			
Xylene (p/m)	186		"	200	ND	93.0	80-120			
Xylene (o)	94.2		"	100	ND	94.2	80-120			
Surrogate: a,a,a-Trifluorotoluene	*107*		"	*100*		*107*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*119*		"	*100*		*119*	*80-120*			

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL43007 - EPA 5030C (GC)										
Matrix Spike Dup (EL43007-MSD1)	**Source: 4L22009-05**			Prepared: 12/29/04 Analyzed: 12/30/04						
Benzene	92.9		ug/l	100	ND	92.9	80-120	4.74	20	
Toluene	86.0		"	100	ND	86.0	80-120	0.700	20	
Ethylbenzene	87.2		"	100	ND	87.2	80-120	0.800	20	
Xylene (p/m)	164		"	200	ND	82.0	80-120	12.6	20	
Xylene (o)	86.7		"	100	ND	86.7	80-120	8.29	20	
Surrogate: a,a,a-Trifluorotoluene	*112*		"	*100*		*112*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*117*		"	*100*		*117*	*80-120*			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL42801 - 413.1										
Blank (EL42801-BLK1)				Prepared: 12/27/04 Analyzed: 12/28/04						
Total Dissolved Solids	ND	5.00	mg/kg							
Duplicate (EL42801-DUP1)	**Source: 4L22019-01**			Prepared: 12/27/04 Analyzed: 12/28/04						
Total Dissolved Solids	2480	5.00	mg/kg		2620			5.49	20	
Batch EL42908 - General Preparation (WetChem)										
Blank (EL42908-BLK1)				Prepared & Analyzed: 12/29/04						
Chloride	ND	5.00	mg/L							
Matrix Spike (EL42908-MS1)	**Source: 4L21010-01**			Prepared & Analyzed: 12/29/04						
Chloride	390	5.00	mg/L	250	155	94.0	80-120			
Matrix Spike Dup (EL42908-MSD1)	**Source: 4L21010-01**			Prepared & Analyzed: 12/29/04						
Chloride	394	5.00	mg/L	250	155	95.6	80-120	1.02	20	
Reference (EL42908-SRM1)				Prepared & Analyzed: 12/29/04						
Chloride	4960		mg/L	5000		99.2	80-120			
Batch EL42909 - General Preparation (WetChem)										
Blank (EL42909-BLK1)				Prepared & Analyzed: 12/29/04						
Sulfate	ND	0.500	mg/L							
Calibration Check (EL42909-CCV1)				Prepared & Analyzed: 12/29/04						
Sulfate	48.9		mg/L	50.0		97.8	80-120			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL42909 - General Preparation (WetChem)										
Duplicate (EL42909-DUP1)		**Source: 4L21010-01**		Prepared & Analyzed: 12/29/04						
Sulfate	96.6	1.00	mg/L		99.8			3.26	20	
Batch EL42911 - General Preparation (WetChem)										
Blank (EL42911-BLK1)				Prepared & Analyzed: 12/29/04						
Total Alkalinity	ND	2.00	mg/L							
Duplicate (EL42911-DUP1)		**Source: 4L22020-01**		Prepared & Analyzed: 12/29/04						
Total Alkalinity	173	2.00	mg/L		172			0.580	20	
Reference (EL42911-SRM1)				Prepared & Analyzed: 12/29/04						
Carbonate Alkalinity	0.0501		mg/L	0.0500		100	80-120			

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Total Metals by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EA50301 - 6010B/No Digestion										
Blank (EA50301-BLK1)				Prepared: 12/29/04 Analyzed: 12/30/04						
Calcium	ND	0.0100	mg/L							
Magnesium	ND	0.00100	"							
Potassium	ND	0.0500	"							
Sodium	ND	0.0100	"							
Calibration Check (EA50301-CCV1)				Prepared: 12/29/04 Analyzed: 12/30/04						
Calcium	1.98		mg/L	2.00		99.0	85-115			
Magnesium	2.28		"	2.00		114	85-115			
Potassium	2.05		"	2.00		102	85-115			
Sodium	1.86		"	2.00		93.0	85-115			
Duplicate (EA50301-DUP1)	**Source: 4L22019-01**			Prepared: 12/29/04 Analyzed: 12/30/04						
Calcium	496	1.00	mg/L		381			26.2	20	QR-02
Magnesium	168	0.100	"		143			16.1	20	
Potassium	17.1	0.500	"		14.4			17.1	20	
Sodium	555	1.00	"		477			15.1	20	

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Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike
Dup	Duplicate

Report Approved By: Raland K. Tuttle Date: 1/3/2005

Raland K. Tuttle, Lab Manager
Celey D. Keene, Lab Director, Org. Tech Director
Peggy Allen, QA Officer
Jeanne Mc Murrey, Inorg. Tech Director
James L. Hawkins, Chemist/Geologist
Sandra Sanchez, Lab Tech.

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Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(432) 682-4559 Fax (432) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Rice Operating SITE MANAGER: IKE Tavarez

PROJECT NO.: 1863 PROJECT NAME: Rice / Justis H-2, Lea County, NM.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	Major Ions	TDS
422020																															
-01	12/21/04	12:40	W		✓	MW-1	3				✓		X																	X	X
-02	12/21/04	2:25	W		✓	MW-2	3				✓		X																	X	X
-03	12/21/04	11:40	W		✓	MW-3	3				✓		X																	X	X
-04	12/21/04	1:50	W		✓	MW-4	3				✓		X																	X	X
-05	12/21/04	1:20	W		✓	MW-5	3				✓		X																	X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 12/22/04 Time: 305 RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) IKE Tavarez Date: Time:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL # HAND DELIVERED UPS OTHER:

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: ECT RECEIVED BY: (Signature)

ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE: DATE: 12/22/04 TIME: 15:13

HIGHLANDER CONTACT PERSON: IKE Tavarez

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

MATRIX: W-Water A-Air SD-Solid S-Soil SL-Sludge O-Other

REMARKS: -0.5°C 2 VOA's 1 500ml Poly

Please Fill out all copies - Laboratory retains yellow copy - Return original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

Environmental Lab of Texas
Variance / Corrective Action Report – Sample Log-In

Client: Highlander Enviro

Date/Time: 12/22/04 15:15

Order #: 4C22020

Initials: JLH

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	-0.5 C
Shipping container/cooler in good condition?	Yes	No	
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	Yes	No	Not present
Chain of custody present?	Yes	No	
Sample Instructions complete on Chain of Custody?	Yes	No	
Chain of Custody signed when relinquished and received?	Yes	No	
Chain of custody agrees with sample label(s)	Yes	No	
Container labels legible and intact?	Yes	No	
Sample Matrix and properties same as on chain of custody?	Yes	No	
Samples in proper container/bottle?	Yes	No	
Samples properly preserved?	Yes	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	Yes	No	
Containers documented on Chain of Custody?	Yes	No	
Sufficient sample amount for indicated test?	Yes	No	
All samples received within sufficient hold time?	Yes	No	
VOC samples have zero headspace?	Yes	No	Not Applicable

Other observations:

Variance Documentation:

Contact Person: - Date/Time: Contacted by:

Regarding:

Corrective Action Taken:

Sample 4l22020-01

TempC =	0.0	pH =	0.0
TDS =	3450.0	COND =	0.0
HARD =	0.0	DENS =	0.0
x-cor =	0.0	y-cor =	0.0
Units =	mg/L	rock =	0.0

	mg/L	mmole/L	meq/L	% meq/L
Na+	126.0	5.4804	5.4804	27.9
K +	7.9	0.2020	0.2020	1.0
Ca++	187.0	4.6657	9.3313	47.4
Mg++	56.6	2.3281	4.6561	23.7
Cl-	93.1	2.6260	2.6260	26.5
SO4--	215.0	2.2382	4.4764	45.1
HCO3-	172.0	2.8189	2.8189	28.4
CO3--	0.0	0.0000	0.0000	0.0
SiO2	0.0	0.0000	0.0000	0.0
Li+	0.0	0.0000	0.0000	0.0
Sr++	0.0	0.0000	0.0000	0.0
Ba++	0.0	0.0000	0.0000	0.0
Fe++	0.0	0.0000	0.0000	0.0
NO3-	0.0	0.0000	0.0000	0.0
F-	0.0	0.0000	0.0000	0.0
Br-	0.0	0.0000	0.0000	0.0
B	0.0	0.0000	0.0000	0.0

LANGELIER INDEX 0.00 IONIC STRENGTH= 0.0240

Analytical checks and comparisons

Sum cations = 19.6699 Sum anions = 9.9213

BALANCE = 32.94 %

TDS entered = 3450 mg/L

TDS calc = 858 mg/L TDS(180) calc = 770 mg/L

Entered TDS - TDS(calc) diff= 75.1 % Entered TDS - TDS(180) diff= 77.7 %

Conductivity = 0 umho

TDS(entered)/Cond ratio = 0.00 Usual range = 0.55 to 0.75

TDS(calc)/Cond = 0.00 Usual range = 0.55 to 0.75

Conductivity/Sum-cations = 0 Usual range = 90 - 110

Entered and calculated density

Meas. Density = 0.0000 Calc. Density = 1.0008

Entered and calculated hardness

Meas. hardness= 0.0 mg/L CaCO3 Calc. hardness= 700.0 mg/L CaCO3

Element ratios

Na - Cl	= 2.854	meq/L	Usually positive
Ca - SO4	= 4.855	meq/L	Usually positive
K/(Na + K)	= 3.56	%	Usually $\leq$ 20%
Mg/(Mg+Ca)	= 33.29	%	Usually $\leq$ 40%

Carbonate/bicarbonate at pH = 0

Meas HCO3	= 172.0	mg/L	Meas CO3	= 0.0	mg/L
Calc HCO3	= 0.0	mg/L	Calc CO3	= 0.0	mg/L

Sample 4L22020-02

TempC =	0.0	pH =	0.0
TDS =	0.0	COND =	0.0
HARD =	0.0	DENS =	0.0
x-cor =	0.0	y-cor =	0.0
Units =	mg/L	rock =	0.0

	mg/L	mmole/L	meq/L	% meq/L
Na+	313.0	13.6140	13.6140	17.8
K +	18.3	0.4680	0.4680	0.6
Ca++	741.0	18.4880	36.9760	48.3
Mg++	309.0	12.7098	25.4195	33.2
Cl-	1150.0	32.4373	32.4373	83.1
SO4--	210.0	2.1861	4.3723	11.2
HCO3-	136.0	2.2289	2.2289	5.7
CO3--	0.0	0.0000	0.0000	0.0
SiO2	0.0	0.0000	0.0000	0.0
Li+	0.0	0.0000	0.0000	0.0
Sr++	0.0	0.0000	0.0000	0.0
Ba++	0.0	0.0000	0.0000	0.0
Fe++	0.0	0.0000	0.0000	0.0
NO3-	0.0	0.0000	0.0000	0.0
F-	0.0	0.0000	0.0000	0.0
Br-	0.0	0.0000	0.0000	0.0
B	0.0	0.0000	0.0000	0.0

LANGELIER INDEX 0.00 IONIC STRENGTH= 0.0911

Analytical checks and comparisons

Sum cations =	76.4776	Sum anions =	39.0385
		BALANCE =	32.41 %

TDS entered = 0 mg/L

TDS calc =	2877 mg/L	TDS(180) calc =	2808 mg/L
Entered TDS - TDS(calc) diff=	0.0 %	Entered TDS - TDS(180) diff=	0.0 %

Conductivity = 0 umho

TDS(entered)/Cond ratio =	0.00	Usual range	= 0.55 to 0.75
TDS(calc)/Cond =	0.00	Usual range	= 0.55 to 0.75
Conductivity/Sum-cations =	0	Usual range	= 90 - 110

Entered and calculated density

Meas. Density = 0.0000 Calc. Density = 1.0028

Entered and calculated hardness

Meas. hardness= 0.0 mg/L CaCO3 Calc. hardness= 3122.5 mg/L CaCO3

Element ratios

Na - Cl =	%-18.823 meq/L	Usually positive	
Ca - SO4 =	32.604 meq/L	Usually positive	
K/(Na + K) =	3.32 %	Usually $\leq$ 20%	
Mg/(Mg+Ca) =	40.74 %	Usually $\leq$ 40%	

Carbonate/bicarbonate at pH = 0

Meas HCO3 =	136.0 mg/L	Meas CO3 =	0.0 mg/L
Calc HCO3 =	0.0 mg/L	Calc CO3 =	0.0 mg/L

Sample 4L22020-03

TempC =	0.0	pH =	0.0
TDS =	3470.0	COND =	0.0
HARD =	0.0	DENS =	0.0
x-cor =	0.0	y-cor =	0.0
Units =	mg/L	rock =	0.0

	mg/L	mmole/L	meq/L	% meq/L
Na+	194.0	8.4381	8.4381	34.5
K +	10.6	0.2711	0.2711	1.1
Ca++	207.0	5.1647	10.3293	42.3
Mg++	65.5	2.6941	5.3883	22.1
Cl-	154.0	4.3438	4.3438	34.7
SO4--	272.0	2.8316	5.6631	45.2
HCO3-	154.0	2.5239	2.5239	20.1
CO3--	0.0	0.0000	0.0000	0.0
SiO2	0.0	0.0000	0.0000	0.0
Li+	0.0	0.0000	0.0000	0.0
Sr++	0.0	0.0000	0.0000	0.0
Ba++	0.0	0.0000	0.0000	0.0
Fe++	0.0	0.0000	0.0000	0.0
NO3-	0.0	0.0000	0.0000	0.0
F-	0.0	0.0000	0.0000	0.0
Br-	0.0	0.0000	0.0000	0.0
B	0.0	0.0000	0.0000	0.0

LANGELIER INDEX 0.00 IONIC STRENGTH= 0.0292

Analytical checks and comparisons

Sum cations = 24.4268 Sum anions = 12.5308
BALANCE = 32.19 %

TDS entered = 3470 mg/L
TDS calc = 1057 mg/L TDS(180) calc = 979 mg/L
Entered TDS - TDS(calc) diff= 69.5 % Entered TDS - TDS(180) diff= 71.8 %

Conductivity = 0 umho
TDS(entered)/Cond ratio = 0.00 Usual range = 0.55 to 0.75
TDS(calc)/Cond = 0.00 Usual range = 0.55 to 0.75
Conductivity/Sum-cations = 0 Usual range = 90 - 110

Entered and calculated density
Meas. Density = 0.0000 Calc. Density = 1.0010

Entered and calculated hardness
Meas. hardness= 0.0 mg/L CaCO3 Calc. hardness= 786.6 mg/L CaCO3

Element ratios

Na - Cl	= 4.094	meq/L	Usually positive
Ca - SO4	= 4.666	meq/L	Usually positive
K/(Na + K)	= 3.11	%	Usually $\leq$ 20%
Mg/(Mg+Ca)	= 34.28	%	Usually $\leq$ 40%

Carbonate/bicarbonate at pH = 0

Meas HCO3	= 154.0	mg/L	Meas CO3	= 0.0	mg/L
Calc HCO3	= 0.0	mg/L	Calc CO3	= 0.0	mg/L

Sample 4L22020-04

TempC =	0.0	pH =	0.0
TDS =	3300.0	COND =	0.0
HARD =	0.0	DENS =	0.0
x-cor =	0.0	y-cor =	0.0
Units =	mg/L	rock =	0.0

	mg/L	mmole/L	meq/L	% meq/L
Na+	165.0	7.1767	7.1767	32.5
K +	8.7	0.2235	0.2235	1.0
Ca++	195.0	4.8653	9.7305	44.0
Mg++	60.5	2.4885	4.9770	22.5
Cl-	59.1	1.6670	1.6670	19.0
SO4--	210.0	2.1861	4.3723	49.8
HCO3-	167.0	2.7370	2.7370	31.2
CO3--	0.0	0.0000	0.0000	0.0
SiO2	0.0	0.0000	0.0000	0.0
Li+	0.0	0.0000	0.0000	0.0
Sr++	0.0	0.0000	0.0000	0.0
Ba++	0.0	0.0000	0.0000	0.0
Fe++	0.0	0.0000	0.0000	0.0
NO3-	0.0	0.0000	0.0000	0.0
F-	0.0	0.0000	0.0000	0.0
Br-	0.0	0.0000	0.0000	0.0
B	0.0	0.0000	0.0000	0.0

LANGELIER INDEX 0.00 IONIC STRENGTH= 0.0250

Analytical checks and comparisons

Sum cations = 22.1077 Sum anions = 8.7762
BALANCE = 43.17 %

TDS entered = 3300 mg/L
TDS calc = 865 mg/L TDS(180) calc = 780 mg/L
Entered TDS - TDS(calc) diff= 73.8 % Entered TDS - TDS(180) diff= 76.3 %

Conductivity = 0 umho
TDS(entered)/Cond ratio = 0.00 Usual range = 0.55 to 0.75
TDS(calc)/Cond = 0.00 Usual range = 0.55 to 0.75
Conductivity/Sum-cations = 0 Usual range = 90 - 110

Entered and calculated density
Meas. Density = 0.0000 Calc. Density = 1.0009

Entered and calculated hardness
Meas. hardness= 0.0 mg/L CaCO3 Calc. hardness= 736.0 mg/L CaCO3

Element ratios

Na - Cl =	5.510	meq/L	Usually positive
Ca - SO4 =	5.358	meq/L	Usually positive
K/(Na + K) =	3.02	%	Usually $\leq$ 20%
Mg/(Mg+Ca) =	33.84	%	Usually $\leq$ 40%

Carbonate/bicarbonate at pH = 0

Meas HCO3 =	167.0 mg/L	Meas CO3 =	0.0 mg/L
Calc HCO3 =	0.0 mg/L	Calc CO3 =	0.0 mg/L

Sample 4L22020-05

TempC =	0.0	pH =	0.0
TDS =	3470.0	COND =	0.0
HARD =	0.0	DENS =	0.0
x-cor =	0.0	y-cor =	0.0
Units =	mg/L	rock =	0.0

	mg/L	mmole/L	meq/L	% meq/L
Na+	191.0	8.3076	8.3076	29.8
K +	10.4	0.2660	0.2660	1.0
Ca++	251.0	6.2625	12.5249	44.9
Mg++	82.4	3.3893	6.7785	24.3
Cl-	165.0	4.6540	4.6540	39.6
SO4--	224.0	2.3319	4.6638	39.7
HCO3-	148.0	2.4256	2.4256	20.7
CO3--	0.0	0.0000	0.0000	0.0
SiO2	0.0	0.0000	0.0000	0.0
Li+	0.0	0.0000	0.0000	0.0
Sr++	0.0	0.0000	0.0000	0.0
Ba++	0.0	0.0000	0.0000	0.0
Fe++	0.0	0.0000	0.0000	0.0
NO3-	0.0	0.0000	0.0000	0.0
F-	0.0	0.0000	0.0000	0.0
Br-	0.0	0.0000	0.0000	0.0
B	0.0	0.0000	0.0000	0.0

LANGELIER INDEX 0.00 IONIC STRENGTH= 0.0318

Analytical checks and comparisons

Sum cations = 27.8771 Sum anions = 11.7434

BALANCE = 40.72 %

TDS entered = 3470 mg/L

TDS calc = 1072 mg/L TDS(180) calc = 997 mg/L

Entered TDS - TDS(calc) diff= 69.1 % Entered TDS - TDS(180) diff= 71.3 %

Conductivity = 0 umho

TDS(entered)/Cond ratio = 0.00 Usual range = 0.55 to 0.75

TDS(calc)/Cond = 0.00 Usual range = 0.55 to 0.75

Conductivity/Sum-cations = 0 Usual range = 90 - 110

Entered and calculated density

Meas. Density = 0.0000 Calc. Density = 1.0011

Entered and calculated hardness

Meas. hardness= 0.0 mg/L CaCO3 Calc. hardness= 966.0 mg/L CaCO3

Element ratios

Na - Cl = 3.654 meq/L Usually positive

Ca - SO4 = 7.861 meq/L Usually positive

K/(Na + K) = 3.10 % Usually $\leq$ 20%

Mg/(Mg+Ca) = 35.12 % Usually $\leq$ 40%

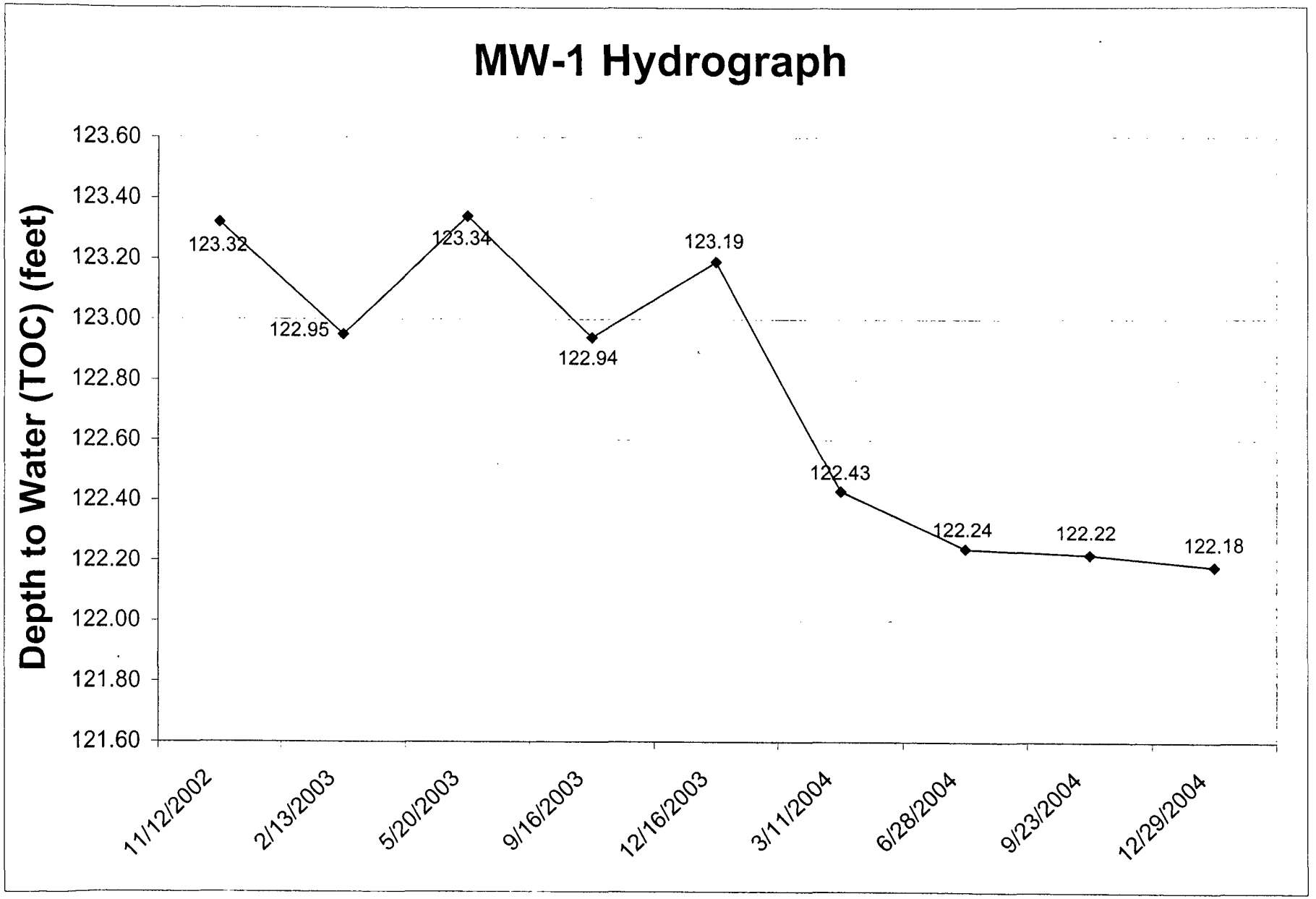
Carbonate/bicarbonate at pH = 0

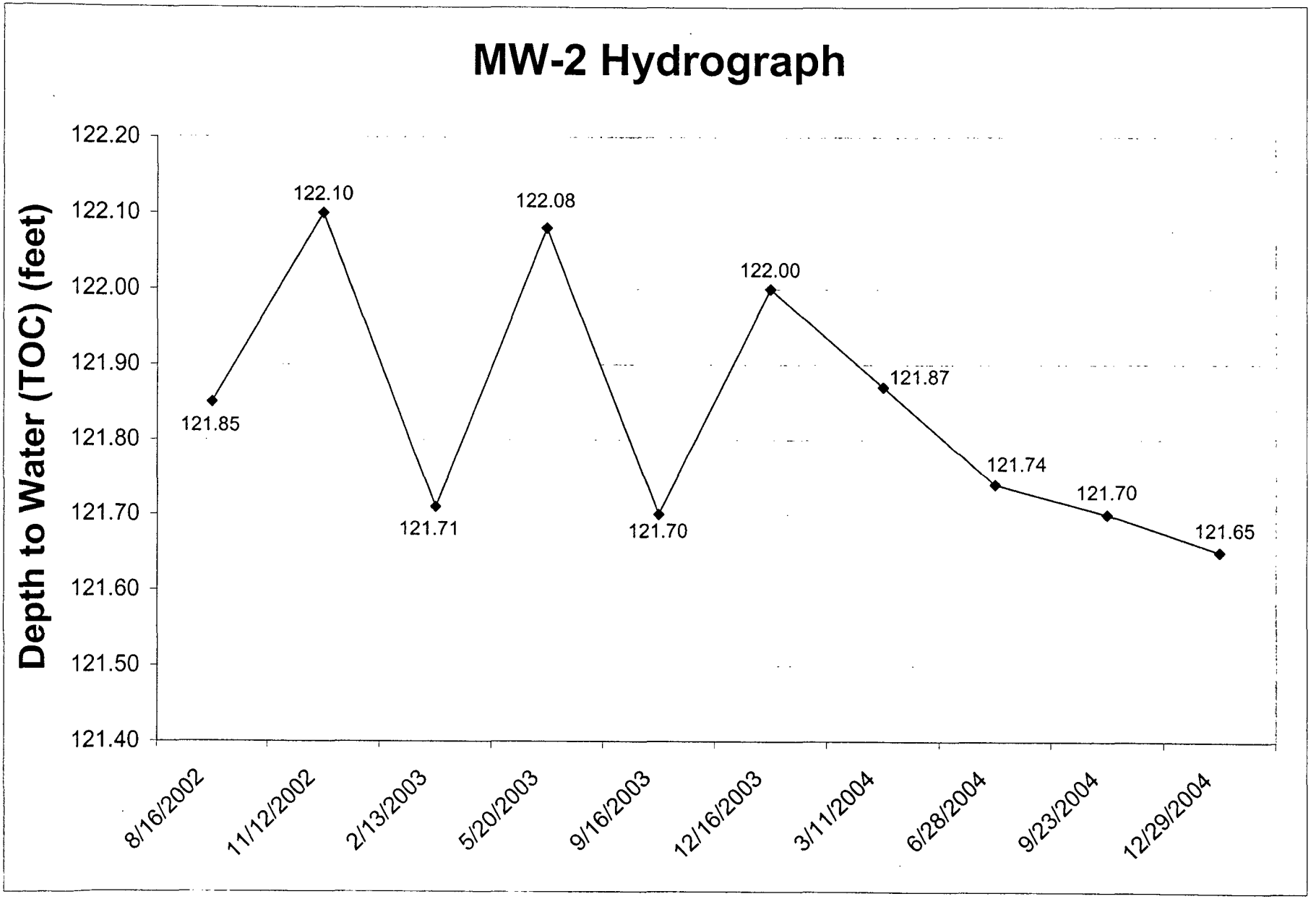
Meas HCO3 = 148.0 mg/L Meas CO3 = 0.0 mg/L

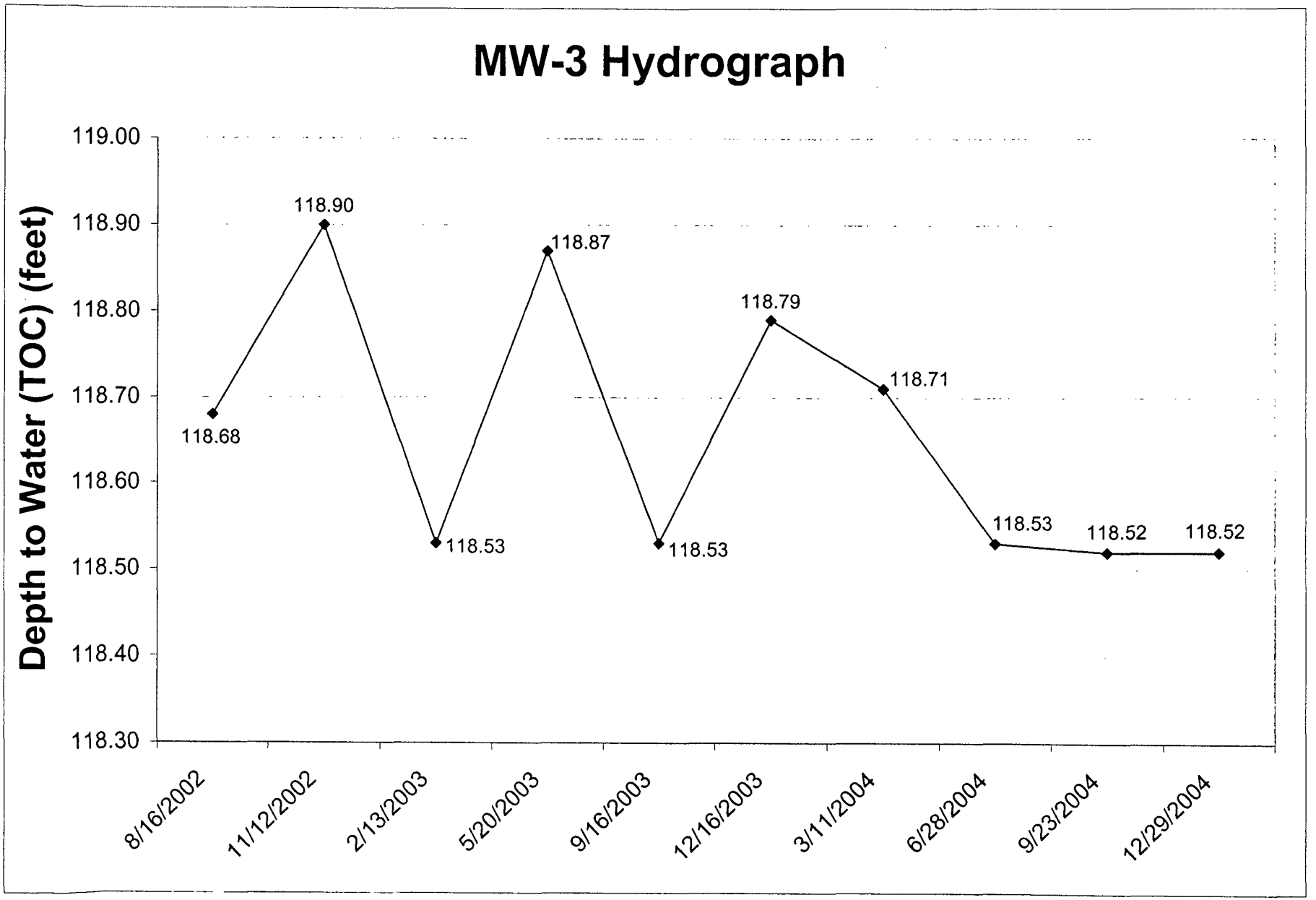
Calc HCO3 = 0.0 mg/L Calc CO3 = 0.0 mg/L

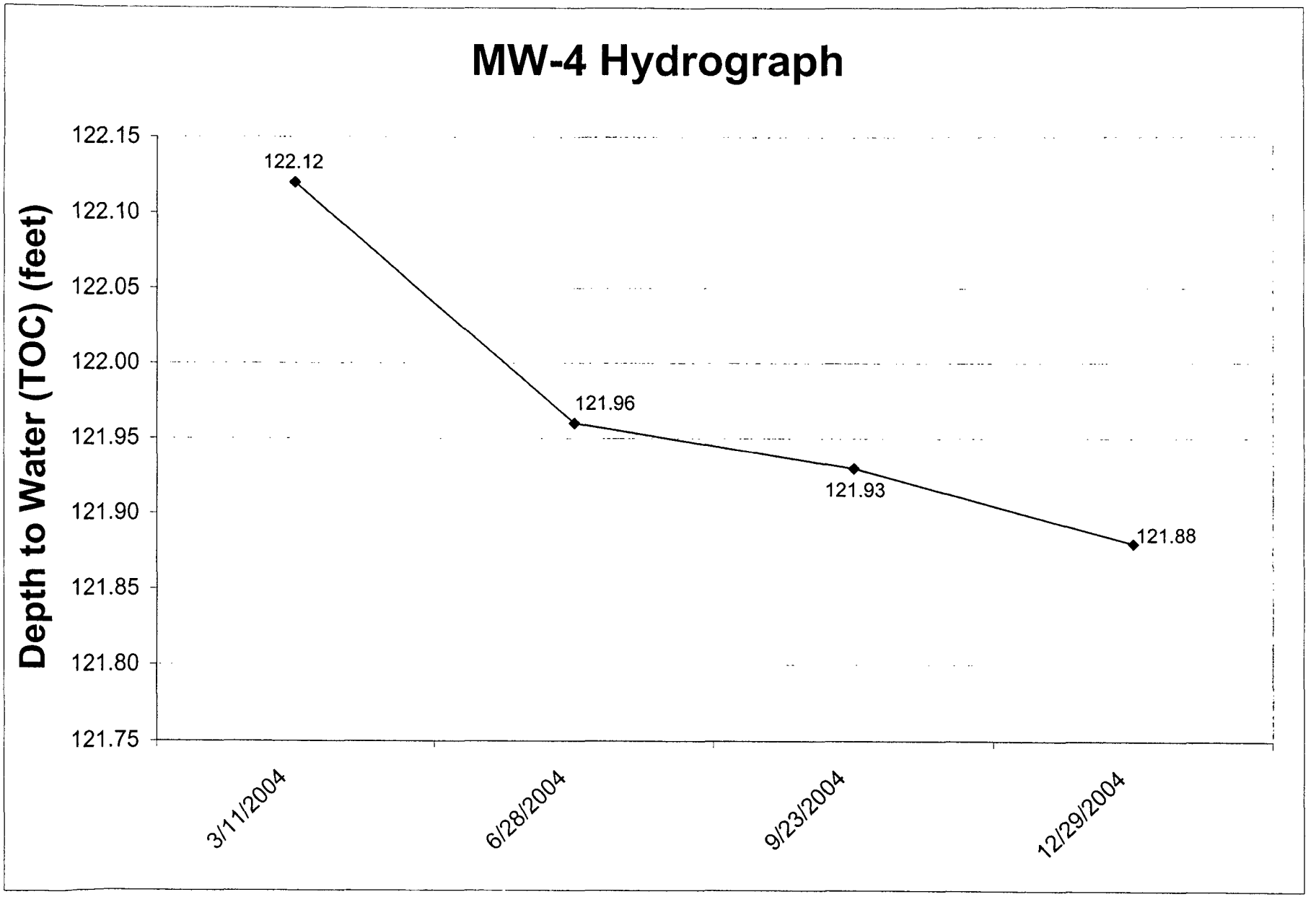
APPENDIX B

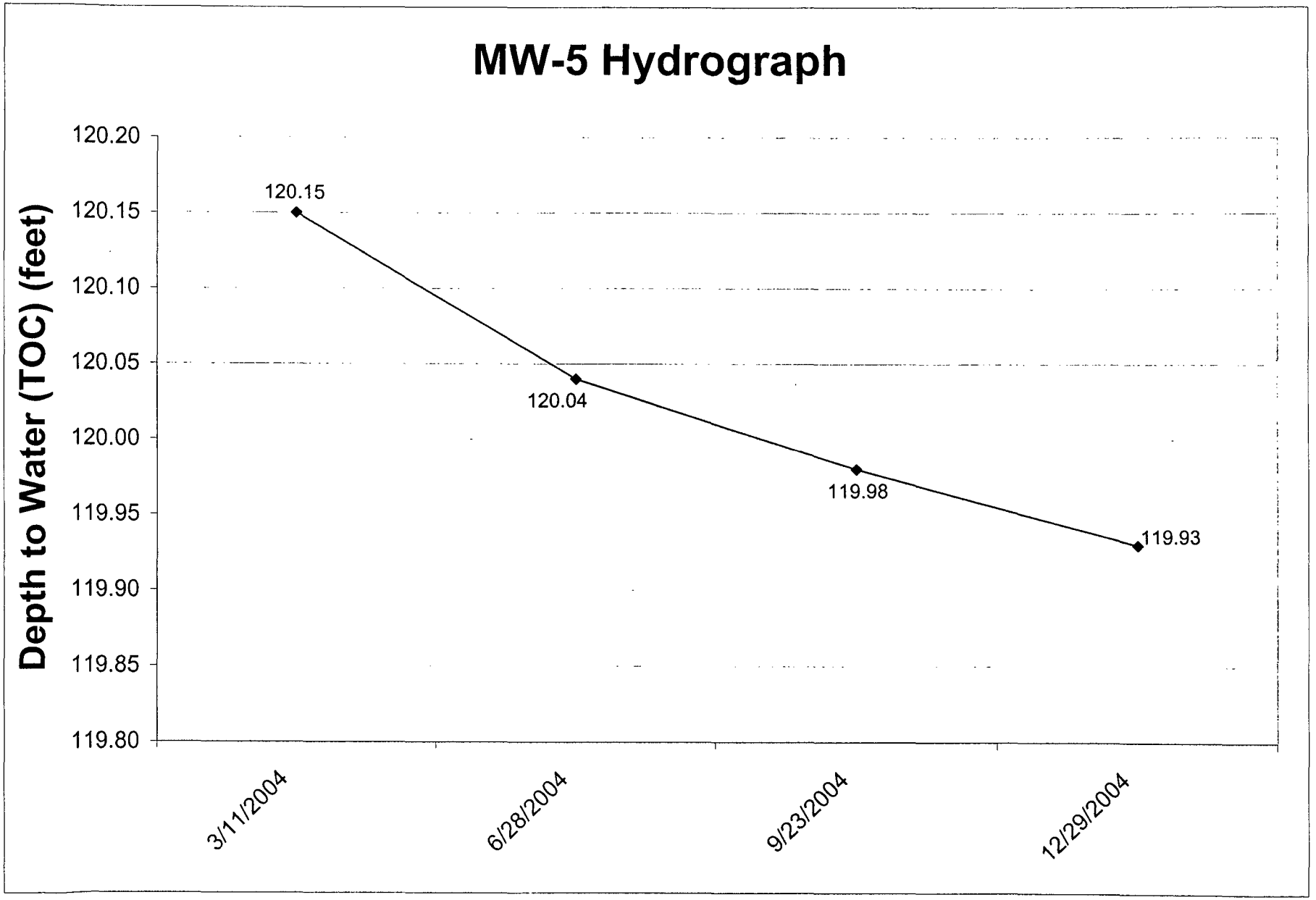
Hydrographs


MW-1 Hydrograph
Depth to Water (TOC) (feet)
123.60
123.40
123.20
123.00
122.80
122.60
122.40
122.20
122.00
121.80
121.60
123.32
122.95
123.34
122.94
123.19
122.43
122.24
122.22
122.18
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004

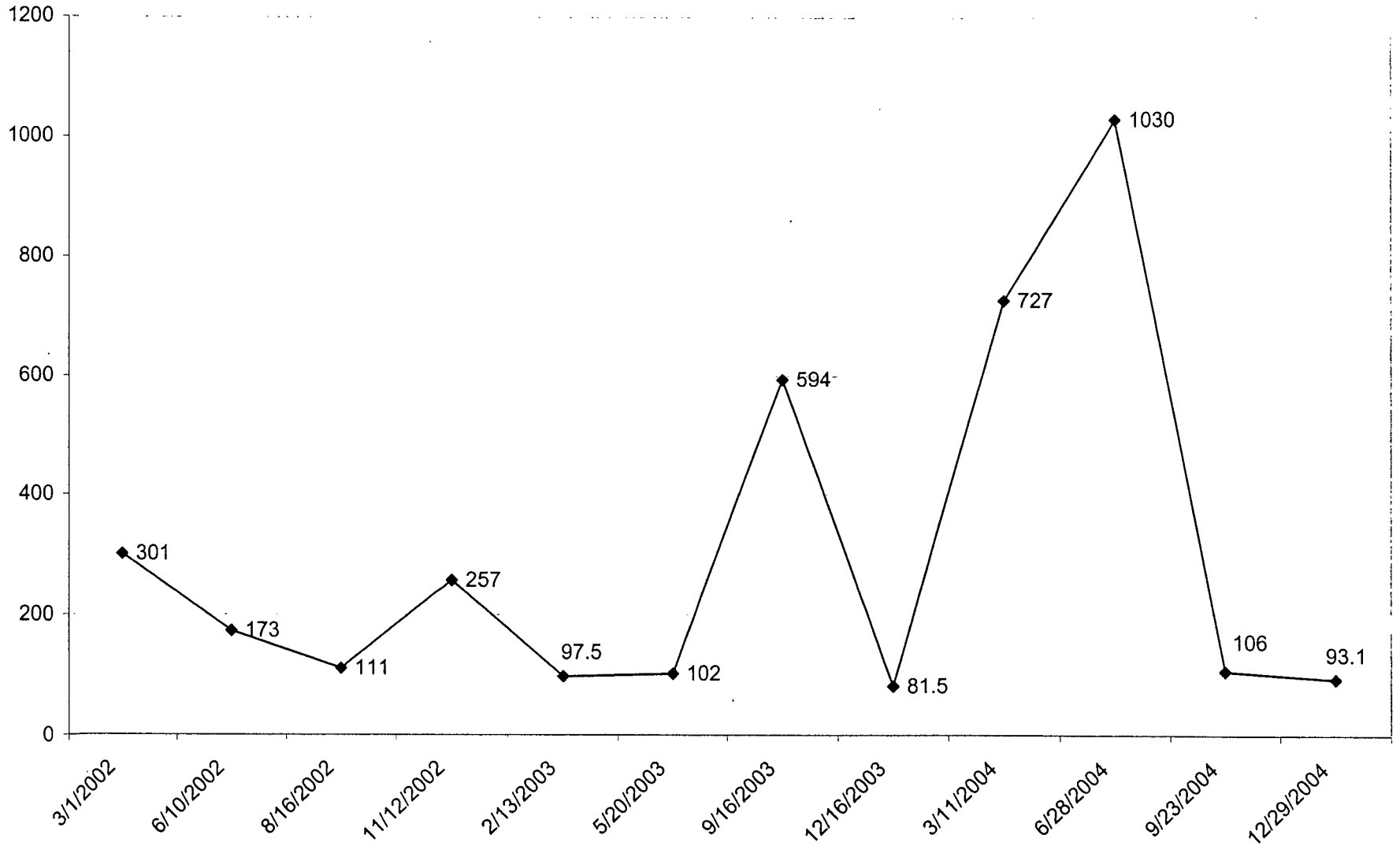

MW-2 Hydrograph
Depth to Water (TOC) (feet)
122.20
122.10
122.00
121.90
121.80
121.70
121.60
121.50
121.40
121.85
122.10
121.71
122.08
121.70
122.00
121.87
121.74
121.70
121.65
8/16/2002
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004

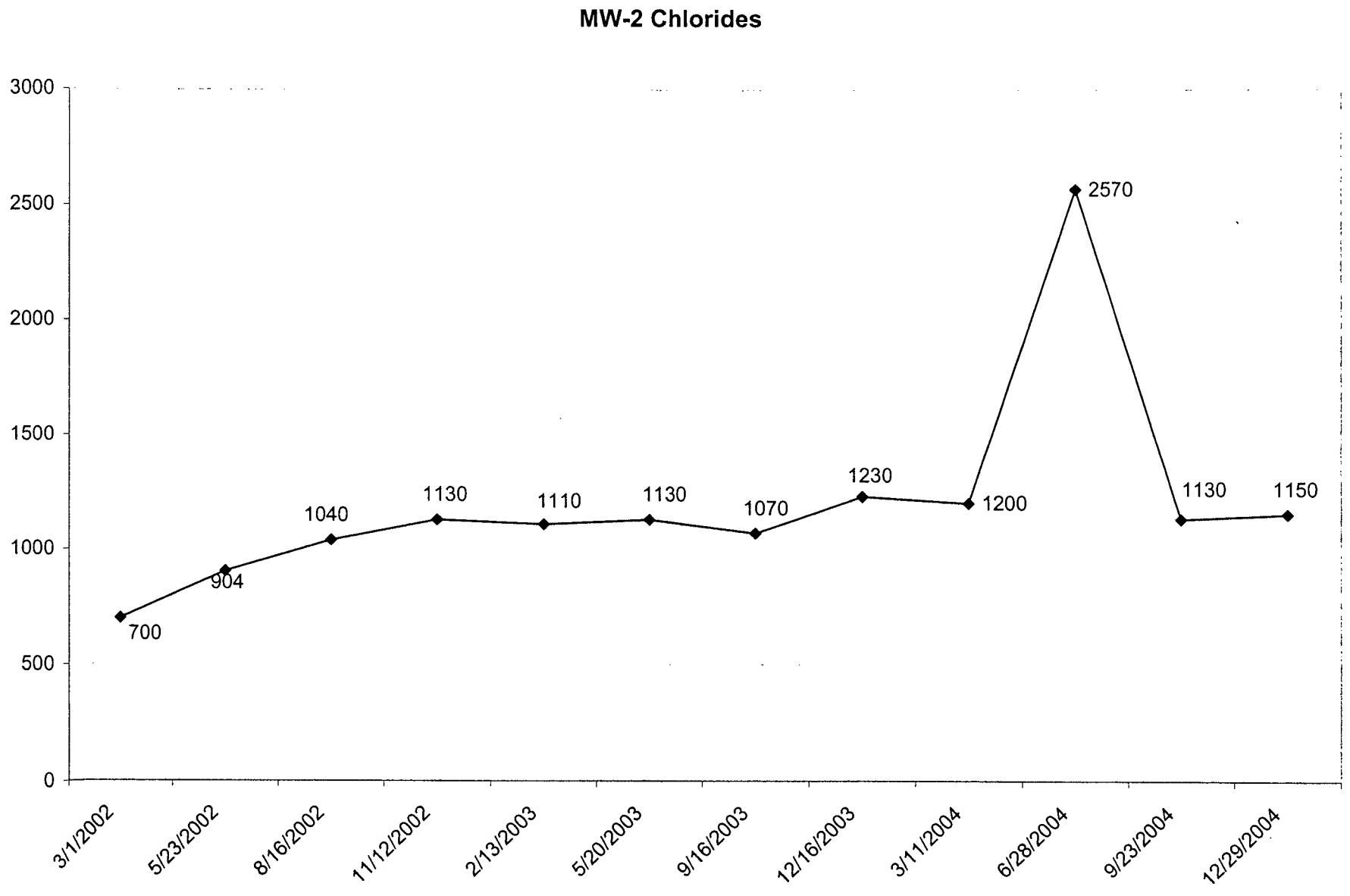

MW-3 Hydrograph
Depth to Water (TOC) (feet)
119.00
118.90
118.80
118.70
118.60
118.50
118.40
118.30
118.68
118.90
118.53
118.87
118.53
118.79
118.71
118.53
118.52
118.52
8/16/2002
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004

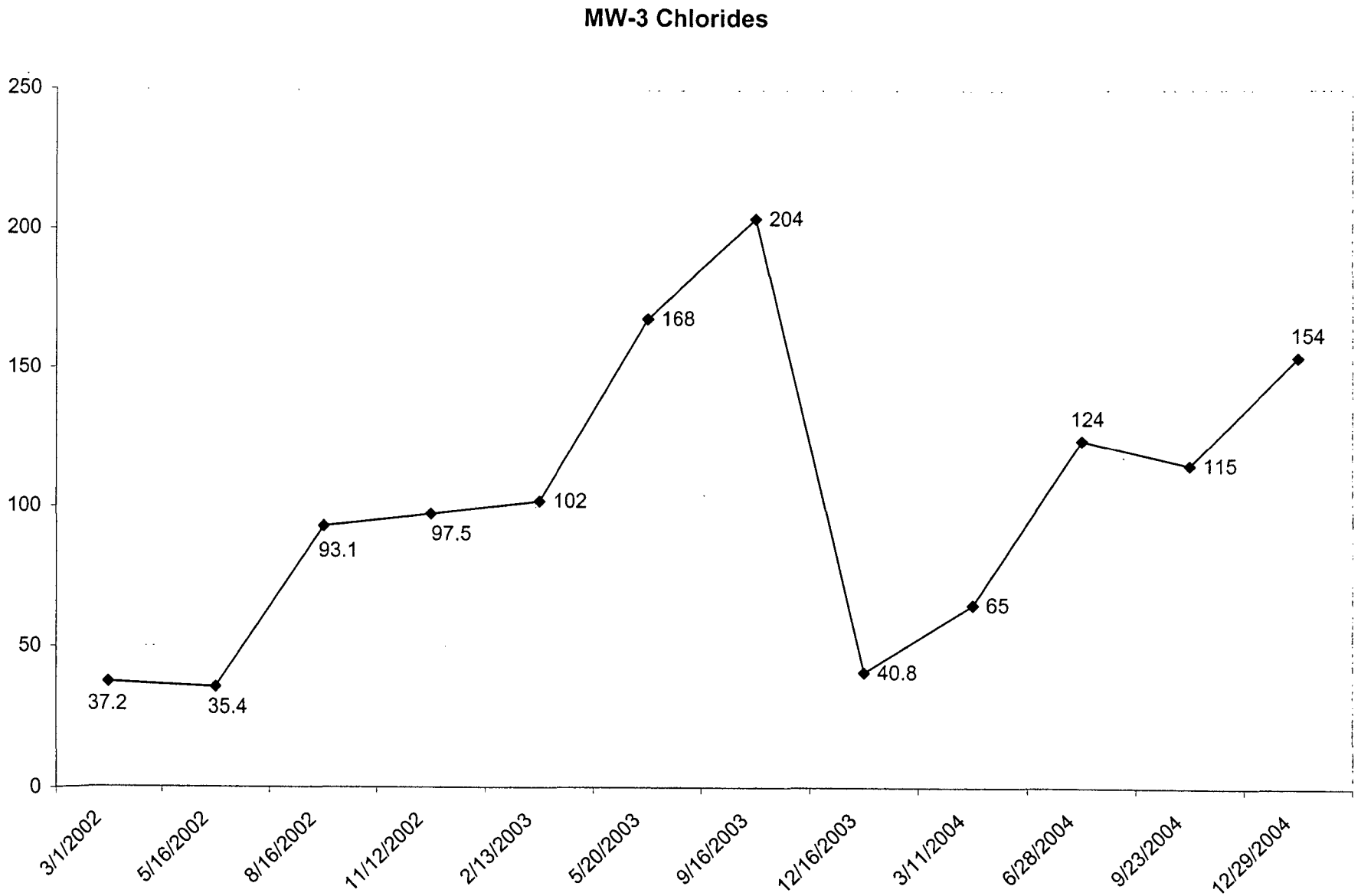

MW-4 Hydrograph
Depth to Water (TOC) (feet)
122.15
122.10
122.05
122.00
121.95
121.90
121.85
121.80
121.75
122.12
121.96
121.93
121.88
3/11/2004
6/28/2004
9/23/2004
12/29/2004

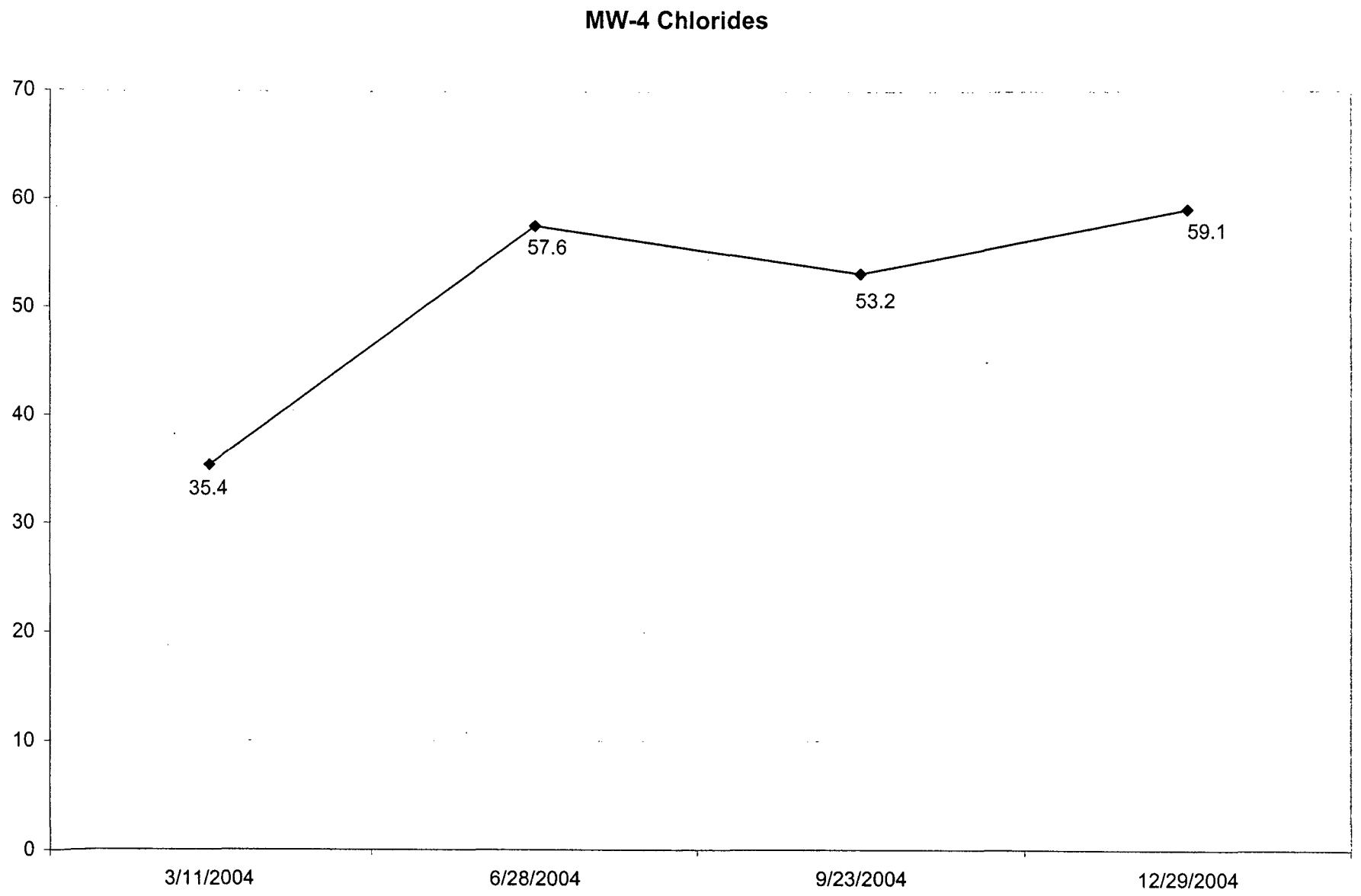

MW-5 Hydrograph
Depth to Water (TOC) (feet)
120.20
120.15
120.10
120.05
120.00
119.95
119.90
119.85
119.80
120.15
120.04
119.98
119.93
3/11/2004
6/28/2004
9/23/2004
12/29/2004

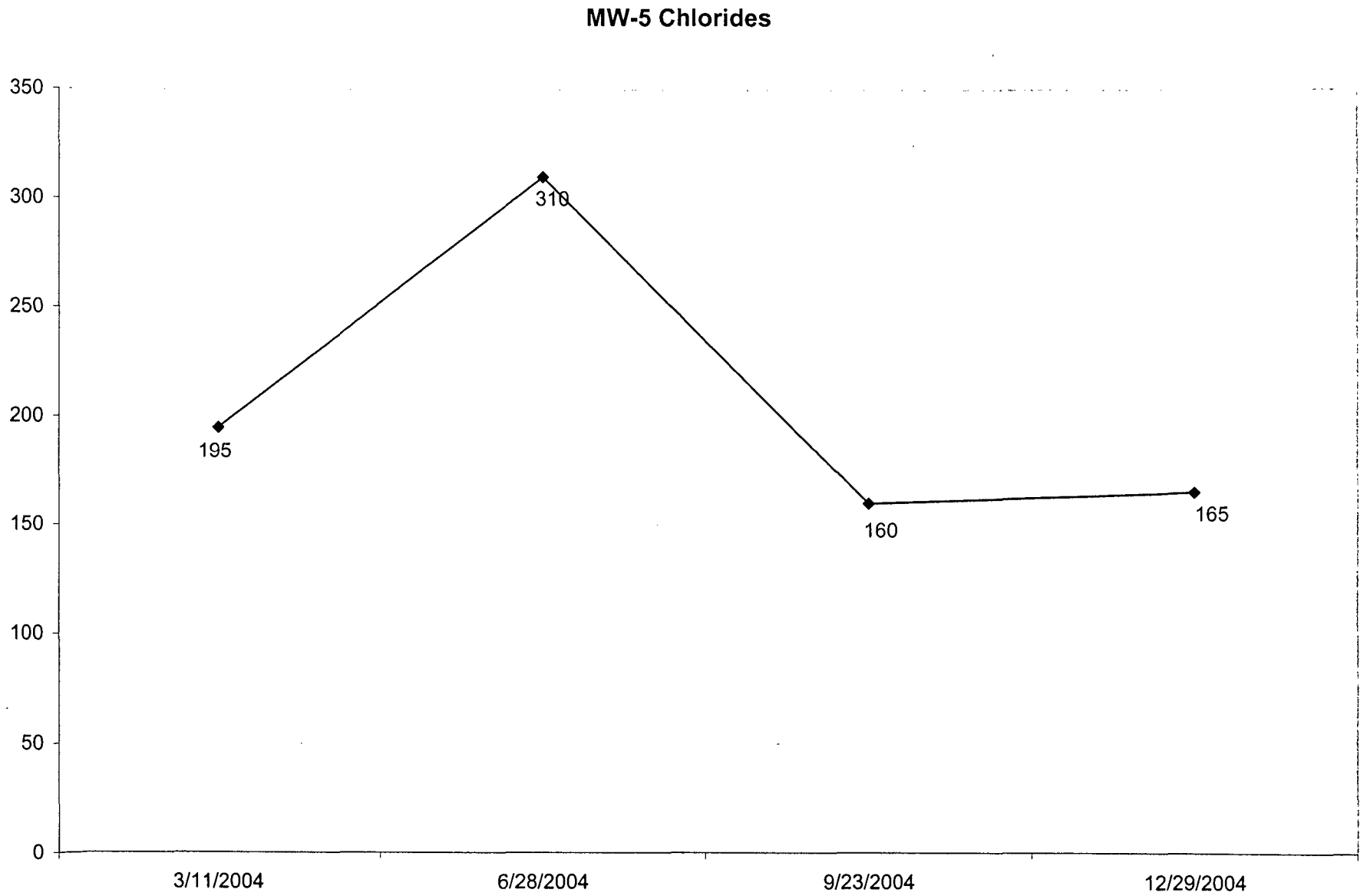
MW-1 Chlorides

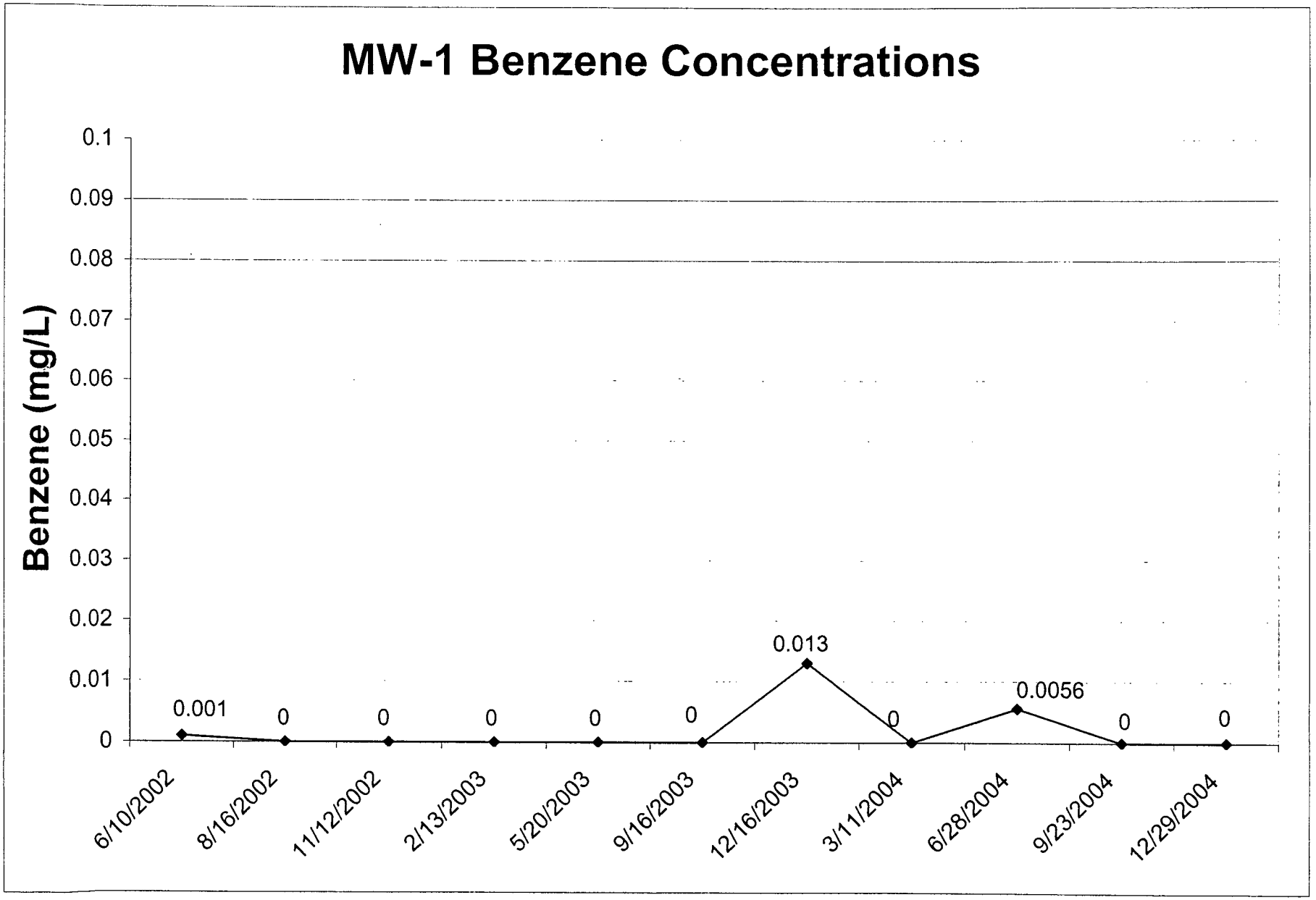



MW-2 Chlorides
3000
2500
2000
1500
1000
500
0
700
904
1040
1130
1110
1130
1070
1230
1200
2570
1130
1150
3/1/2002
5/23/2002
8/16/2002
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-3 Chlorides
250
200
150
100
50
0
37.2
35.4
93.1
97.5
102
168
204
40.8
65
124
115
154
3/1/2002
5/16/2002
8/16/2002
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-4 Chlorides
70
60
50
40
30
20
10
0
35.4
57.6
53.2
59.1
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-5 Chlorides
350
300
250
200
150
100
50
0
195
310
160
165
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-1 Benzene Concentrations
Benzene (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0.001
0
0
0
0
0
0.013
0
0.0056
0
0
6/10/2002
8/16/2002
11/12/2002
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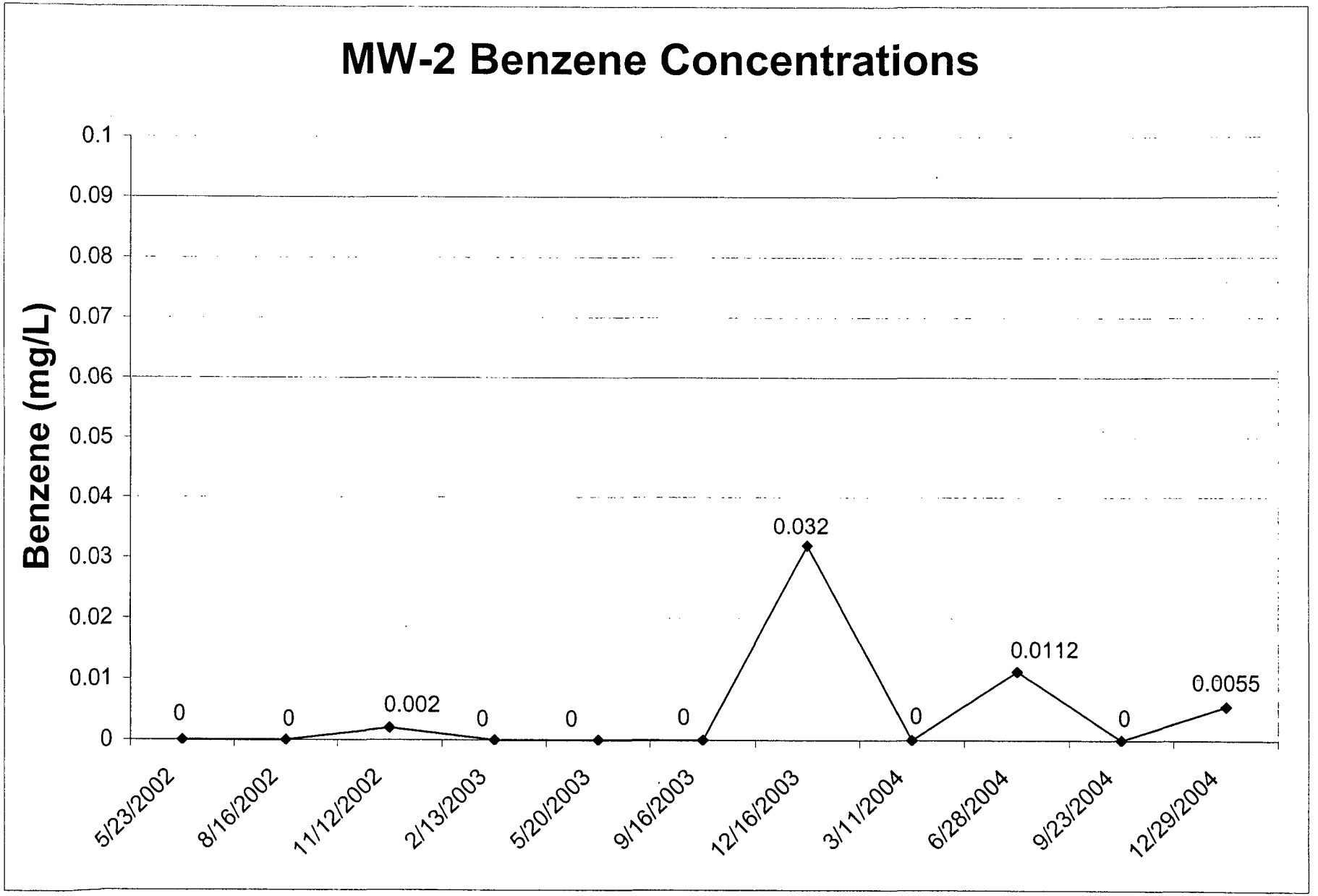
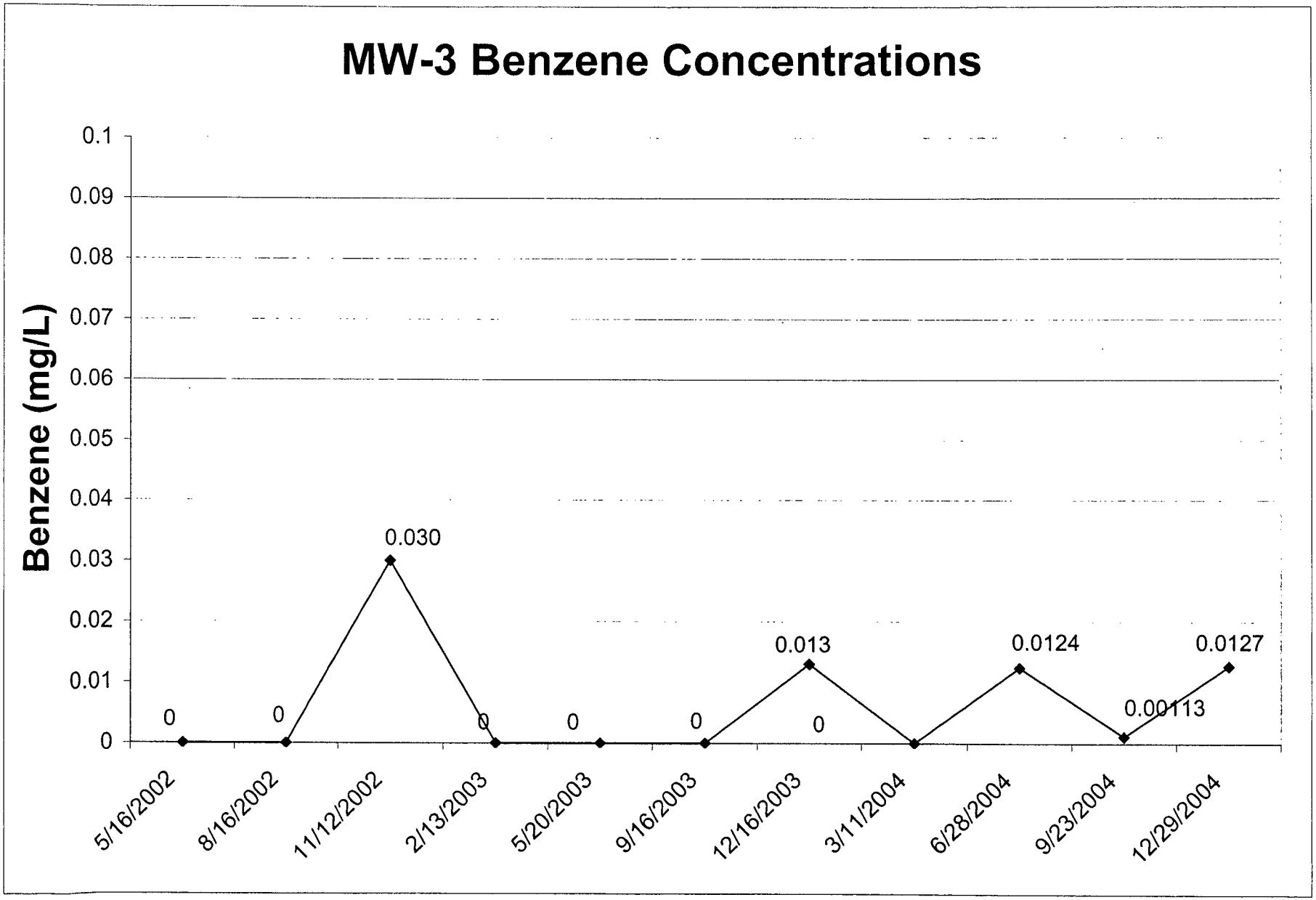
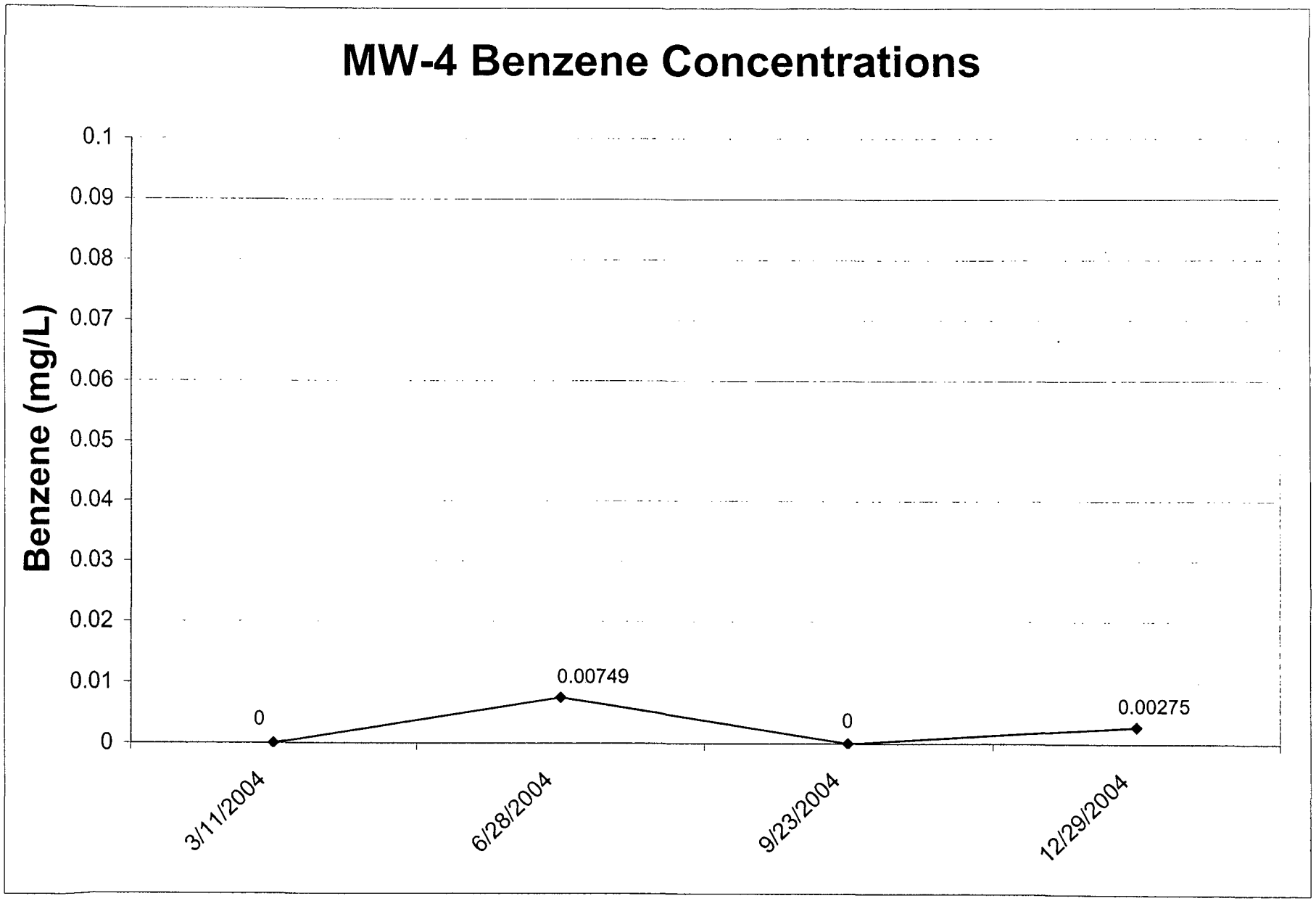
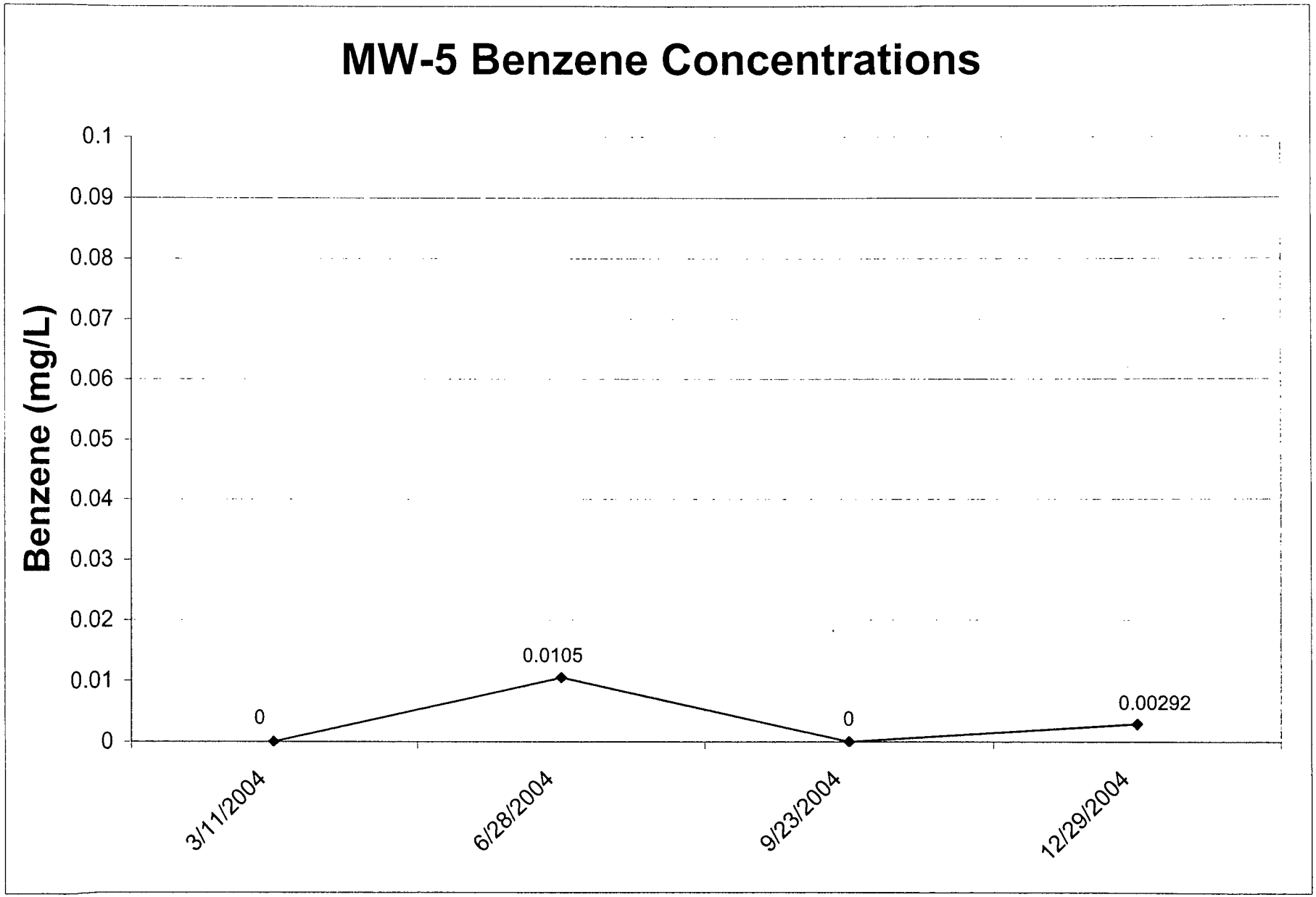
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-2 Benzene Concentrations
Benzene (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0
0
0.002
0
0
0
0.032
0
0.0112
0
0.0055
5/23/2002
8/16/2002
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-3 Benzene Concentrations
Benzene (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0
0
0.030
0
0
0
0.013
0
0.0124
0.00113
0.0127
5/16/2002
8/16/2002
11/12/2002
2/13/2003
5/20/2003
9/16/2003
12/16/2003
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-4 Benzene Concentrations
Benzene (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0
0.00749
0
0.00275
3/11/2004
6/28/2004
9/23/2004
12/29/2004


MW-5 Benzene Concentrations
Benzene (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
0
0.0105
0
0.00292
3/11/2004
6/28/2004
9/23/2004
12/29/2004