GW - 49-0

MONITORING REPORTS

YEAR(S):

2005

elpaso

Via Federal Express

October 25, 2005

Mr. Glenn von Gonten
Senior Hydrologist
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RE: Annual Groundwater Report for the Blanco North Flare Pit Near Bloomfield, NM

Dear Mr. von Gonten;

El Paso Tennessee Pipeline Company hereby submits the enclosed annual report "2005 Blanco North Flare Pit Annual Report". The enclosed report details sparge system operation and maintenance and groundwater sampling for the fourth quarter 2004 through third quarter 2005, and recommends additional site investigation activities for 2005/2006.

If you have any questions concerning the enclosed report or require additional information, please call me at (719) 520-4433.

Sincerely,

Scott T. Pope, P.G.
Senior Environmental Scientist

Enclosures: as stated

xc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **Via Federal Express**

Prepared for:

elpaso

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Oil Conservation Division
Environmental Bureau

El Paso Tennessee Pipeline Company
2 North Nevada
Colorado Springs, Colorado 80903

Final
2005 BLANCO NORTH FLARE PIT ANNUAL REPORT

SAN JUAN COUNTY, NEW MEXICO

October, 2005

Prepared by:

MWH
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LIST OF ACRONYMS

AS	air sparging
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and total xylenes
cfm	cubic feet per minute
EPTPC	EL Paso Tennessee Pipeline Company
mg/L	milligrams per liter
µg/L	micrograms per liter
NMOCD	New Mexico Oil Conservation Division
NMWQCC	New Mexico Water Quality Control Commission
psi	pounds per square inch

1.0 INTRODUCTION

This *2005 Blanco North Flare Pit Annual Report* has been prepared for EL Paso Tennessee Pipeline Company (EPTPC) to document the performance of the air sparging (AS) system and to report groundwater monitoring data at the Blanco Plant North Flare Pit site (Site). This report includes field data reports and groundwater analytical data reports for the period from October 2004 through September 2005. Data collected prior to this period, free-product removal data, and construction details of the AS system are included in the *2003 Blanco North Flare Pit Pilot Air Sparging System Report* (MWH, 2003a) (2003 AS System Report), and the *2004 Blanco North Flare Pit Annual Report* (MWH 2004). An evaluation of the AS system and recommendations for future activities are also included in this report.

The purpose of these activities is groundwater remediation downgradient of the North Flare Pit. Constituents of potential concern at the site include free-phase hydrocarbons (i.e., free-product), benzene, ethylbenzene, toluene and total xylenes (BTEX). Regulatory drivers for groundwater remediation at this Site include New Mexico Oil Conservation Division's (NMOCD) guidelines and the New Mexico Water Quality Control Commission's (NMWQCC) regulations.

Previous remediation activities conducted at the Site are described in *the Work Plan for* the *Blanco North Flare Pit, July 2002* (Work Plan) (MWH, 2002), the *Blanco North Flare Pit Work Plan Update Technical Memorandum, June 2003* (Work Plan Update) (MWH, 2003b), and the *2004 Blanco North Flare Pit Annual Report* (MWH 2004). The Work Plan summarizes available information related to the Site, including a summary of previous site activities and investigations, a description of the geology/hydrogeology of the area and historic groundwater quality data. Therefore these discussions will not be reiterated in this report.

2.0 REMEDIAL ACTIVITIES

2.1 AIR SPARGING SYSTEM OPERATION

EPTPC is currently operating an AS system in the vicinity of the impacted groundwater to remediate dissolved-phase hydrocarbon contamination and reduce BTEX concentrations to below NMWQCC standards.

In December 2002, an AS well, SW-1, was installed approximately 25 feet upgradient (north) of monitoring well MW-26 as shown on Figure 1, *Blanco Plant Site Layout.* Details of the sparging well construction, including the geologic borelog and monitoring well installation report is included in the 2003 AS System Report. The AS system was instrumented and prepared for operation and testing during January/February 2003. Operation of the AS system was delayed during initiation of free-product removal in MW-26 in April/May 2003, as described further below. The AS system operation was initiated in June 2003, and the system has operated continuously from start-up through April 2005, with the exception of minor periods of down-time due to system failures, and scheduled shut-downs for the purpose of groundwater monitoring. A meter was installed in January 2005 to record the amount of time the air sparge motor operates between visits. Ideally, air injection is conducted on a 12-hour off/on cycle with 5 to 9 cubic feet per minute (cfm) of air injection into the well at 13 to 16 pounds per square inch (psi) of pressure. Intermittent electricity failures have occurred at the Site beginning in late 2004; as of April 2005, the electricity service was terminated at the Site by the City of Bloomfield and has not resumed to date. EPTPC and Enterprise are working together to resolve the issues and have service restored to the area.

During system operation, bi-weekly operation and monitoring (O&M) visits were made to the Site. Air pressure measurements were collected at each well head using magnehelic gauges, and groundwater field parameters (including water levels, pH, temperature, specific conductance and dissolved oxygen) were monitored. Following each visit, a field report was prepared to summarize all O&M data and report any problems. Field O&M and site visit reports for the period between October 2004 and September 2005 are included in Appendix A, and selected data are summarized in Table 2.1, *AS System Operation and Monitoring Data (February 2003 – September 2005).* As shown in this table, the air pressure and dissolved oxygen content data indicate that there has been good communication between the AS well (SW-1) and wells MW-26 and MW-19; the amount of influence in terms of induced air pressures increased in MW-19 and remained steady in MW-26 while the dissolved oxygen concentrations continued to fluctuate in 2005. Less pronounced effects of the AS system were also observed in well MW-27.

2.2 FREE-PRODUCT REMOVAL

During drilling and installation of the AS well in December 2002, free-product was discovered in well MW-26. The nearby monitoring wells were checked for the presence of free-product; none was encountered in any of the other existing wells or the new AS well. In December 2002, a total of approximately 4.5 gallons of water/free-product was hand bailed from MW-26. On April 22, 2003, approximately 2 feet of free-product was

measured, and in late-April a skimmer pump was installed in MW-26 for free-product removal. Between April and June 2003, the skimmer pump removed an additional 3.1 gallons of free-product.

In April 2005, approximately 0.02 feet of free-product was measured and removed from MW-27. Free-product was not measured in this, or any other Site well, during the subsequent sampling events.

2.3 GROUNDWATER REMEDIATION BY AIR SPARGING

The purpose of the groundwater monitoring program at the Site is to evaluate the effectiveness of the AS system for groundwater hydrocarbon remediation. Since the 2004 Annual Report was submitted, groundwater monitoring has been conducted at the six monitoring wells in the North Flare Pit area (MW-2, MW-19, MW-23, MW-24, MW-26 and MW-27) during November 2004, February 2005, May 2005, and August 2005. Forty-eight hours prior to each sampling event, the AS system was shut–down to ensure natural groundwater conditions were being evaluated. During each sampling event, groundwater levels and field parameters (pH, temperature, specific conductance and dissolved oxygen) were measured, and samples were analyzed for BTEX concentrations. Groundwater sample collection field forms are attached in Appendix B. Samples were not collected from MW-2 or MW-24 during any of the sampling rounds because the wells were either dry or bailed dry. Water levels could not be measured in MW-19 because the water level probe could not pass an obstruction in the casing; however, grab samples were collected from this well using a small-diameter bailer and submitted for analysis.

Analytical results from these four sampling rounds are presented with historic data in Table 2.2, *Groundwater Monitoring Analytical Data (June 1991 – August 2005).* Laboratory analytical reports are attached in Appendix C. Benzene concentrations in groundwater for each of the recent sampling events are presented on site maps in Figures 2 through 4, *Benzene Concentrations in Groundwater.* These maps also present the groundwater flow direction based on water levels measured during the sampling event. Figure 5, *Historic Benzene Concentrations in Groundwater, 1991 – 2005*, presents trends in historic benzene concentrations in wells MW-19, MW-23, MW-26 and MW-27.

As shown in the data table and presented in the figures, groundwater BTEX concentrations in all of the monitoring wells decreased significantly immediately following AS system start-up in June 2003. Concentrations have continued to generally decrease in the wells with some fluctuations in concentrations. The largest decreases in concentrations have occurred in MW-19, where the benzene concentration was reduced from 10,100 micrograms per liter (µg/L) in June 2003 to 2,040 µg/L in August 2005 (an 80% reduction in concentration); and in MW-26, where free-product was present in June 2003, and the benzene concentration has declined to 18.2 µg/L in August 2005. These wells were also the locations where physical effects of the AS system (induced air pressure and dissolved oxygen concentrations) have been most pronounced. BTEX concentration decreases were also observed at MW-23 and MW-27 over this period. There was a spike in benzene concentrations in wells MW-19, MW-23, and MW-26 during the May sampling event. This is possibly a rebound effect due to the air sparge

system being shut down in April 2005 (as water levels were generally stable between sampling events). These data results indicate that the AS system continues to be effective for groundwater remediation at the Site in the nearby vicinity of the sparge well, SW-1.

3.0 RECOMMENDATIONS FOR FUTURE ACTIVITIES

It is anticipated that electrical service will be resumed to the Site in the near future. At that time, EPTPC recommends continued operation of the AS system with monthly O&M visits. In addition, EPTPC plans to expand the AS system to more aggressively affect other areas of the Site. To that end, a site investigation work plan is being prepared which will include additional drilling and groundwater sampling in the area of the former flare pit and evaporation pond. Sparge points and an expanded sparging system will beevaluated based on the data collected during the additional investigation.

Groundwater sampling will continue on a quarterly basis until four consecutive rounds of groundwater samples indicate BTEX concentrations below NMWQCC standards or until levels reach steady-state values. The groundwater monitoring schedule for 2005/2006 is presented in Table 3.1, *Groundwater Monitoring Schedule.* The next quarterly groundwater sampling event is scheduled for the 4th Quarter 2005. Results of the groundwater monitoring will be transmitted in an annual report, tentatively scheduled for submission to NMOCD in October 2006.

4.0 REFERENCES

MWH, 2002. *Work Plan for the Blanco North Flare Pit.* Prepared for EL Paso Tennessee Pipeline Company. July 2002.

MWH, 2003a. *2003 Blanco North Flare Pit Pilot Air Sparging System Report.* Prepared for EL Paso Tennessee Pipeline Company. October 2003.

MWH, 2003b. *Blanco North Flare Pit Work Plan Update Technical Memorandum.* Prepared for EL Paso Tennessee Pipeline Company. June 2003.

MWH, 2004. *2004 Blanco North Flare Pit Annual Report.* Prepared for EL Paso Tennessee Pipeline Company. October 2004.

TABLES

TABLE 2.1 (Page 1 of 3)
AS SYSTEM OPERATION AND MONITORING DATA (FEBRUARY 2003 - AUGUST 2005)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

	Depth to Water (ft bgs)					
Date	**MW-2**	**MW-19**	**MW-23**	**MW-24**	**MW-26**	**MW-27**
2/3/03	dry	63.64	nm	nm	64.55/63.02	64.05
6/2/03	dry	63.90	57.12	66.38	pump in well	64.41
6/5/03	dry	62.42	57.03	66.96	pump in well	64.48
6/6/03	dry	62.34	57.14	66.97	pump in well	64.44
6/9/03	dry	62.31	57.03	66.81	pump in well	64.41
6/16/03	dry	62.47	57.09	66.74	pump in well	64.46
6/23/03	dry	62.31	56.99	66.71	pump in well	64.45
7/2/03	dry	62.75	57.06	66.68	pump in well	64.50
7/10/03	dry	62.45	57.08	66.68	65.38	64.50
7/15/03	dry	62.75	57.08	66.81	64.35	64.74
7/29/03	dry	62.71	57.06	66.83	64.46	64.68
8/7/03	dry	65.00	57.13	67.09	65.26	64.75
8/21/03	dry	64.84	57.12	67.09	64.59	64.78
9/10/03	dry	64.79	57.04	67.08	64.55	64.81
9/25/03	dry	63.95	57.12	67.07	64.55	64.89
10/6/03	dry	64.58	57.07	67.11	64.62	64.82
10/22/03	dry	64.16	57.16	67.15	64.65	64.95
11/3/03	dry	64.75	56.99	67.17	64.69	64.9
11/17/03	nm	64.07	56.98	67.18	64.63	64.95
12/1/03	nm	64.29	57.18	67.17	64.77	65.03
12/16/03	dry	65.14	57.31	61.165	65.02	65.16
1/2/04	nm	64.22	57.04	67.20	65.1	65.10
1/15/04	dry	64.23	55.98	67.15	64.76	65.11
1/30/04	dry	64.14	57.08	67.11	64.76	65.09
2/13/04	nm	64.13	57.09	67.12	64.79	65.22
2/27/04	nm	64.07	56.99	67.12	64.76	65.24
3/12/04	nm	65.01	56.96	67.11	65.06	65.3
3/26/04	nm	64.06	56.98	67.23	64.69	65.24
4/13/04	dry	64.2	57.075	67.11	65.09	65.47
4/26/04	nm	64.51	57.25	67.11	65.28	65.41
5/10/04	nm	65.50	57.03	67.11	65.17	65.64
5/17/04	dry	65.31	57.14	dry	65.54	65.74
6/1/04	dry	63.42	57.15	67.14	65.23	65.77
6/15/04	dry	64.78	57.07	67.1	65.58	65.85
7/14/04	dry	63.81	57.14	67.11	65.57	66.01
7/28/04	dry	63.75	57.08	67.11	65.59	66.06
8/17/04	dry	nm	57.17	67.05	65.78	66.22
9/8/04	dry	nm	57.18	67.11	65.65	66.3
9/23/04	dry	nm	57.23	67.12	65.77	66.32
10/11/04	dry	nm	57.13	67.12	65.92	66.38
10/26/04	dry	nm	57.13	67.11	66.79	66.44
11/17/04	dry	nm	57.19	67.19	65.67	66.55
12/7/04	dry	nm	57.27	67.14	35.67	66.64
12/22/04	dry	nm	57.09	67.12	65.85	66.68
1/10/05	dry	nm	57.15	67.11	65.35	66.71
1/23/05	dry	nm	57.16	67.12	65.32	66.76
2/8/05	dry	nm	57.12	67.11	65.2	66.82
2/21/05	dry	nm	57.12	67.11	65.41	66.89
2/23/05	dry	nm	57.13	67.11	66.12	67.15
3/7/05	dry	nm	57.08	67.11	65.51	66.96
3/23/05	dry	nm	57.64	67.12	67.68	67.1
4/6/05	dry	nm	57.37	67.11	67.3	67.2
5/23/05	dry	nm	57.215	nm	66.25	67.41
5/30/05	dry	nm	57.22	67.13	67.16	67.58
8/30/05	dry	nm	57.22	67.11	66.08	67.8

dry - well was dry
nm - not measured
bgs - below ground surface

TABLE 2.1 (Page 2 of 3)
AS SYSTEM OPERATION AND MONITORING DATA (FEBRUARY 2003 - AUGUST 2005)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

Date	Dissolved Oxygen (mg/L)					
	MW-2	MW-19	MW-23	MW-24	MW-26	MW-27
2/3/03	dry	nm	nm	nm	nm	nm
6/2/03	dry	nm	nm	nm	pump in well	nm
6/5/03	dry	nm	nm	nm	pump in well	nm
6/6/03	dry	nm	nm	nm	pump in well	nm
6/9/03	dry	1.60	1.85	1.51	pump in well	0.88
6/16/03	dry	1.54	1.89	1.34	pump in well	0.80
6/23/03	dry	2.72	0.94	1.54	pump in well	1.44
7/2/03	dry	nm	nm	nm	pump in well	nm
7/10/03	dry	2.98	0.94	1.50	4.44	1.17
7/15/03	dry	1.29	0.75	2.09	6.89	0.96
7/29/03	dry	1.41	0.64	1.55	6.16	0.94
8/7/03	dry	0.60	1.42	nm	0.49	1.00
8/21/03	dry	0.91	1.11	nm	2.23	0.59
9/10/03	dry	1.10	0.64	nm	2.02	0.86
9/25/03	dry	1.10	1.12	1.71	0.50	1.01
10/6/03	nm	1.12	1.75	1.02	1.69	0.79
10/22/03	nm	1.07	1.83	nm	1.40	1.57
11/3/03	nm	1.15	1.76	nm	1.32	1.20
11/17/03	nm	1.16	0.91	nm	1.07	1.07
12/1/03	nm	0.88	1.27	nm	1.08	1.19
1/2/04	nm	1.12	1.14	nm	1.65	1.07
1/15/04	nm	1.04	1.26	nm	0.44	1.16
1/30/04	nm	1.10	1.07	nm	0.98	1.23
2/13/04	nm	1.31	1.57	nm	2.50	0.93
2/27/04	nm	1.11	0.98	nm	2.98	0.79
3/12/04	nm	1.10	1.07	nm	0.62	0.98
3/26/04	nm	1.39	0.90	nm	2.17	0.84
4/13/04	nm	1.20	1.08	nm	0.43	1.07
4/26/04	nm	1.03	1.15	nm	0.36	0.86
5/10/04	nm	0.68	0.92	nm	0.80	1.18
6/1/04	nm	1.05	0.81	nm	2.22	0.90
6/15/04	nm	1.02	0.80	nm	0.65	1.06
7/14/04	nm	0.91	0.66	nm	0.88	0.89
7/28/04	nm	nm	0.80	nm	3.38	0.56
8/17/04	nm	nm	0.85	nm	1.77	0.78
9/8/04	nm	1.53	0.87	nm	0.71	1.23
9/23/04	nm	1.86	0.98	nm	3.35	1.22
10/11/04	nm	1.07	0.88	nm	0.81	0.98
10/26/04	nm	0.95	0.68	nm	0.50	0.61
11/17/04	nm	1.65	0.91	nm	1.78	0.89
12/7/04	nm	1.98	0.92	nm	2.75	0.98
12/22/04	nm	1.67	1.41	nm	1.34	1.16
1/10/05	nm	1.79	1.08	nm	1.86	0.73
1/23/05	nm	2.02	1.00	nm	3.49	0.88
2/8/05	nm	1.93	0.82	nm	1.98	0.94
2/21/05	nm	1.53	0.86	nm	3.43	0.89
3/7/05	nm	2.02	0.53	nm	3.29	0.56
3/23/05	nm	nm	0.51	nm	3.55	0.78
4/6/05	nm	nm	0.77	nm	0.41	0.84
5/23/05	nm	0.96	1.32	nm	0.84	1.60
5/30/05	nm	nm	nm	nm	nm	nm
8/30/05	nm	nm	nm	nm	nm	nm

dry - well was dry
nm - not measured
bgs - below ground surface

TABLE 2.1 (Page 3 of 3)
AS SYSTEM OPERATION AND MONITORING DATA (FEBRUARY 2003 - AUGUST 2005)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

Date	Induced Air Pressure at Well (inches H2O)					
	MW-2	MW-19	MW-23	MW-24	MW-26	MW-27
2/3/03	dry	3.80	nm	nm	5.50	0.02
6/2/03	dry	NA	nm	nm	pump in well	nm
6/5/03	dry	4.50	0.00	0.00	pump in well	0.00
6/6/03	dry	5.80	0.00	0.00	pump in well	0.00
6/9/03	dry	6.10	0.00	0.09	pump in well	0.07
6/16/03	dry	6.00	0.00	0.10	pump in well	0.07
6/23/03	dry	6.15	0.00	0.09	pump in well	0.05
7/2/03	dry	7.40	0.00	0.10	pump in well	0.10
7/10/03	dry	5.20	0.00	0.02	>10	0.04
7/15/03	dry	6.10	0.00	0.04	>10	0.07
7/29/03	dry	6.60	0.00	0.09	>10	0.05
8/7/03	dry	0.00	0.00	0.00	0.00	0.00
8/21/03	dry	3.60	0.00	0.07	6.80	0.06
9/10/03	dry	6.40	0.00	0.03	<10	0.90
9/25/03	dry	3.10	0.00	0.06	3.90	0.04
10/6/03	nm	0.11	0.00	0.10	0.09	0.02
10/22/03	nm	2.60	0.00	0.00	3.25	0.25
11/3/03	nm	0.03	0.00	0.03	0.07	0.00
11/17/03	nm	3.00	0.00	0.06	3.60	0.11
12/1/03	nm	2.10	0.00	0.10	2.10	0.08
1/2/04	nm	3.00	0.00	0.06	2.10	0.12
1/15/04	nm	2.10	0.00	0.04	3.20	0.06
1/30/04	nm	2.00	0.00	0.07	3.10	0.03
2/13/04	nm	3.10	0.00	0.09	3.50	0.16
2/27/04	nm	3.00	0.00	0.13	3.20	0.24
3/12/04	nm	0.17	0.00	0.12	0.09	0.08
3/26/04	nm	3.00	0.00	0.14	3.20	0.18
4/13/04	nm	2.20	0.00	-0.02	4.10	0.13
4/26/04	nm	2.20	0.00	-0.03	1.90	0.08
5/10/04	nm	2.40	0.00	0.11	2.00	0.18
6/1/04	nm	5.60	0.00	0.06	8.30	0.11
6/15/04	nm	4.20	0.00	-0.04	6.60	0.00
7/14/04	nm	4.70	0.00	0.01	7.00	0.12
7/28/04	nm	4.80	0.00	-0.01	6.00	0.15
8/17/04	nm	3.20	0.00	0.02	6.00	0.07
9/8/04	nm	4.20	0.00	-0.01	5.30	0.03
9/23/04	nm	2.20	0.00	0.02	4.70	0.00
10/11/04	nm	0.01	0.00	0.02	0.02	0.01
10/26/04	nm	nm	nm	nm	nm	nm
11/17/04	nm	nm	nm	nm	nm	nm
12/7/04	nm	nm	nm	nm	nm	nm
12/22/04	nm	2.50	0.00	-0.03	7.30	0.05
1/10/05	nm	3.60	0.00	0.03	7.70	0.06
1/23/05	nm	5.40	0.00	0.03	8.80	0.03
2/8/05	nm	4.00	0.00	-0.02	>10	0.08
2/21/05	nm	5.30	0.00	0.00	9.40	0.02
3/7/05	nm	5.00	0.00	0.02	9.40	0.32
3/23/05	nm	0.00	0.00	-0.03	0.00	-0.01
4/6/05	nm	nm	nm	nm	nm	nm
5/23/05	nm	nm	nm	nm	nm	nm
5/30/05	nm	nm	nm	nm	nm	nm
8/30/05	nm	nm	nm	nm	nm	nm

dry - well was dry
nm - not measured
bgs - below ground surface

TABLE 2.2
GROUNDWATER MONITORING ANALYTICAL DATA (JUNE 1991 - AUGUST 2005)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO
(Page 1 of 2)

Monitoring Well	Sample Date	Static Water Level (ft BTOC)	Analytical Parameters: Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)
		NMWQCC Standard:	10	750	750	620
MW-2	6/18/91		<0.5	<0.5	0.7	0.9
	2/23/93		<0.5	<0.5	<0.5	<0.5
	6/8/93		<2.0	<2.0	<2.0	<2.0
	9/29/93		6.2	<2.0	<2.0	<2.0
	2/10/94		<2.0	<2.0	<2.0	<2.0
	5/13/94		<2.0	<2.0	<2.0	<2.0
	8/22/94		<2.0	<2.0	<2.0	<2.0
	11/9/00	dry	Well Dry - No Sample Collected			
	3/25/01	dry	Well Dry - No Sample Collected			
	6/2/03	dry	Well Dry - No Sample Collected			
	8/4/03	dry	Well Dry - No Sample Collected			
	9/3/03	dry	Well Dry - No Sample Collected			
	12/16/03	dry	Well Dry - No Sample Collected			
	5/17/04	dry	Well Dry - No Sample Collected			
	8/23/04	dry	Well Dry - No Sample Collected			
	11/22/04	dry	Well Dry - No Sample Collected			
	2/23/05	dry	Well Dry - No Sample Collected			
	5/23/05	dry	Well Dry - No Sample Collected			
	8/30/05	dry	Well Dry - No Sample Collected			
MW-19	6/19/91		8,600	210	<25.0	4,200
	2/25/93		14,000	450.00	3,900	5100.00
	6/10/93		9,580	159	928	1,087
	11/13/00	63.45	7,200	<25	3,500	88
	3/26/01	63.37	12,000	<50	4,500	110
	5/30/02	63.54	12,000	<50	4,300	140
	6/2/03	63.90	10,100	<10	3,900	<30
	8/4/03	62.75	2,000	<10	304	<30
	9/3/03	65.06	3,580	<1.0	1,020	<3.0
	12/18/03	65.02	8,130	<50	<50	<100
	5/17/04	65.31	7,410	<13	1,160	45
	8/23/04	nm	2,650	<25	303	<50
	11/22/04	nm	4,150	7	<1	<2
	2/23/05	nm	191	<10	<10	<20
	5/23/05	nm	8,520	<20	176	176
	8/30/05	nm	2,040	<20	117	<40
MW-23	9/26/92		2,770	221	7,690	6,090
	2/1/93		2,900	3,500	190	4,100
	2/25/93		2,900	190	3,500	4,100
	6/8/93		1,680	30	1,850	2,906
	9/29/93		2,133	216	1,807	3,823
	2/10/94		2,090	151	1,150	2,660
	5/13/94		3,530	255	852	2,150
	8/22/94		3,270	212	353	1,176
	11/13/00	57.02	3,700	<25	840	1,400
	3/26/01	57.07	7,200	<25	520	1,300
	5/30/02	57.08	9,300	<50	360	1,500
	6/2/03	57.12	8,920	<10	337	1,450
	8/4/03	57.06	2,250	<10	100	337
	9/3/03	57.11	3,860	8	208	768
	12/18/03	65.14	5,080	<50	<50	219
	5/17/04	57.14	8,020	<13	208	1,490
	8/23/04	57.04	4,480	<25	160	966
	11/22/04	57.13	3,360	<1	<1	<2
	2/23/05	53.17	7,450	<1	321	1,380
	5/23/05	57.22	9,900	37	270	1,650
	8/30/05	57.18	3,760	<5	53	199

TABLE 2.2
GROUNDWATER MONITORING ANALYTICAL DATA (JUNE 1991 - AUGUST 2005)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

Monitoring Well	Sample Date	Static Water Level (ft BTOC)	Analytical Parameters: Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)
		NMWQCC Standard:	10	750	750	620
MW-24	9/26/92		2,650	95	<50	1,340
	2/23/93		1,300	71	<12.5	600
	6/10/93		59	15	7	95
	9/29/93		1,040	63	8	918
	2/10/94		490	44	<2.0	395
	5/13/94		1,390	69	<2.0	898
	8/22/94		836	60	<2.5	154
	11/13/00	65.06	200	<1	5	22
	3/26/01	65.00	1,500	<5.0	18	35
	5/30/02	65.65	2,100	13	29	<25
	6/2/03	66.38	Well Bailed Dry - No Sample Collected			
	8/4/03	66.91	Well Bailed Dry - No Sample Collected			
	9/3/03	dry	Well Dry - No Sample Collected			
	12/16/03	57.31	Well Bailed Dry - No Sample Collected			
	5/17/04	dry	Well Dry - No Sample Collected			
	8/23/04	67.11	Well Bailed Dry - No Sample Collected			
	11/22/04	66.37	Well Bailed Dry - No Sample Collected			
	2/23/05	67.11	Well Bailed Dry - No Sample Collected			
	8/30/05	67.11	Not Enough Water to Sample - TD 67.19			
MW-26	2/25/93		11,000	860	9,900	10,000
	6/10/93		12,180	470	7,504	4,959
	3/26/01	62.36	6,400	100	280	1,900
	5/30/02	63.68	6,200	50	270	1,300
	6/2/03	NA	Free-Product Recovery Pump in Well - No Sample Collected			
	8/4/03	65.19	Well Bailed Dry - No Sample Collected			
	9/4/03	65.00	538	10	139	466
	12/18/03	65.16	307	<0.5	158	685
	5/17/04	65.54	109	14	87	280
	8/23/04	66.11	29.5	<5	40	94
	11/22/04	66.37	19.0	<1	4	57
	2/23/05	66.12	22.7	<10	<10	11
	5/23/05	66.25	38.0	6	62	173
	8/30/05	66.08	18.2	<5	3	30
MW-27	2/26/93		9,100	470	5,700	4,900
	6/10/93		8,970	376	137	5,406
	9/30/93		13,200	402	420	3,100
	2/2/94		9,740	212	209	1,750
	5/14/94		10,100	358	180	4,500
	11/13/00	63.67	4,400	4,700	12,000	60,000
	3/26/01	63.38	420	27	260	1,600
	5/30/02	63.54	420	13	170	1,100
	6/2/03	64.41	192	<25	328	1,480
	8/4/03	63.72	116	<10	145	697
	9/3/03	64.80	137	17	274	1,240
	12/18/03	61.17	127	17	250	1,060
	5/17/04	65.74	95.9	28	317	1,600
	8/23/04	66.27	398	<25	<25	4,830
	11/22/04	66.63	<1	<1	330	1,520
	2/23/05	67.15	20.7	28	419	2,210
	5/23/05	67.41	<1	<1	<1	<2
	8/30/05	67.80	16.6	14	383	1,860

Notes:

1. Shaded data indicate exceedance of New Mexico Water Quality Control Commission's (NMWQCC) standards.
2. All detected concentrations are shown in bold type.

< Analyte detected below the reporting limit (RL). Value shown is the RL.

BTOC = Below Top of Casing
NA = Not Applicable

TABLE 3.1
GROUNDWATER MONITORING SCHEDULE
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO
EL PASO FIELD SERVICES

Monitoring Well	Monitoring Schedule	Analyses
North Flare Pit Area		
MW-2	Quarterly	Field Parameters, BTEX
MW-19	Quarterly	Field Parameters, BTEX
MW-23	Quarterly	Field Parameters, BTEX
MW-24	Quarterly	Field Parameters, BTEX
MW-26	Quarterly	Field Parameters, BTEX
MW-27	Quarterly	Field Parameters, BTEX

Notes:

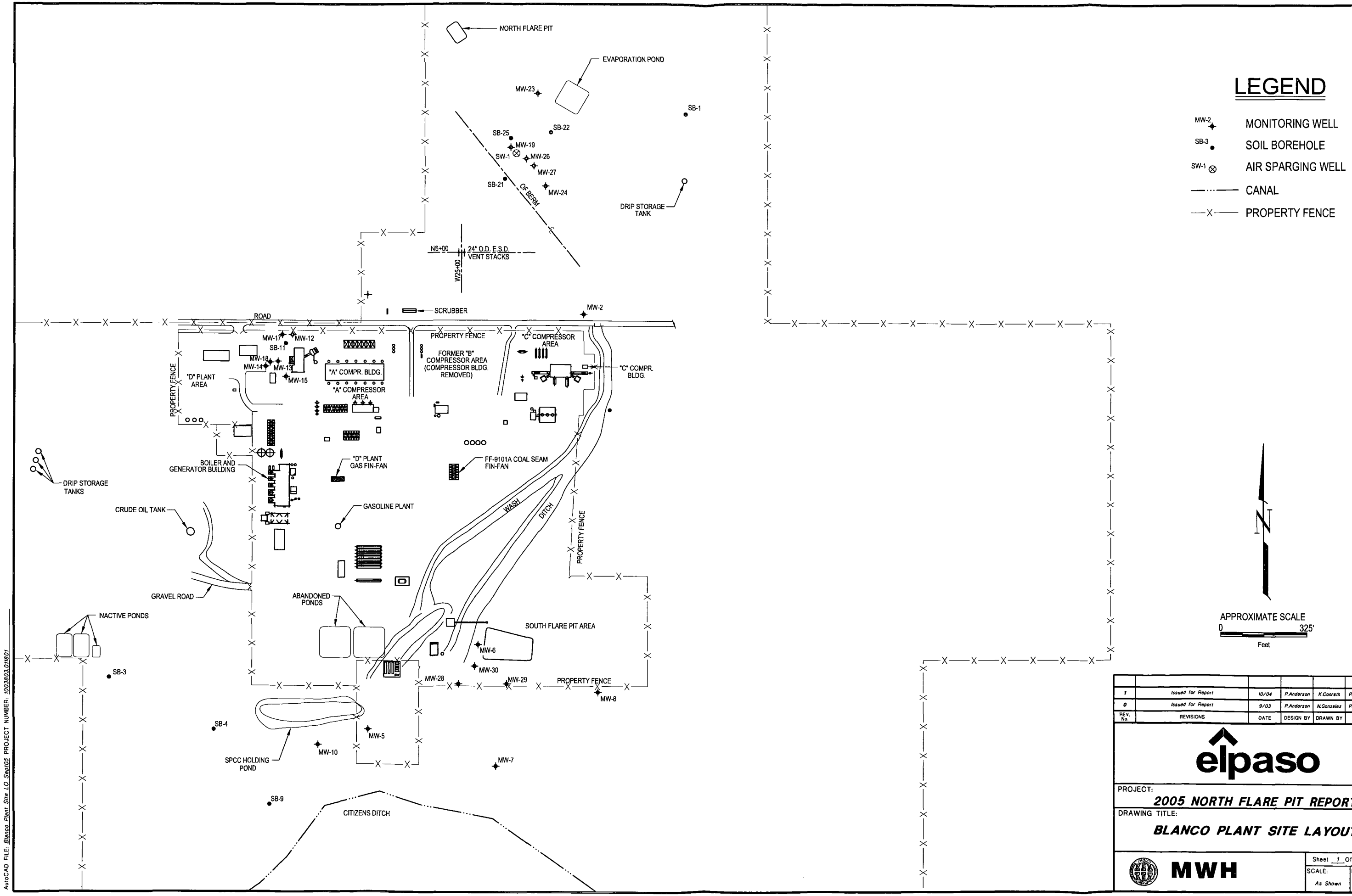
1. **Field Parameters include temperature, pH, dissolved oxygen and specific conductance.**

2. **The next quarterly sampling event is scheduled for 4th Quarter 2005.**

3. **Monitoring well MW-20 was damaged and abandoned in 2002.**

BTEX: Benzene, Toluene, Ethylbenzene and Total Xylenes.

FIGURES



LEGEND

- MW-2 — MONITORING WELL
- SB-3 — SOIL BOREHOLE
- SW-1 — AIR SPARGING WELL
- CANAL
- PROPERTY FENCE

N

APPROXIMATE SCALE
0 325'
Feet

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
1	Issued for Report	10/04	P.Anderson	K.Conrath	P.Anderson
0	Issued for Report	9/03	P.Anderson	N.Gonzalez	P.Anderson

elpaso

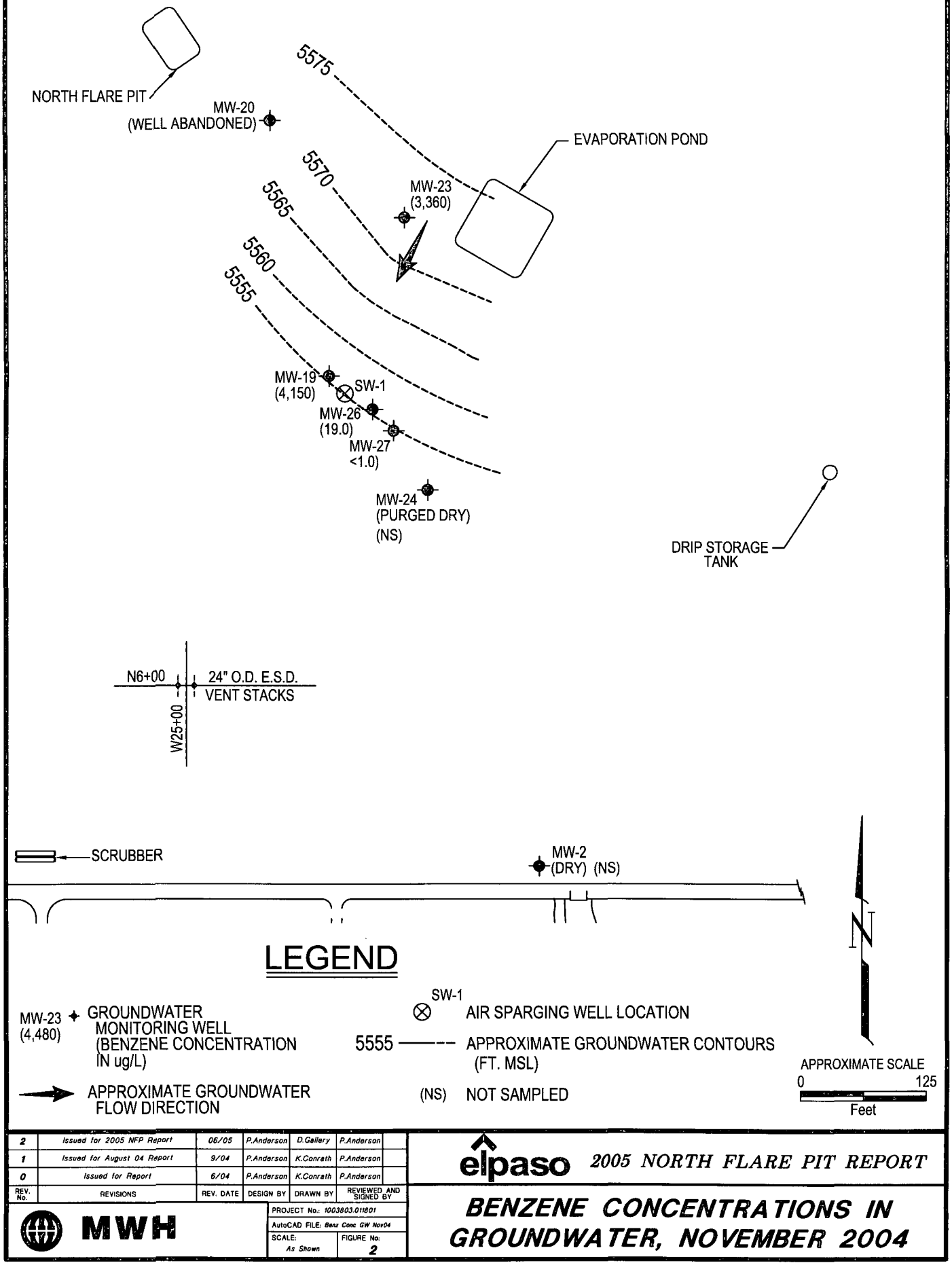
PROJECT:
2005 NORTH FLARE PIT REPORT

DRAWING TITLE:
BLANCO PLANT SITE LAYOUT

MWH

Sheet 1 Of 1 Sheets
SCALE: As Shown
FIGURE No. 1

AutoCAD FILE: Blanco Plant Site I.O. Sep05 PROJECT NUMBER: 10038603.019801



REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	Issued for 2005 NFP Report	06/05	P.Anderson	D.Gallery	P.Anderson
1	Issued for August 04 Report	9/04	P.Anderson	K.Conrath	P.Anderson
0	Issued for Report	6/04	P.Anderson	K.Conrath	P.Anderson

MWH

PROJECT No.: 1003603.011801

AutoCAD FILE: Benz Conc GW Nov04

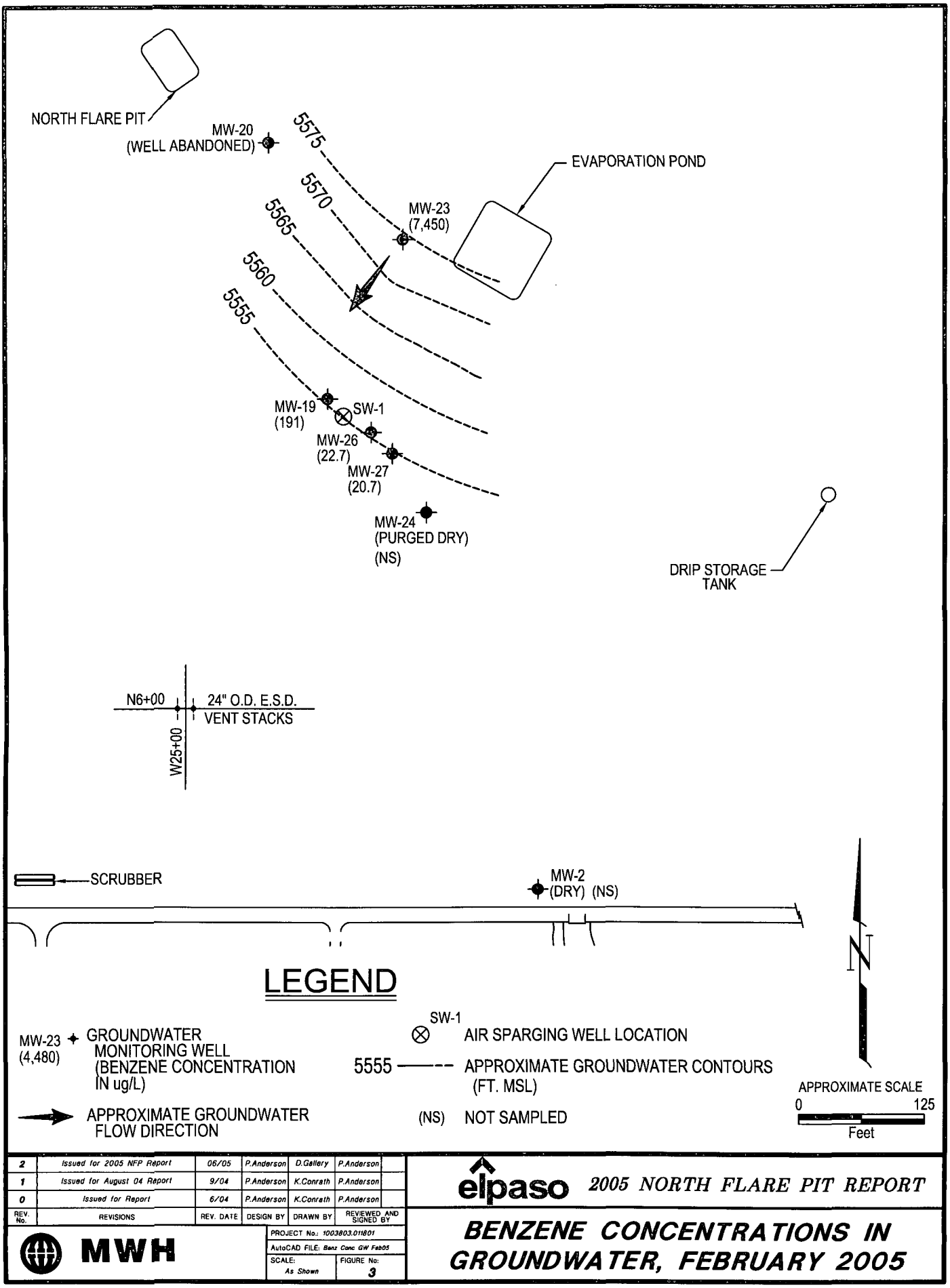
SCALE: As Shown

FIGURE No: 2

elpaso

2005 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, NOVEMBER 2004



REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	Issued for 2005 NFP Report	06/05	P.Anderson	D.Gallery	P.Anderson
1	Issued for August 04 Report	9/04	P.Anderson	K.Conrath	P.Anderson
0	Issued for Report	6/04	P.Anderson	K.Conrath	P.Anderson

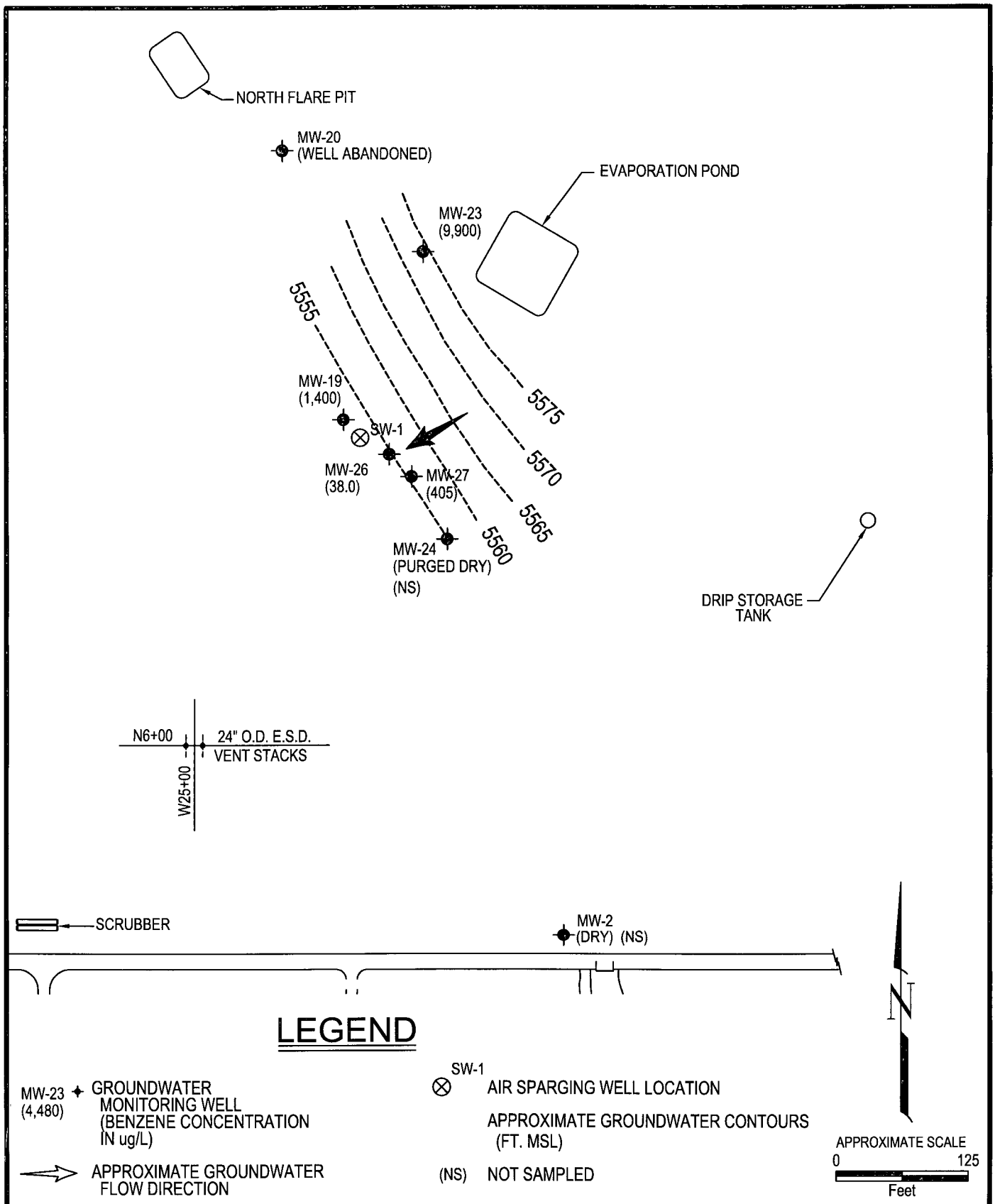
MWH

PROJECT No.: 1003803.011801
AutoCAD FILE: Benz Conc GW Feb05
SCALE: As Shown
FIGURE No: 3

elpaso

2005 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, FEBRUARY 2005



REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	Issued for May 05 Report	6/05	P.Anderson	K.Conrath	P.Anderson
1	Issued for August 04 Report	9/04	P.Anderson	K.Conrath	P.Anderson
0	Issued for Report	6/04	P.Anderson	K.Conrath	P.Anderson

MWH

PROJECT No.: 1003803.011801

AutoCAD FILE: Benz Conc GW May 05

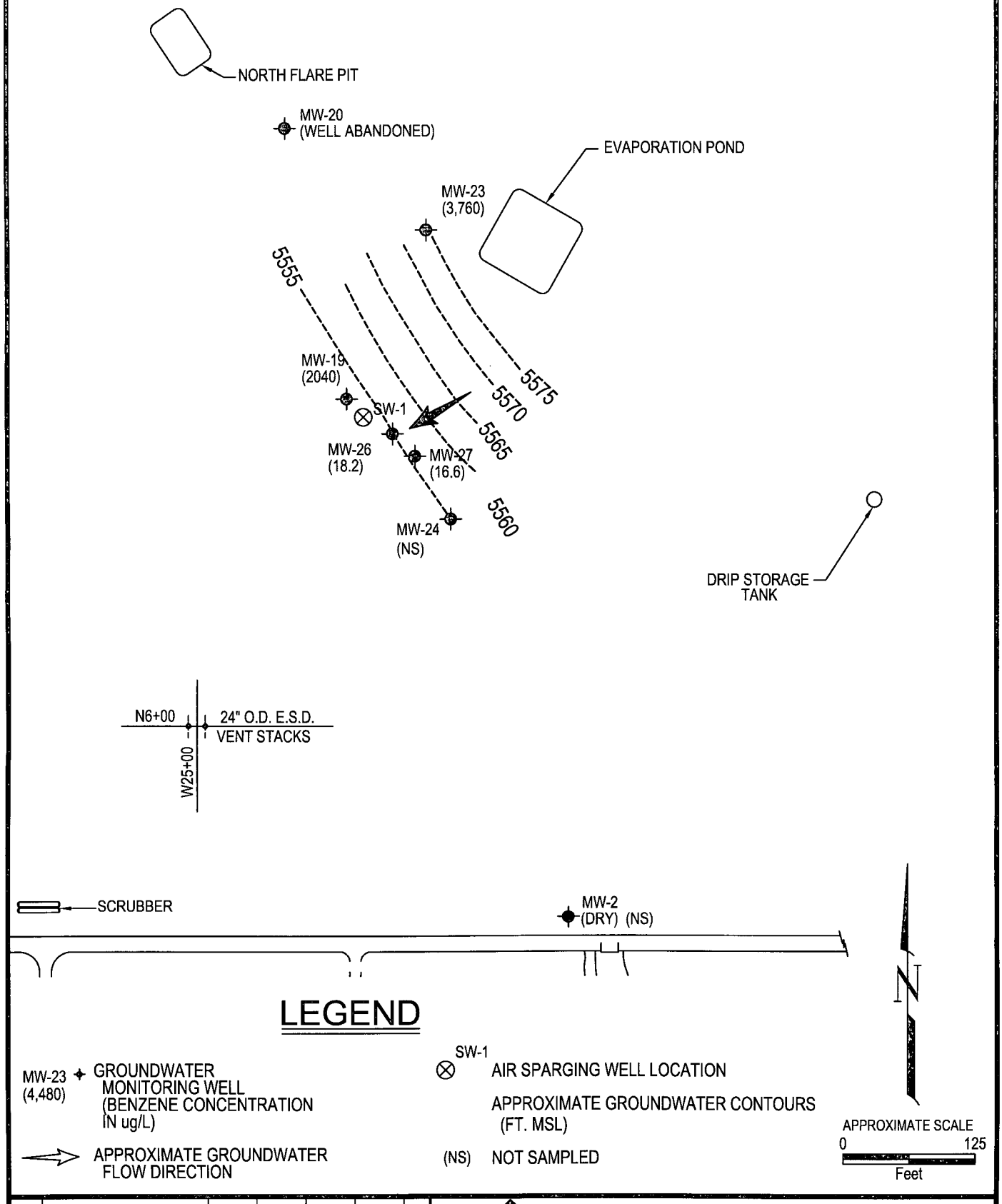
SCALE: As Shown

FIGURE No: 4

elpaso

2005 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, MAY 2005



REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
0	Issued for August 05 Report	9/05	P.Anderson	K.Conrath	P.Anderson

MWH

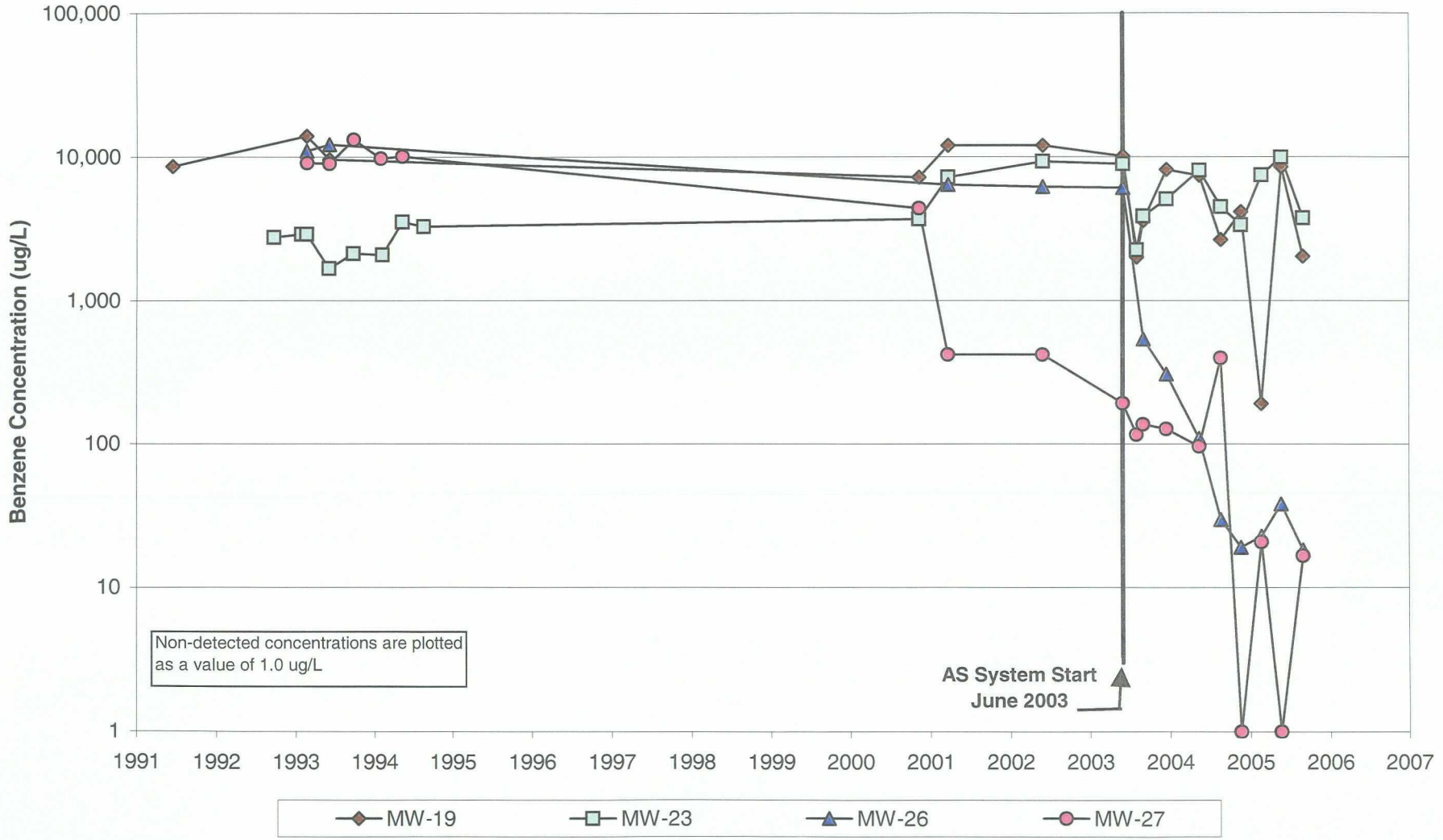
PROJECT No.: 1004426.0106
AutoCAD FILE: Benz Conc GW Aug05
SCALE: As Shown
FIGURE No: 5

elpaso

2005 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, AUGUST 2005

FIGURE 6
Historic Benzene Concentrations in Groundwater, 1991 - 2005
2005 Blanco Plant North Flare Pit Annual Report



APPENDIX A
AS System O&M and Site Visit Reports

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: September 23, 2004

Re: Blanco North

9-23-04 0800 hrs. O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp C	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.23	6.95	14.02	>20000	0.98	0
MW-24	67.12	na	na	na	na	0.02
MW-27	66.32	6.90	14.33	10790	1.22	.0
MW-19	na	7.15	15.06	>20000	1.86	2.2
MW-26	65.77	7.41	18.06	16510	3.35	4.7

System Pressure 14 psi, flow 7.0 scfm

System was off when I arrived at site. The clock read 7 am. The electricity came on at approximately 9:30 just prior to taking the readings at MW-19 and MW-26. Reset clock before leaving.

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: October 11, 2004

Re: Blanco North

10-11-04 0915 hrs. O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp C	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.13	6.94	14.7	>20000	0.88	0
MW-24	67.12	na	na	na	na	0.02
MW-27	66.38	6.88	14.0	13250	0.98	.01
MW-19	na	6.99	16.10	>20000	1.07	.01
MW-26	65.92	7.30	15.30	14120	0.81	.02

System Pressure 0 psi, flow 0.0 scfm

The electricity is off once again. The clock reads midnight. I do not know how long it has been off. Once the electricity comes on it will start cycling 12 hrs on 12 hrs off.

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: October 26, 2004

Re: Blanco North

10-26-04 1141 hrs. O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp C	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.13	7.60	16.94	16130	0.68	na
MW-24	67.11	na	na	na	na	na
MW-27	66.44	7.05	18.83	6520	0.61	na
MW-19	na	7.26	19.28	15090	0.95	na
MW-26	66.79	7.46	18.22	8590	0.50	na

System Pressure 0 psi, flow 0.0 scfm

The electricity is off once again. The clock reads midnight, same time as two weeks ago. I do not know how long it has been off. Once the electricity comes on it will start cycling 12 hrs on 12 hrs off.

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: December 7, 2004

Re: Blanco North

12/07/04 1117 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.27	5.75	57.8	17850	0.92	na
MW-24	67.14	NA	NA	NA	na	na
MW-27	66.64	5.58	60.2	8810	0.98	na
MW-19	NA	5.90	57.9	15560	1.98	na
MW-26	65.67	6.32	59.8	9100	2.75	na

System Pressure 0 psi, flow 0.0 scfm

The electricity is off again. The clock reads 10 am .

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: November 17, 2004

Re: Blanco North

11/17/04 1122 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.19	7.41	59.1	<20,000	0.91	na
MW-24	67.19	NA	NA	NA	na	na
MW-27	66.55	7.25	60.2	8720	0.89	na
MW-19	NA	7.44	59.5	19910	1.65	na
MW-26	65.67	7.85	59.2	11270	1.78	na

System Pressure 0 psi, flow 0.0 scfm

The electricity is on!!!. The clock reads 10 pm . So the system was off during the visit. I left the system off pending sampling early next week.. Following sampling I will reset the clock.

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: December 22, 2004

Re: Blanco North

12/22/04 0813 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.09	5.30	56.5	>20,000	1.41	0
MW-24	67.12	NA	NA	NA	na	-.03
MW-27	66.68	5.16	61.5	11150	1.16	0.05
MW-19	NA	5.37	61.4	>20,000	1.67	2.5
MW-26	65.85	5.73	60.03	11130	1.34	7.3

System Pressure 14psi, flow 6.5 scfm

Reset clock that was 2 hrs slow

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: January 10, 2005

Re: Blanco North

1/10/05 1025 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.15	6.85	61.1	>20,000	1.08	0
MW-24	67.11	NA	NA	NA	na	0.03
MW-27	66.71	6.70	64.8	11610	0.73	0.06
MW-19	NA	7.06	65.2	>20,000	1.79	3.6
MW-26	65.35	7.37	66.0	11150	1.86	7.7

System Pressure 14psi, flow 7.0 scfm

Clock showed correct time, indicating electricity has been on since last visit on 12/22/04

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: January 21, 2005 0931 hrs

Re: Blanco North Site Visit

Arrived at site with electrician and installed meter on system to record amount of time the sparge motor operates. Electrician installed the meter in an electric box and mounted it on the wall. Installation took approximately 2 hrs on site.

System Pressure 14psi, flow 7.0 scfm

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: January 23, 2005

Re: Blanco North

1/23/05 0847 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.16	6.88	63.7	>20,000	1.00	0
MW-24	67.12	NA	NA	NA	na	0.03
MW-27	66.76	7.01	62.3	9320	0.88	0.03
MW-19	NA	7.20	61.7	17500	2.02	5.4
MW-26	65.32	7.21	61.0	11150	3.49	8.8

System Pressure 14psi, flow 7.0 scfm

The system operated 33.6 hrs since installation of the new meter approximately 3 days ago.

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: February 8, 2005

Re: Blanco North

2/8/05 0721 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.12	6.83	61.2	17130	0.82	0
MW-24	67.11	NA	NA	NA	na	-0.02
MW-27	66.82	6.71	61.4	9060	0.94	0.08
MW-19	NA	7.03	60.3	16580	1.93	4.0
MW-26	65.20	6.96	61.0	7100	1.98	>10

System Pressure 14psi, flow 7.5 scfm

Previous Meter Reading 1/24/05 2002

Current Meter Reading 2/8/05 12470 minutes

Minutes since previous meter reading 10468 minutes (174.5 hrs) in 14 days (12.46 hrs/day)

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: February 21, 2005

Re: Blanco North

2/21/05 0739 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.21	6.85	52.7	17370	0.86	0.0
MW-24	67.11	NA	NA	NA	na	0.0
MW-27	66.89	6.80	55.6	8550	0.89	0.02
MW-19	NA	7.08	55.8	14900	1.53	5.3
MW-26	65.41	7.60	58.4	7110	3.43	9.4

System Pressure 14psi, flow 7.5 scfm

Previous Meter Reading 2/8/05 12470

Current Meter Reading 2/21/05 21659 minutes

Minutes since previous meter reading 9189 minutes (153.1 hrs) in 13 days (11.78 hrs/day)

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: March 8, 2005

Re: Blanco North

3/7/05 0854 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.08	6.92	56.5	>20K	0.53	0.0
MW-24	67.11	NA	NA	NA	na	0.02
MW-27	66.96	6.70	58.2	10560	0.56	0.32
MW-19	NA	7.18	63.8	16570	2.02	5.0
MW-26	65.51	7.01	68.3	8410	3.29	9.4

System Pressure 14psi, flow 7.5 scfm

Previous Meter Reading 2/21/05 21659 minutes

Current Meter Reading 3/07/05 30095 minutes

System was down 2/21-23/05

Minutes since previous meter reading 8436 minutes (140.6 hrs) in 12 days (11.71 hrs/day)

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: March 23, 2005

Re: Blanco North

3/23/05 0657 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.64	6.95	56.4	>20K	0.51	0.0
MW-24	67.12	NA	NA	NA	na	-0.03
MW-27	67.10	6.64	66.9	11040	0.78	-0.01
MW-19	NA	NA	NA	NA	NA	0.0
MW-26	67.68	6.73	63.2	8310	3.55	0.0

System Pressure 0 psi, flow 0 scfm

Previous Meter Reading 3/07/05 30095 minutes

Current Meter Reading 3/23/05 40774 minutes

System was down. There is no electricity.

Minutes since previous meter reading 10679 minutes (178 hrs) in 15 days (11.87 hrs/day)

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Memo

To: Pam Anderson

From: Martin Nee

CC: File

Date: April 6, 2005

Re: Blanco North

4/06/05 0951 O&M site visit.

Well	Depth to Water from TOC Feet	pH	Temp F	Conductivity umhos/cm	Do mg/L	Pressure Inches Water
MW-23	57.37	6.74	60.2	>20K	0.77	na
MW-24	67.11	na	na	na	na	na
MW-27	67.20	6.62	63.0	11690	0.84	na
MW-19	na	na	na	na	na	na
MW-26	67.30	6.67	64.3	9520	041	na

System Pressure 0 psi, flow 0 scfm

Previous Meter Reading 3/23/05 40774 minutes

Current Meter Reading 4/06/05 40774 minutes

.02 feet of product in MW-27. System was down. Electricity is suspect as is the sparge motor. I usually know if the electricity is on by the lights and they did not work but there was a low hum coming from the compressor motor. We should have an electrician out. We still have the compressor from the San Juan River Plant.

APPENDIX B
Groundwater Sampling Field Forms

Groundwater Sampling Field Forms – November 2004

WATER LEVEL DATA

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Project Name_	**San Juan Basin Ground Water**	**Project No.**	**30001.0**
Project Manager	**MJN**		
Client Company	**MWH**	**Date**	**11/22/04**
Site Name	**Blanco North Flare Pit**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	**0959**	-	-	**Well is dry, TD 58.75**
MW-19		-	**na**	**well is blocked, cannot get interface probe to groundwater**
MW-23		-	**57.15**	
MW-24		-	**67.11**	**TD is 67.20 water may not be static water level and may be water accumulated in end cap of well**
MW-26		-	**66.37**	
MW-27		-	**66.63**	

Comments

Signature: Martin J. Nee Date: November 22, 2004

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-19 Development **Sampling**
Project Manager MJN Date 11-22-04 Start Time 1116 Weather cloudy 40s
Depth to Water na Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height na Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
na x .16	na x 3	na x 3	na oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1125	**5.86**	**18820**	**62.8**				**4**	**clear with black silt**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1125	**5.86**	**18820**	**62.8**					**4**	**clear with black silt**

COMMENTS: grab sample collected due to well construction/accessability problems

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-19 Sample Time 1130

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 221104tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-23 Development **Sampling**
Project Manager MJN Date 11-22/04 Start Time 1014 Weather cloudy 40s
Depth to Water 57.15 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.71 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
9.71 x .65	6.31 x 3		18.93 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1025	**5.68**	**>20,000**	**59.6**				**1**	**gray, odor, sheen**
	5.64	**>20,000**	**60.0**				**2**	**gray, odor, sheen**
	5.59	**>20,000**	**58.7**				**5**	**gray, odor, sheen**
	5.63	**>20,000**	**58.9**				**7.5**	**well is bailing down**
1058	**5.97**	**>20,000**	**58.8**				**8.25**	**well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1058	**5.97**	**>20,000**	**58.8**					**8.25**	**well has bailed down**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-23 Sample Time 1105

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 112204tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-26 Development **Sampling**
Project Manager MJN Date 11-22-04 Start Time 1141 Weather cloudy 40s
Depth to Water 66.37 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.30 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/oz to be removed
	Gallons	Ounces	
1.3 x .65	0.84 x 3	108 x 3	333 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
1148	**6.27**	**11060**	**61.6**				**32**	**gray, HC odor, Sheen**
	6.26	**11020**	**62**				**52**	**gray, HC odor, Sheen**
	6.30	**10940**	**61.6**				**66**	**gray, HC odor, Sheen**
	6.42	**10900**	**61.0**				**74**	**gray, HC odor, Sheen**
1206	**6.32**	**10800**	**60.4**				**80**	**gray, HC odor, Sheen**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1206	**6.32**	**10800**	**60.4**					**80**	**gray, HC odor, Sheen**

COMMENTS: Well bailed dry.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-26 Sample Time 1210

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 221104tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-27 Development **Sampling**
Project Manager MJN Date 11/22/04 Start Time 1218 Weather cloudy 40s
Depth to Water 66.63 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 2.65 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
2.65 x .16	0.42 x 3	54 x 3	161

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1228	**5.62**	**7360**	**63.4**				**32**	**clear, strong HC odor, sheen**
	5.61	**7960**	**63.3**				**56**	**well is bailing down**
	5.66	**7460**	**63.2**				**70**	**clear, strong HC odor, sheen**
1240	**5.73**	**7200**	**63.3**				**78**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1240	**5.73**	**7200**	**63.3**					**78**	**well has bailed dry**

COMMENTS: Well bailed dry.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-27 Sample Time 1245

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 112204tb01

Groundwater Sampling Field Forms – February 2005

WATER LEVEL DATA

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

Project Name_	**San Juan Basin Ground Water**	**Project No.**	**30001.0**
Project Manager	**MJN**		
Client Company	**MWH**	**Date**	**02/23/05**
Site Name	**Blanco**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	**0732**	-	-	**Well is dry, TD 58.75**
MW-19		-	**na**	**well is blocked, cannot get interface probe to groundwater**
MW-23		-	**57.13**	
MW-24		-	**67.11**	**TD is 67.20 water may not be static water level and may be water accumulated in end cap of well**
MW-26		-	**66.12**	
MW-27		**67.14**	**67.15**	**First measurable product in this well. Product was obvious in the bailer during sampling.**

Comments
System was turned off on February 21, 2005 at approximately 0930 hrs. Also on the 21st, water was removed from these very slow recovering wells for field parameters.

Signature: Martin J. Nee Date: February 23, 2005

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-19 Development **Sampling**
Project Manager MJN Date 2-23-05 Start Time 0835 Weather cloudy 40s
Depth to Water na Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height na Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
na x .16	na x 3	na x 3	na oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
0855	**7.24**	**12640**	**55.6**				**4**	**clear with black floaters and sediment, hydrocarbon odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0855	**7.24**	**12640**	**55.6**		**0.65**			**4**	**clear with black floaters and sediment, hydrocarbon odor**

COMMENTS: collected grab sample without purging due to well structural problems. Could not measure water levels.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-19 Sample Time 0900
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 022305TB01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-23 Development **Sampling**
Project Manager MJN Date 02-23-05 Start Time 0732 Weather cloudy 40s
Depth to Water 57.13 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.72 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
9.72 x .65	6.32 x 3		18.95 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0740	**6.93**	**13300**	**53.9**				**1**	**dark olive/grey, sudsy, sheen**
	7.03	**15040**	**57.4**				**2**	**dark olive/grey, sudsy, sheen**
	7.05	**16380**	**56.8**				**3**	**dark olive/grey, sudsy, sheen**
	7.00	**16690**	**56.8**				**5**	**dark olive/grey, sudsy, sheen**
	6.99	**16770**	**56.0**				**8.25**	**well is bailing down, dark grey, sheen**
0813	**7.09**	**17090**	**57.2**				**8.5**	**well has bailed down, dark grey, sheen**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0813	**7.09**	**17090**	**57.2**					**8.5**	**well has bailed down, dark grey, sheen**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-23 Sample Time 0820

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 230205tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-26 Development **Sampling**
Project Manager MJN Date 02-23-05 Start Time 0903 Weather cloudy 40s
Depth to Water 66.12 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.55 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/oz to be removed
	Gallons	Ounces	
1.55 .65	1.00 x 3	128 x 3	438 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
0914	**7.06**	**6610**	**59.7**				**38**	**bailer top clear, bottom dark grey, silty, sheen**
	7.39	**6720**	**61.7**				**70**	**dark grey, silty, sheen, well is bailing down**
	7.52	**6740**	**62.2**				**94**	**dark grey silty**
	7.57	**6770**	**62.6**				**112**	**dark grey silty**
0934	**7.61**	**6670**	**62.8**				**124**	**dark grey silty, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0934	**7.61**	**6670**	**62.8**					**124**	**dark grey silty, well has bailed dry**

COMMENTS: Well bailed dry.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-26 Sample Time 1040

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 022305tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-27 Development **Sampling**
Project Manager MJN Date 02/23/05 Start Time 0943 Weather cloudy 40s
Depth to Water 67.15 Depth to Product 67.14 Product Thickness .01 MeasuringPoint TOC
Water Column Height 2.14 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
2.14 x .16		44 x 3	131

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1004	**6.96**	**8100**	**61.7**				**24**	**grey, strong HC odor, product**
	7.02	**8450**	**63.1**				**40**	**grey, strong HC odor, product**
1025	**7.03**	**8400**	**63.1**				**48**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1025	**7.03**	**8400**	**63.1**					**48**	**well has bailed dry**

COMMENTS: Well bailed dry.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Kutz Sample ID Blanco NFP MW-27 Sample Time 1115

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 022305tb01

Groundwater Sampling Field Forms – May 2005

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

WATER LEVEL DATA

Project Name_ San Juan Basin Ground Water **Project No.** 30001.0
Project Manager MJN
Client Company MWH **Date** 5-30-05
Site Name Blanco

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	1105	-	-	well is dry TD 58.76
MW-19		-		no access
MW-23		-	57.22	well purged and sampled 5/23/05, looks static
MW-24		-	67.13	not enough water in well to sample TD 67.19
MW-26		-	67.16	well purged and sampled 5/23/05 not recovered not static
MW-27		-	67.58	well purged and sampled 5/23/05 not recovered not static
MW-5		-		Dry hole TD 21.15
MW-6		-	30.95	not enough water to sample TD 31.22, may not be static
MW-7		-		Well is dry TD is 21.24
MW-8		-	34.66	
MW-28		-	30.22	
MW-29		-	32.31	
MW-30		-	32.28	
MW-12		-	15.65	
MW-13		-	13.43	
MW-14		-	18.81	
MW-15		-	17.80	

Comments

Signature: Martin J. Nee Date: May 31, 2005

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-19 Development **Sampling**
Project Manager MJN Date 5-23-05 Start Time 0920 Weather sunny 80s
Depth to Water na Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height na Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
na x .16	na x 3	na x 3	na oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
0922	**6.48**	**8520**	**71.1**				**4**	**grey with black floaters and sediment, hydrocarbon odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0922	**6.48**	**8520**	**71.1**		**0.96**			**4**	**grey with black floaters and sediment, hydrocarbon odor**

COMMENTS: collected grab sample without purging due to well structural problems. Could not measure water levels.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-19 Sample Time 0926
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 230505TB01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-19 Development **Sampling**
Project Manager MJN Date 5-31-05 Start Time 0700 Weather sunny 80s
Depth to Water NA Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height NA Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
na x .16	na x 3	x 3	na oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate

COMMENTS: a grab sample was collected due to access problems, water levels are not available, no pH, conductivity, or temperature measurements were collected.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal____ Sample ID Blanco NFP MW-19 Sample Time 0745 5/31/05

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-23 Development **Sampling**
Project Manager MJN Date 052305 Start Time 0932 Weather cloudy 40s
Depth to Water 57.215 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.63 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	**Gal**/oz to be removed
9.63 x .65	6.26 x 3		18.79 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0940	**6.35**	**7820**	**69.3**				**1**	**grey, sheen, sudsy**
	6.34	**8070**	**66.3**				**2**	**grey, sheen, sudsy**
	6.32	**8140**	**65.5**				**3**	**grey, sheen, sudsy**
	6.29	**8670**	**65.6**				**5**	**grey, sheen, sudsy**
	6.31	**9040**	**65.2**				**7.5**	**as above, well is bailing down**
0953	**6.48**	**9390**	**65.0**		**1.32**		**7.75**	**as above, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0953	**6.48**	**9390**	**65.0**		**1.32**		**7.75**	**grey, sheen, sudsy, well has bailed dry**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-23 Sample Time 1007
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 230505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-23 Development **Sampling**
Project Manager MJN Date 5/30/05 Start Time 1202 Weather sunny 80s
Depth to Water 57.22 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.625 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
9.625 x .65	6.63 x 3		18.77 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1215	**6.67**	**6940**	**67.9**				**1**	**yellow tinge, sudsy, sheen**
	6.76	**7570**	**65.4**				**2**	**yellow tinge, sudsy, sheen**
	6.67	**8250**	**65.2**				**3**	**yellow tinge, sudsy, sheen**
	6.61	**8740**	**65.2**				**5**	**grey, sudsy, sheen**
	6.74	**9060**	**65.2**				**7.5**	**well is bailing down, grey**
1234	**6.79**	**9170**	**65.5**				**7.25**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1234	**6.79**	**9170**	**65.5**					**7.25**	**well has bailed dry**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-23 Sample Time 12335 5/30/05

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name:_Blanco NFP Client:_MWH/EL Paso
Location:_Blanco NFP Well No:__MW-26 Development **Sampling**
Project Manager __MJN Date__05-23-05 Start Time__0841__ Weather__sunny 80s
Depth to Water __66.25 Depth to Product __na__ Product Thickness__na__ Measuring Point __TOC__
Water Column Height __1.55 Well Dia. __4"__

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other__or bail dry_

Gal/ft x ft of water	Water Volume in Well		Gal/oz to be removed
	Gallons	Ounces	
1.38 .65	0.897 x 3	114.81 x 3	344.45 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
0848	**6.39**	**6610**	**65.20**				**33**	**dark grey, sheen, HC odor**
	6.47	**6150**	**64.8**				**57**	**well is bailing down**
	6.48	**6060**	**64.3**				**75**	**dark grey, sheen, HC odor**
	6.47	**6150**	**64.6**				**91**	**dark grey, sheen, HC odor**
0901	**6.52**	**6160**	**64.9**		**0.84**		**98**	**well is dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0901	**6.52**	**6160**	**64.9**		**0.84**		**98**	**well is dry**

COMMENTS: Well bailed dry.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal__Rio Vista_ Sample ID_Blanco NFP MW-26 Sample Time__0910_____
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB__230505tb01__

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-26 Development **Sampling**
Project Manager MJN Date 5/30/05 Start Time 1356 Weather Sunny 80s
Depth to Water 67.16 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 0.47 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/oz to be removed
	Gallons	Ounces	
0.47 x .65	.306 x 3	39.17 x 3	117 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
1408	**6.59**	**7890**	**70.2**				**18**	**well has not fully recovered from previous weeks BTEX sampling**
	6.73	**7920**	**67.9**				**27**	**grey, HC odor, sheen**
	6.76	**8010**	**68.1**				**31**	**grey, HC odor, sheen**
1438	**6.78**	**8070**	**68.2**				**39**	**grey, HC odor, sheen**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1438	**6.78**	**8070**	**68.2**					**39**	**grey, HC odor, sheen**

COMMENTS: Well bailed dry on 5/30/05 not enough water to sample on 5/31/05 or 6/1/05. Water level had not recovered fully following 5/23/05 sampling when purged on 5/31/05

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-26 Sample Time none collected
VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB na

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-27 Development **Sampling**
Project Manager MJN Date 05/23/05 Start Time 0810 Weather sunny 80s
Depth to Water 67.41 Depth to Product 67.34 Product Thickness .02 MeasuringPoint TOC
Water Column Height 1.91 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
1.91 x .16		39.12 x 3	117.35

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
0817	**6.34**	**490**	**63.6**				**24**	**strong HC odor, grey**
	6.37	**1030**	**64.9**				**37**	**well is bailing down**
	6.50	**1040**	**64.9**				**41**	**strong HC odor, grey**
0836	**6.50**	**1090**	**65.1**		**1.60**		**43**	**strong HC odor, grey, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0836	**6.50**	**1090**	**65.1**		**1.60**		**43**	**strong HC odor, grey, well has bailed dry**

COMMENTS: Well bailed dry. Not enough water after 2 hrs recovery for 2 VOAs. Submitted 1 VOA to laboratory

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-27 Sample Time 1027

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 230505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name:_Blanco NFP Client:_MWH/EL Paso

Location:_Blanco NFP Well No:__MW-27 Development **Sampling**

Project Manager ___MJN Date__5/30/05 Start Time__1258__ Weather__sunny 80s

Depth to Water __67.58__ Depth to Product __na__ Product Thickness__na__ Measuring Point __TOC__

Water Column Height __1.7__ Well Dia. ____2"____

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other__or bail dry_

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
1.7 x .16	0.27 x 3	34.81 x 3	104.45

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1313	**6.22**	**8870**	**71.0**				**22**	**grey, product, HC odor**
	6.60	**8880**	**69.7**				**32**	**grey, product, HC odor**
	6.55	**9370**	**70.3**				**36**	**grey, product, HC odor**
1323	**6.91**	**10470**	**69.7**				**38**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1323	**6.91**	**10470**	**69.7**					**38**	**well has bailed dry**

COMMENTS: Well bailed dry, returned to sample 5/31/05 and had to return on 6/1/05 to finish due to lack of water.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal__Rio Vista_ Sample ID_Blanco NFP MW-27 Sample Time__0803 5/31/05

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB__310505tb01

Groundwater Sampling Field Forms – August 2005

Lodestar Services, Incorporated
PO Box 3861 Farmington, NM 87499-3861 Office (505) 334-2791

WATER LEVEL DATA

Project Name_ San Juan Basin Ground Water **Project No.** 30001.0
Project Manager MJN
Client Company MWH **Date** August 30, 2005
Site Name Blanco

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	0752	-	-	well is dry TD 58.76
MW-19		-		no access
MW-23		-	57.18	well purged and sampled
MW-24		-	67.11	not enough water in well to sample TD 67.19
MW-26		-	66.08	well purged and sampled
MW-27		-	67.80	pulled absorbent sock, not static

Comments

Signature: Martin J. Nee Date: August 30, 2005

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-19 Development **Sampling**
Project Manager MJN Date 8-30-05 Start Time 1000 Weather sunny 80s
Depth to Water na Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height na Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
na x .16	na x 3	na x 3	na oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1036	**6.51**	**7820**	**71.9**				**4**	**grey with black suspended organic material and sediment, hydrocarbon odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1036	**6.51**	**7820**	**71.9**					**4**	**grey with black suspended organic material and sediment, hydrocarbon odor**

COMMENTS: Collected grab sample without purging due to well structural problems. Could not measure water levels.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-19 Sample Time 1019

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 300805TB01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-23 Development **Sampling**
Project Manager MJN Date 8/30/05 Start Time 0753 Weather sunny 80s
Depth to Water 57.18 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.96 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
9.96 x .65	6.28 x 3		18.85 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0801	**6.51**	**4090**	**61.5**				**1**	**grey, hydrocarbon odor**
	6.48	**4700**	**62.1**				**2**	**grey, hydrocarbon odor**
	6.47	**4960**	**62.2**				**3**	**grey, hydrocarbon odor**
	6.48	**5290**	**62.4**				**5**	**grey, hydrocarbon odor, sheen**
	6.53	**5550**	**62.3**				**7.5**	**grey, hydrocarbon odor, sheen, well is bailing down**
0812	**6.76**	**5680**	**62.3**				**8.125**	**grey, hydrocarbon odor, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0812	**6.76**	**5680**	**62.3**					**8.125**	**grey, hydrocarbon odor, well has bailed dry**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-23 Sample Time 0815 8/30/05

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 300805tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name:_Blanco NFP Client:_MWH/EL Paso

Location:_Blanco NFP Well No:__MW-26 Development **Sampling**

Project Manager __MJN Date__8/30/05__ Start Time__0908__ Weather__Sunny 80s

Depth to Water __66.08__ Depth to Product __na__ Product Thickness__na__ Measuring Point __TOC__

Water Column Height __1.79__ Well Dia. _____4"_____

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other__or bail dry_

Gal/ft x ft of water	Water Volume in Well		Gal/oz to be removed
	Gallons	Ounces	
1.79 x .65	1.16 x 3	149 x 3	447 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
0908	**6.41**	**5380**	**66.5**				**38**	**grey, hydrocarbon odor**
	6.41	**5220**	**65.2**				**70**	**grey, hydrocarbon odor, well is bailing down**
	6.40	**4950**	**65.4**				**86**	**grey, hydrocarbon odor**
	6.40	**4900**	**65.0**				**94**	**grey, hydrocarbon odor**
0921	**6.43**	**4900**	**65.1**				**98**	**grey, hydrocarbon odor, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0921	**6.43**	**4900**	**65.1**					**98**	**grey, hydrocarbon odor, well has bailed dry**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal__Rio Vista_ Sample ID_Blanco NFP MW-26 Sample Time__8/30/05 0925 _____

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB__300805tb01___

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco NFP Client: MWH/EL Paso

Location: Blanco NFP Well No: MW-27 Development **Sampling**

Project Manager MJN Date 8/30/05 Start Time 0846 Weather sunny 80s

Depth to Water 67.80 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 1.48 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
1.48 x .16	0.23 x 3	30 x 3	91

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
0850	**6.32**	**4280**	**65.2**				**16**	**grey, sheen, hydrocarbon odor**
	6.39	**4680**	**65.1**				**26**	**grey, sheen, hydrocarbon odor, well is bailing down**
0902	**6.64**	**7100**	**65.2**				**30**	**grey, sheen, hydrocarbon odor, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0902	**6.64**	**7100**	**65.2**					**30**	**grey, sheen, hydrocarbon odor, well has bailed down**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-27 Sample Time 0905 8/30/05

BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 300805tb01

APPENDIX C
Groundwater Analytical Laboratory Reports

Groundwater Analytical Report – November 2004

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	11/22/04
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco North)
Batch Identification:	T8855	**Matrix:**	Water
MS/MSD Parent(s)[a]:	T8855-04	**Field Replicate Parent(s):**	None

Verification Complete: *Brian Buttars – 12/06/04*

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
1,2	Blanco North	MW-23	T8855-01	Y	J	Benzene @ 3360 µg/l
					UJ	Toluene @ <1 µg/l
					UJ	Ethylbenzene @ <1 µg/l
					UJ	Xylenes, total @ <2 µg/l
					UJ	o-Xylenes @ <1 µg/l
					UJ	m/p-Xylenes @ <2 µg/l
1,3	Blanco North	MW-19	T8855-02	Y	J	Benzene @ 4150 µg/l
					J	Toluene @ 6.8 µg/l
					UJ	Ethylbenzene @ <1 µg/l
					UJ	Xylenes, total @ <2 µg/l
					UJ	o-Xylenes @ <1 µg/l
					UJ	m/p-Xylenes @ <2 µg/l
1	Blanco North	MW-26	T8855-03	Y	J	Benzene @ 19 µg/l
					UJ	Toluene @ <1 µg/l
					J	Ethylbenzene @ 3.5 µg/l
					J	Xylenes, total @ 56.8 µg/l
					J	o-Xylenes @ 11.5 µg/l
					J	m/p-Xylenes @ 45.4 µg/l
1,4	Blanco North	MW-27	T8855-04	Y	UJ	Benzene @ <1 µg/l
					UJ	Toluene @ <1 µg/l
					J	Ethylbenzene @ 330 µg/l
					J	Xylenes, total @ 1520 µg/l
					J	o-Xylenes @ 299 µg/l
					J	m/p-Xylenes @ 1220 µg/l
None	Trip Blank	221104TB01	T8855-05	N		

DATA VERIFICATION WORKSHEET

Analytical Method:	SW-846 8021B (BTEX)	**MWH Job Number:**	EPC-SJRB (Blanco North)
Laboratory:	Accutest	**Batch Identification:**	T8855

Verification Criteria								
Sample ID	**Blanco North MW-23**	**Blanco North MW-19**	**Blanco North MW-26**	**Blanco North MW-27**	**221104TB 01**			
Lab ID	**T8855-01**	**T8855-02**	**T8855-03**	**T8855-04**	**T8855-05**			
Holding Time	A[1]	A[1]	A[1]	A[1]	A			
Analyte List	A	A	A	A	A			
Reporting Limits	A	A	A	A	A			
Surrogate Spike Recovery	A[2]	A[3]	A	A[4]	A			
Trip Blank	A	A	A	A	A			
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A			
Initial Calibration	N	N	N	N	N			
Initial Calibration Verification (ICV)	N	N	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N	N	N			
Method Blank	A	A	A	A	A			
Laboratory Control Sample (LCS)	A	A	A	A	A			
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	A	N/A			
Retention Time Window	N	N	N	N	N			
Injection Time(s)	N	N	N	N	N			
Hardcopy vs. Chain-of-Custody	A	A	A	A	A			
EDD vs. Hardcopy	N	N	N	N	N			
EDD vs. Chain of Custody	N	N	N	N	N			

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Sample analyzed three days outside of holding time, introducing a possible low bias. Qualify associated sample hits with "J" flags indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags indicating possible false negatives.

2) Surrogate aaa-trifluorotoluene recovery outside acceptance criteria for Run #1 @ 244% (66-136); no analytes detected above the method detection limit (MDL) associated with Run #1; no data qualified.

3) Surrogate aaa-trifluorotoluene recovery outside acceptance criteria for Run #1@ 151% (66-136), indicating a possible high bias. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased high.

4) Surrogate 4-bromofluorobenzene and aaa-trifluorotoluene recoveries outside acceptance criteria for Run #1 @ 238% (71-127) and 0% (66-136) respectively, indicating an unknown bias. No analytes detected above the MDL associated with Run #1; no data qualified.

Gulf Coast ACCUTEST. Laboratories

12/06/04

Technical Report for

Montgomery Watson

Blanco North

D-MWH-05-08-03-MSG-01

Accutest Job Number: T8855

Sampling Date: 11/22/04

Report to:

MWH

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: **14**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4

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Sample Summary

Montgomery Watson

Job No: T8855

Blanco North
Project No: D-MWH-05-08-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
T8855-1	11/22/04	11:05	MN	11/24/04	AQ	Water	BLANCO MW-23
T8855-2	11/22/04	11:30	MN	11/24/04	AQ	Water	BLANCO MW-19
T8855-3	11/22/04	12:10	MN	11/24/04	AQ	Water	BLANCO MW-26
T8855-4	11/22/04	12:45	MN	11/24/04	AQ	Water	BLANCO MW-27
T8855-5	11/22/04	07:00	MN	11/24/04	AQ	Trip Blank Water	BLANCO TRIP 221104TB01

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO MW-23		
Lab Sample ID:	T8855-1	Date Sampled:	11/22/04
Matrix:	AQ - Water	Date Received:	11/24/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03068.D	1	12/03/04	JH	n/a	n/a	GKK471
Run #2 [a]	KK03069.D	100	12/03/04	JH	n/a	n/a	GKK471

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3360 [b]	100	40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	104%	94%	71-127%
98-08-8	aaa-Trifluorotoluene	244% [c]	121%	66-136%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO MW-19		
Lab Sample ID:	T8855-2	Date Sampled:	11/22/04
Matrix:	AQ - Water	Date Received:	11/24/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03072.D	1	12/03/04	JH	n/a	n/a	GKK471
Run #2 [a]	KK03073.D	100	12/03/04	JH	n/a	n/a	GKK471

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	4150 [b]	100	40	ug/l	
108-88-3	Toluene	6.8	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	126%	92%	71-127%
98-08-8	aaa-Trifluorotoluene	151% [c]	108%	66-136%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO MW-26		
Lab Sample ID:	T8855-3	Date Sampled:	11/22/04
Matrix:	AQ - Water	Date Received:	11/24/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03074.D	1	12/03/04	JH	n/a	n/a	GKK471
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	19.0	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	3.5	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	56.8	2.0	0.80	ug/l	
95-47-6	o-Xylene	11.5	1.0	0.40	ug/l	
	m,p-Xylene	45.4	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	101%		71-127%
98-08-8	aaa-Trifluorotoluene	114%		66-136%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO MW-27		
Lab Sample ID:	T8855-4	Date Sampled:	11/22/04
Matrix:	AQ - Water	Date Received:	11/24/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK03076.D	1	12/03/04	JH	n/a	n/a	GKK471
Run #2 [a]	KK03077.D	50	12/03/04	JH	n/a	n/a	GKK471

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	330 [b]	50	20	ug/l	
1330-20-7	Xylenes (total)	1520 [b]	100	40	ug/l	
95-47-6	o-Xylene	299 [b]	50	20	ug/l	
	m,p-Xylene	1220 [b]	100	40	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	238% [c]	95%	71-127%
98-08-8	aaa-Trifluorotoluene	0% [c]	109%	66-136%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO TRIP 221104TB01		
Lab Sample ID:	T8855-5	Date Sampled:	11/22/04
Matrix:	AQ - Trip Blank Water	Date Received:	11/24/04
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK03067.D	1	12/03/04	JH	n/a	n/a	GKK471
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	80%		71-127%
98-08-8	aaa-Trifluorotoluene	97%		66-136%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 221104MN01

ACCUTEST Laboratories
10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 849304501316 | Bottle Order Control #
Accutest Quote # | Accutest Job # T8855

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 719 520 4433
Sampler's Name:

Project Information

Project Name: Blanco NFP
Street:
City: State:
Project #:
Fax #: 719 520 4716
Client Purchase Order #:

Requested Analysis

BTEX

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
LAB USE ONLY

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAc	H2SO4	None	NaHSO4	MEOH	ENCORE
1	Blanco MW-23		11/2/04	1105	MN	WG	2					✓			
2	Blanco MW-19		11/2/04	1130	MN	WG	2					✓			
3	Blanco MW-26		11/2/04	1210	MN	WG	2					✓			
4	Blanco MW-27		11/2/04	1245	MN	WG	2					✓			
5	Blanco Trip 221104TB01		11/2/04	0700	MN	WQ	2	✓							

Turnaround Time (Business Days)

- [x] 10 Day *STANDARD* — Approved By: / Date:
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format _____

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler	Date Time	Received by	Relinquished by	Date Time	Received by
1 11/2/04	1501	1	2	11/4/04 10:00	2
Relinquished by 3	Date Time	Received by 3	Relinquished by 4	Date Time	Received by 4
Relinquished by 5	Date Time	Received by 5	Custody Seal # Yes	Preserved where applicable	On Ice 9	Cooler Temp 3

T8855: Chain of Custody
Page 1 of 1

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T8855
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK471-MB	KK03059.D	1	12/03/04	JH	n/a	n/a	GKK471

The QC reported here applies to the following samples: Method: SW846 8021B

T8855-1, T8855-2, T8855-3, T8855-4, T8855-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	79% [a]	71-127%
98-08-8	aaa-Trifluorotoluene	89% [a]	66-136%

(a) %Recovery adjusted for double surrogate.

Blank Spike Summary

Job Number: T8855
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK471-BS	KK03060.D	1	12/03/04	JH	n/a	n/a	GKK471

The QC reported here applies to the following samples: Method: SW846 8021B

T8855-1, T8855-2, T8855-3, T8855-4, T8855-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.3	102	76-128
100-41-4	Ethylbenzene	20	19.9	100	79-129
108-88-3	Toluene	20	19.6	98	77-126
1330-20-7	Xylenes (total)	60	58.5	98	79-126
95-47-6	o-Xylene	20	19.6	98	78-125
	m,p-Xylene	40	38.9	97	79-127

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	86%	71-127%
98-08-8	aaa-Trifluorotoluene	96%	66-136%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T8855
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T8855-4MS	KK03078.D	50	12/03/04	JH	n/a	n/a	GKK471
T8855-4MSD	KK03079.D	50	12/03/04	JH	n/a	n/a	GKK471
T8855-4 [a]	KK03076.D	1	12/03/04	JH	n/a	n/a	GKK471
T8855-4 [a]	KK03077.D	50	12/03/04	JH	n/a	n/a	GKK471

The QC reported here applies to the following samples: Method: SW846 8021B

T8855-1, T8855-2, T8855-3, T8855-4, T8855-5

CAS No.	Compound	T8855-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		1000	1070	107	1090	109	2	70-134/21
100-41-4	Ethylbenzene	330 [b]		1000	1230	90	1260	93	2	73-132/15
108-88-3	Toluene	ND		1000	1040	104	1060	106	2	66-137/22
1330-20-7	Xylenes (total)	1520 [b]		3000	4060	85	4120	87	1	69-130/19
95-47-6	o-Xylene	299 [b]		1000	1210	91	1220	92	1	66-131/20
	m,p-Xylene	1220 [b]		2000	2850	82	2900	84	2	68-132/19

CAS No.	Surrogate Recoveries	MS	MSD	T8855-4	T8855-4	Limits
460-00-4	4-Bromofluorobenzene	95%	94%	238%* [c]	95%	71-127%
98-08-8	aaa-Trifluorotoluene	107%	107%	0%* [c]	109%	66-136%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run #2.
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

Groundwater Analytical Report – February 2005

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	02/23/05
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco NFP)
Batch Identification:	T9595	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None

Verification Complete: *Brian Buttars – 03/08/05*

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Trip Blank	230205TB01	T9595-01	N		
1,2	Blanco NFP	MW-23	T9595-02	Y	J	Benzene @ 7450 D µg/l
					UJ	Toluene @ <1 µg/l
					J	Ethylbenzene @ 321 D µg/l
					J	Xylenes, total @ 1380 D µg/l
					UJ	o-Xylene @ <100 D µg/l
					J	m/p-Xylene @ 1380 D µg/l
1,3	Blanco NFP	MW-27	T9595-03	Y	J	Benzene @ 20.7 µg/l
					J	Toluene @ 28.2 µg/l
					J	Ethylbenzene @ 419 D µg/l
					J	Xylenes, total @ 2210 D µg/l
					J	o-Xylene @ 434 D µg/l
					J	m/p-Xylene @ 1780 D µg/l
1	Blanco NFP	MW-19	T9595-04	Y	J	Benzene @ 191 D µg/l
					UJ	Toluene @ <10 D µg/l
					UJ	Ethylbenzene @ <10 D µg/l
					UJ	Xylenes, total @ <20 D µg/l
					UJ	o-Xylene @ <10 D µg/l
					UJ	m/p-Xylene @ <20 D µg/l
1	Blanco NFP	MW-26	T9595-05	Y	J	Benzene @ 22.7 D µg/l
					UJ	Toluene @ <10 D µg/l
					UJ	Ethylbenzene @ <10 D µg/l
					UJ	Xylenes, total @ 11 TD µg/l
					UJ	o-Xylene @ 5.6 TD µg/l
					UJ	m/p-Xylene @ <20 D µg/l

DATA VERIFICATION WORKSHEET

Analytical Method:	**SW-846 8021B (BTEX)**	**MWH Job Number:**	**EPC-SJRB (Blanco NFP)**
Laboratory:	**Accutest**	**Batch Identification:**	**T9595**

Verification Criteria								
Sample ID	**230205TB 01**	**Blanco NFP MW-23**	**Blanco NFP MW-27**	**Blanco NFP MW-19**	**Blanco NFP MW-26**			
Lab ID	**T9595-01**	**T9595-02**	**T9595-03**	**T9595-04**	**T9595-05**			
Holding Time	A	A[1]	A[1]	A[1]	A[1]			
Analyte List	A	A	A	A	A			
Reporting Limits	A	A	A	A	A			
Surrogate Spike Recovery	A	A[2]	A[3]	A	A			
Trip Blank	A	A	A	A	A			
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A			
Initial Calibration	N	N	N	N	N			
Initial Calibration Verification (ICV)	N	N	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N	N	N			
Method Blank	A	A	A	A	A			
Laboratory Control Sample (LCS)	A	A	A	A	A			
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A	N/A			
Retention Time Window	N	N	N	N	N			
Injection Time(s)	N	N	N	N	N			
Hardcopy vs. Chain-of-Custody	A	A	A	A	A			
EDD vs. Hardcopy	N	N	N	N	N			
EDD vs. Chain of Custody	N	N	N	N	N			

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Sample not preserved to a pH <2, reducing the holding time from 14 days to 7. Sample analyzed one day outside of holding time @ 8 days. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags, indicating possible false negatives.

2) Surrogate aaa-trifluorotoluene from run #1 outside acceptance criteria @ 0% (50-144), indicating a possible low bias. Qualify associated sample non-detect with "UJ" flags, indicating possible false negatives (toluene only).

3) 4-bromofluorobenzene from run #1 outside acceptance criteria @ 159% (56-136), indicating a possible high bias. Surrogate aaa-trifluorotoluene from run #1 outside acceptance criteria @ 0% (50-144), indicating a possible low bias. Qualify associated sample hits with "J" flags, indicating the data are estimated with an unknown bias (benzene and toluene only).

Gulf Coast
ACCUTEST
Laboratories

03/07/05

Technical Report for

Montgomery Watson

Blanco North

D-MWH-05-08-03-MSG-01

Accutest Job Number: T9595

Sampling Date: 02/23/05

Report to:

MWH

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: **15**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4

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Sample Summary

Montgomery Watson

Job No: T9595

Blanco North
Project No: D-MWH-05-08-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T9595-1	02/23/05	07:00	MJN	02/24/05	AQ	Trip Blank Water	230205TB01
T9595-2	02/23/05	08:20	MJN	02/24/05	AQ	Water	BLANCO NFP MW-23
T9595-3	02/23/05	11:15	MJN	02/24/05	AQ	Water	BLANCO NFP MW-27
T9595-4	02/23/05	09:00	MJN	02/24/05	AQ	Water	BLANCO NFP MW-19
T9595-5	02/23/05	10:40	MJN	02/24/05	AQ	Water	BLANCO NFP MW-26

Accutest Laboratories

Report of Analysis

Client Sample ID:	230205TB01		
Lab Sample ID:	T9595-1	Date Sampled:	02/23/05
Matrix:	AQ - Trip Blank Water	Date Received:	02/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK05180.D	1	03/03/05	JH	n/a	n/a	GKK537
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	81%		56-136%
98-08-8	aaa-Trifluorotoluene	103%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO NFP MW-23		
Lab Sample ID:	T9595-2	Date Sampled:	02/23/05
Matrix:	AQ - Water	Date Received:	02/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK05181.D	1	03/03/05	JH	n/a	n/a	GKK537
Run #2 [a]	KK05185.D	100	03/03/05	JH	n/a	n/a	GKK537

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	7450 [b]	100	40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	321 [b]	100	40	ug/l	
1330-20-7	Xylenes (total)	1380 [b]	200	80	ug/l	
95-47-6	o-Xylene	ND [b]	100	40	ug/l	
	m,p-Xylene	1380 [b]	200	80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%	102%	56-136%
98-08-8	aaa-Trifluorotoluene	0% [c]	109%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO NFP MW-27		
Lab Sample ID:	T9595-3	Date Sampled:	02/23/05
Matrix:	AQ - Water	Date Received:	02/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK05183.D	1	03/03/05	JH	n/a	n/a	GKK537
Run #2 [a]	KK05189.D	10	03/03/05	JH	n/a	n/a	GKK537

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	20.7	1.0	0.40	ug/l	
108-88-3	Toluene	28.2	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	419 [b]	10	4.0	ug/l	
1330-20-7	Xylenes (total)	2210 [b]	20	8.0	ug/l	
95-47-6	o-Xylene	434 [b]	10	4.0	ug/l	
	m,p-Xylene	1780 [b]	20	8.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	159% [c]	134%	56-136%
98-08-8	aaa-Trifluorotoluene	0% [c]	95%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO NFP MW-19		
Lab Sample ID:	T9595-4	Date Sampled:	02/23/05
Matrix:	AQ - Water	Date Received:	02/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK05190.D	10	03/03/05	JH	n/a	n/a	GKK537
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	191	10	4.0	ug/l	
108-88-3	Toluene	ND	10	4.0	ug/l	
100-41-4	Ethylbenzene	ND	10	4.0	ug/l	
1330-20-7	Xylenes (total)	ND	20	8.0	ug/l	
95-47-6	o-Xylene	ND	10	4.0	ug/l	
	m,p-Xylene	ND	20	8.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	105%		56-136%
98-08-8	aaa-Trifluorotoluene	109%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Elevated reporting limits due to matrix interference. Sample foamed during purged.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	BLANCO NFP MW-26		
Lab Sample ID:	T9595-5	Date Sampled:	02/23/05
Matrix:	AQ - Water	Date Received:	02/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK05191.D	10	03/03/05	JH	n/a	n/a	GKK537
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	22.7	10	4.0	ug/l	
108-88-3	Toluene	ND	10	4.0	ug/l	
100-41-4	Ethylbenzene	ND	10	4.0	ug/l	
1330-20-7	Xylenes (total)	11.0	20	8.0	ug/l	J
95-47-6	o-Xylene	5.6	10	4.0	ug/l	J
	m,p-Xylene	ND	20	8.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		56-136%
98-08-8	aaa-Trifluorotoluene	111%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values. Elevated reporting limits due to matrix interference. Sample foamed during purged.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 230205 MW01

ACCUTEST Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 8493 0450 1275 | Bottle Order Control #
Accutest Quote # | Accutest Job # T9595

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 720 844 4433 Fax #: 720 844 4716
Sampler's Name: MJ Nee

Project Information

Project Name: Blanco North
Street:
City: State:
Project #:
Client Purchase Order #:

Requested Analysis

BTEX

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: VOA	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	BIOPE	BTEX	LAB USE ONLY
1	230205TB01		2/3/05	0700	MW	AQ	2	X								X	
2	BlancoNFP MW-23		2/3/05	0830	MW	WW	2					X				X	
3	BlancoNFP MW-27		2/3/05	1115	MW	WW	2					X				X	
4	BlancoNFP MW-14		2/3/05	0900	MW	WW	2					X				X	
5	BlancoNFP MW-26		2/3/05	1040	MW	WW	2					X				X	

Turnaround Time (Business Days)

- [X] 10 Day STANDARD — Approved By: / Date:
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format ____

Commercial "A" = Results Only

Comments / Remarks

All samples unpreserved

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by	Date Time:	Received by:
1 2/3/05	1330	1 fed ex	2 fed ex	2/4 0900	2
Relinquished by:	Date Time	Received by:	Relinquished by	Date Time:	Received by:
3		3	4		4
Relinquished by:	Date Time:	Received by:	Custody Seal #	Preserved where applicable	On Ice	Cooler Temp.
5		5	Yes			3.0

T9595: Chain of Custody
Page 1 of 2

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: 9595 DATE/TIME RECEIVED: 2/24

CLIENT: El PASO INITIALS: [illegible]

Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation):

1. Y N Sample received in undamaged condition.
2. Y N Samples received within temp. range.
3. Y N Sample received with proper pH.
4. Y N Sample received in proper containers.
5. Y N Sample volume sufficient for analysis.
6. Y N Sample received with chain of custody.
7. Y N Chain of Custody matches **sample IDs and analysis** on containers.
8. Y N NA Custody seal received intact and tamper not evident on cooler.
9. Y N NA Custody seal received intact and tamper not evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	1-3	2/22	W	VOA	VR	1,2,3,4,5,6	U, <2, >12, NA
2						1,2,3,4,5,6	U, <2, >12, NA
3						1,2,3,4,5,6	U, <2, >12, NA
4						1,2,3,4,5,6	U, <2, >12, NA
5						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments:

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: Fed Ex

Tracking#: 8493 0450 1274

COOLER TEMP: 3.0 COOLER TEMP:

COOLER TEMP: COOLER TEMP:

Method of sample disposal: (circle one) (Accutest disposal) Hold Return to Client

Form: SM012, Rev.12/14/04, QAO

T9595: Chain of Custody

Page 2 of 2

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T9595
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK537-MB	KK05165.D	1	03/03/05	JH	n/a	n/a	GKK537

The QC reported here applies to the following samples: Method: SW846 8021B

T9595-1, T9595-2, T9595-3, T9595-4, T9595-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	84%	56-136%
98-08-8	aaa-Trifluorotoluene	106%	50-144%

Blank Spike Summary

Job Number: T9595
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK537-BS	KK05166.D	1	03/03/05	JH	n/a	n/a	GKK537

The QC reported here applies to the following samples: Method: SW846 8021B

T9595-1, T9595-2, T9595-3, T9595-4, T9595-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	21.4	107	72-125
100-41-4	Ethylbenzene	20	20.2	101	76-125
108-88-3	Toluene	20	20.7	104	74-125
1330-20-7	Xylenes (total)	60	61.7	103	78-124
95-47-6	o-Xylene	20	20.7	104	78-124
	m,p-Xylene	40	41.0	103	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	98%	56-136%
98-08-8	aaa-Trifluorotoluene	105%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T9595
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T9568-17MS	KK05193.D	10	03/03/05	JH	n/a	n/a	GKK537
T9568-17MSD	KK05194.D	10	03/03/05	JH	n/a	n/a	GKK537
T9568-17	KK05186.D	10	03/03/05	JH	n/a	n/a	GKK537

The QC reported here applies to the following samples: Method: SW846 8021B

T9595-1, T9595-2, T9595-3, T9595-4, T9595-5

CAS No.	Compound	T9568-17 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	375		200	549	87	515	70	6	45-137/21
100-41-4	Ethylbenzene	150		200	331	91	325	88	2	68-126/15
108-88-3	Toluene	10.3		200	211	100	206	98	2	63-130/22
1330-20-7	Xylenes (total)	267		600	843	96	825	93	2	72-125/19
95-47-6	o-Xylene	ND		200	203	102	198	99	2	70-128/20
	m,p-Xylene	266		400	640	94	627	90	2	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T9568-17	Limits
460-00-4	4-Bromofluorobenzene	105%	105%	107%	56-136%
98-08-8	aaa-Trifluorotoluene	111%	106%	111%	50-144%

Groundwater Analytical Report – May 2005

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	05/23/05
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco No.)
Batch Identification:	T10433	**Matrix:**	Water
MS/MSD Parent(s)[(a)]:	None	**Field Replicate Parent(s):**	None

Verification Complete: *Brian Buttars – 06/21/05*
(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Blanco No.	MW-26	T10433-01	Y		
1	Blanco No.	MW-19	T10433-02	Y	J UJ J J UJ J	Benzene @ 1400 µg/l Toluene @ <20 µg/l Ethylbenzene @ 176 µg/l Xylenes, total @ 24.3 T µg/l o-Xylene @ 20 µg/l m,p-Xylene @ 24.3 T µg/l
2,3	Blanco No.	MW-23	T10433-03	Y	J J J J UJ J	Benzene @ 9900 µg/l Toluene @ 36.5 µg/l Ethylbenzene @ 270 µg/l Xylenes, total @ 1650 µg/l o-Xylene @ <100 µg/l m,p-Xylene @ 1650 µg/l
1	Blanco No.	MW-27	T10433-04	Y	UJ UJ UJ UJ UJ UJ	Benzene @ <1.0 µg/l Toluene @ <1.0 µg/l Ethylbenzene @ <1.0 µg/l Xylenes, total @ <2.0 µg/l o-Xylene @ <1.0 µg/l m,p-Xylene @ <2.0 µg/l
None	Trip Blank	230505TB01	T10433-05	N		

DATA VERIFICATION WORKSHEET

Analytical Method:	**SW-846 8021B (BTEX)**	**MWH Job Number:**	**EPC-SJRB (Blanco No.)**
Laboratory:	**Accutest**	**Batch Identification:**	**T10433**

Verification Criteria								
Sample ID	**Blanco No. MW-26**	**Blanco No. MW-19**	**Blanco No. MW-23**	**Blanco No. MW-27**	**230505TB 01**			
Lab ID	**T10433-01**	**T10433-02**	**T10433-03**	**T10433-04**	**T10433-05**			
Holding Time	A	A[1]	A[2]	A[1]	A			
Analyte List	A	A	A	A	A			
Reporting Limits	A	A	A	A	A			
Surrogate Spike Recovery	A	A	A[3]	A	A			
Trip Blank	A	A	A	A	A			
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A			
Initial Calibration	N	N	N	N	N			
Initial Calibration Verification (ICV)	N	N	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N	N	N			
Method Blank	A	A	A	A	A			
Laboratory Control Sample (LCS)	A	A	A	A	A			
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A	N/A			
Retention Time Window	N	N	N	N	N			
Injection Time(s)	N	N	N	N	N			
Hardcopy vs. Chain-of-Custody	A	A	A	A	A			
EDD vs. Hardcopy	N	N	N	N	N			
EDD vs. Chain of Custody	N	N	N	N	N			

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Sample analyzed outside of holding time @ 8 days (7), introducing a possible low bias. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags, indicating possible false negatives.
2) Sample analyzed outside of holding time @ 8 days (undiluted run – toluene only) and 9 days (diluted run) (7), introducing a possible low bias. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags, indicating possible false negatives.
3) Surrogate recovery, for run #1, outside acceptance criteria for 4-bromofluorobenzene @ 180% (56-136), indicating a possible high bias (toluene is the only analyte reported from run #1). Qualify associated sample hit with a "J" flag, indicating the datum is estimated and possibly biased high.

Gulf Coast
ACCUTEST.
Laboratories

06/02/05

Technical Report for

Montgomery Watson

Blanco North

D-MWH-05-08-03-MSG-01

Accutest Job Number: T10433

Sampling Date: 05/23/05

Report to:

MWH Americas, Inc.

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: **20**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4 5

Table of Contents

-1-

Sample Summary

Montgomery Watson

Job No: T10433

Blanco North
Project No: D-MWH-05-08-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T10433-1	05/23/05	09:10	MN	05/24/05	AQ	Water	NFP MW-26
T10433-2	05/23/05	09:25	MN	05/24/05	AQ	Water	NFP MW-19
T10433-3	05/23/05	10:07	MN	05/24/05	AQ	Water	NFP MW-23
T10433-4	05/23/05	10:27	MN	05/24/05	AQ	Water	NFP MW-27
T10433-5	05/23/05	07:00	MN	05/24/05	AQ	Trip Blank Water	230505TB01

ACCUTEST Laboratories

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T10433
Site:	Blanco North	**Report Date**	6/2/2005 12:12:20 PM

4 Samples and 1 Trip Blank were collected on 05/23/2005 and were received at Accutest on 05/24/2005 properly preserved, at 2.8 Deg. C and intact. These Samples received an Accutest job number of T10433. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GEE869

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T10398-5MS, T10398-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- T10433-4: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T10433-2: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T10398-5MSD: Sample was not preserved to a pH < 2.
- T10433-3 for 4-Bromofluorobenzene: Outside control limits due to matrix interference. Confirmed by reanalysis.

Matrix AQ **Batch ID:** GEE870

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T10416-5MS, T10416-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- T10433-3: Sample was not preserved to a pH < 2; reported results are considered minimum values.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Accutest Laboratories

Report of Analysis

Client Sample ID:	NFP MW-26		
Lab Sample ID:	T10433-1	Date Sampled:	05/23/05
Matrix:	AQ - Water	Date Received:	05/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE018953.D	1	06/01/05	JH	n/a	n/a	GEE870
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	38.0	1.0	0.40	ug/l	
108-88-3	Toluene	6.3	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	62.3	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	173	2.0	0.80	ug/l	
95-47-6	o-Xylene	23.6	1.0	0.40	ug/l	
	m,p-Xylene	150	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		56-136%
98-08-8	aaa-Trifluorotoluene	107%		50-144%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NFP MW-19		
Lab Sample ID:	T10433-2	Date Sampled:	05/23/05
Matrix:	AQ - Water	Date Received:	05/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	EE018928.D	20	05/31/05	JH	n/a	n/a	GEE869
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1400	20	8.0	ug/l	
108-88-3	Toluene	ND	20	8.0	ug/l	
100-41-4	Ethylbenzene	176	20	8.0	ug/l	
1330-20-7	Xylenes (total)	24.3	40	16	ug/l	J
95-47-6	o-Xylene	ND	20	8.0	ug/l	
	m,p-Xylene	24.3	40	16	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		56-136%
98-08-8	aaa-Trifluorotoluene	78%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NFP MW-23		
Lab Sample ID:	T10433-3	Date Sampled:	05/23/05
Matrix:	AQ - Water	Date Received:	05/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE018929.D	1	05/31/05	JH	n/a	n/a	GEE869
Run #2 [a]	EE018957.D	100	06/01/05	JH	n/a	n/a	GEE870

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	9900 [b]	100	40	ug/l	
108-88-3	Toluene	36.5	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	270 [b]	100	40	ug/l	
1330-20-7	Xylenes (total)	1650 [b]	200	80	ug/l	
95-47-6	o-Xylene	ND [b]	100	40	ug/l	
	m,p-Xylene	1650 [b]	200	80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	180% [c]	100%	56-136%
98-08-8	aaa-Trifluorotoluene	106%	89%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NFP MW-27		
Lab Sample ID:	T10433-4	Date Sampled:	05/23/05
Matrix:	AQ - Water	Date Received:	05/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	EE018930.D	50	05/31/05	JH	n/a	n/a	GEE869
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	405	50	20	ug/l	J
108-88-3	Toluene	172	50	20	ug/l	
100-41-4	Ethylbenzene	1000	50	20	ug/l	
1330-20-7	Xylenes (total)	5260	100	40	ug/l	
95-47-6	o-Xylene	985	50	20	ug/l	
	m,p-Xylene	4280	100	40	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	114%		56-136%
98-08-8	aaa-Trifluorotoluene	112%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.5

Client Sample ID:	230505TB01		
Lab Sample ID:	T10433-5	Date Sampled:	05/23/05
Matrix:	AQ - Trip Blank Water	Date Received:	05/24/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	EE018920.D	1	05/31/05	JH	n/a	n/a	GEE869
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%		56-136%
98-08-8	aaa-Trifluorotoluene	97%		50-144%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 230505MN01

ACCUTEST Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking #	Bottle Order Control #
847982594220	
Accutest Quote #	Accutest Job # T10433

Client / Reporting Information

- Company Name: EL Paso
- Address: 2 North Nevada
- City: Colorado Springs State: CO Zip: 80903
- Project Contact: Scott Pope E-mail:
- Phone #: 719 520 4433
- Sampler's Name: Martin Nee

Project Information

- Project Name: Blanco NFP
- Street:
- City: State:
- Project #:
- Fax #: 719 520 4716
- Client Purchase Order #:

Requested Analysis: BTEX

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Date	Time	Sampled By	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	BTEX	LAB USE ONLY
1	NFP MW-26		52305	0910	MN	WG	2	2								2	
2	NFPMW-19		52305	0925	MN	WG	2					2				2	
3	NFPMW-23		52305	1007	MN	WG	2					2				2	
4	NFPMW-27		52305	1027	MN	WG	1					1				1	
5	230505TB01		52305	0700	MN	WQ	2	2								2	

Turnaround Time (Business Days)

- [x] 10 Day STANDARD — Approved By: / Date:
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format ____

Commercial "A" = Results Only

Comments / Remarks

Not enough water in 27 for 2 VOAS product present

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler:	Date Time	Received by	Relinquished by	Date Time	Received by
1 MN	52305 1400	1	2	5/24/05 9:40	2 A. Rodriguez
Relinquished by: 3	Date Time:	Received by 3	Relinquished by 4	Date Time:	Received by 4
Relinquished by: 5	Date Time:	Received by 5	Custody Seal #	Preserved where applicable ☐	On Ice X Cooler Temp. 2.8

T10433: Chain of Custody

Page 1 of 3

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T10433 DATE/TIME RECEIVED: 5/24/05 / 9:40

CLIENT: El Paso INITIALS: QR

Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation):

1. (Y) N Sample received in undamaged condition.
2. (Y) N Samples received within temp. range.
3. Y (NA) Sample received with proper pH.
4. (Y) N Sample received in proper containers.
5. (Y) N Sample volume sufficient for analysis.
6. Y N Sample received with chain of custody.
7. (Y) N Chain of Custody matches **sample IDs and analysis** on containers.
8. (Y) N NA Custody seal received intact and tamper not evident on cooler.
9. Y N (NA) Custody seal received intact and tamper not evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1-3	1-2	5/13	AQ	40mL	VREF	1,(2),3,4,5,6	U, <2, >12, (NA)
4	1	"	"	"	"	1,(2),3,4,5,6	U, <2, >12, (NA)
5	1-2	"	"	"	"	1,(2),3,4,5,6	U, <2, >12, (NA)
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
			QR 5/24/05			1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments:

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: FE

Tracking#:

COOLER TEMP: 2.8 COOLER TEMP:

COOLER TEMP: COOLER TEMP:

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev.12/14/04, QAO

T10433: Chain of Custody

Page 2 of 3

4.1

4

T10433

FedEx Express US Airbill 847982594220 0200 FedEx Retrieval Copy

1 From
Date 52305
Sender's FedEx Account Number
Sender's Name Martin Nunez Phone 505 334-2791
Company LoadstarServices
Address 26 CR 3500
City Bloomfield State NM ZIP 87413

2 Your Internal Billing Reference

3 To
Recipient's Name Dan Albertino Phone 713 271-4700
Company Accutest
Recipient's Address 10165 Harwin Dr
Address STE 150
City Houston State TX ZIP 77036

8479 8259 4220

2411 43937

Total Charges

467

ACCUTEST LABORATORIES
CUSTODY SEAL CUSTODY SEAL CUSTODY SEAL CUSTODY SEAL

DATE / TIME SEALED: 52305 1400 INITIALS: mjh

T10433: Chain of Custody
Page 3 of 3

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T10433
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE869-MB	EE018907.D	1	05/31/05	JH	n/a	n/a	GEE869

The QC reported here applies to the following samples: Method: SW846 8021B

T10433-2, T10433-3, T10433-4, T10433-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	108%	56-136%
98-08-8	aaa-Trifluorotoluene	105%	50-144%

Method Blank Summary

Job Number: T10433
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE870-MB	EE018934.D	1	06/01/05	JH	n/a	n/a	GEE870

The QC reported here applies to the following samples: Method: SW846 8021B

T10433-1, T10433-3

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.40	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.40	ug/l	
108-88-3	Toluene	ND	1.0	0.40	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.80	ug/l	
95-47-6	o-Xylene	ND	1.0	0.40	ug/l	
	m,p-Xylene	ND	2.0	0.80	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	56-136%
98-08-8	aaa-Trifluorotoluene	90%	50-144%

Blank Spike Summary

Job Number: T10433
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE869-BS	EE018908.D	1	05/31/05	JH	n/a	n/a	GEE869

5.2

The QC reported here applies to the following samples: Method: SW846 8021B

T10433-2, T10433-3, T10433-4, T10433-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.0	95	72-125
100-41-4	Ethylbenzene	20	18.7	94	76-125
108-88-3	Toluene	20	19.0	95	74-125
1330-20-7	Xylenes (total)	60	58.0	97	78-124
95-47-6	o-Xylene	20	19.0	95	78-124
	m,p-Xylene	40	39.1	98	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	105%	56-136%
98-08-8	aaa-Trifluorotoluene	96%	50-144%

Blank Spike Summary

Job Number: T10433
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GEE870-BS	EE018933.D	1	06/01/05	JH	n/a	n/a	GEE870

The QC reported here applies to the following samples: Method: SW846 8021B

T10433-1, T10433-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.1	96	72-125
100-41-4	Ethylbenzene	20	18.8	94	76-125
108-88-3	Toluene	20	18.9	95	74-125
1330-20-7	Xylenes (total)	60	57.1	95	78-124
95-47-6	o-Xylene	20	19.2	96	78-124
	m,p-Xylene	40	37.9	95	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	104%	56-136%
98-08-8	aaa-Trifluorotoluene	99%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T10433
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T10398-5MS	EE018922.D	1	05/31/05	JH	n/a	n/a	GEE869
T10398-5MSD [a]	EE018923.D	1	05/31/05	JH	n/a	n/a	GEE869
T10398-5	EE018921.D	1	05/31/05	JH	n/a	n/a	GEE869

The QC reported here applies to the following samples: Method: SW846 8021B

T10433-2, T10433-3, T10433-4, T10433-5

CAS No.	Compound	T10398-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	19.9	100	20.3	102	2	45-137/21
100-41-4	Ethylbenzene	ND		20	20.5	103	20.8	104	1	68-126/15
108-88-3	Toluene	ND		20	20.2	101	20.2	101	0	63-130/22
1330-20-7	Xylenes (total)	ND		60	61.8	103	62.1	104	0	72-125/19
95-47-6	o-Xylene	ND		20	20.8	104	20.8	104	0	70-128/20
	m,p-Xylene	ND		40	41.1	103	41.3	103	0	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T10398-5	Limits
460-00-4	4-Bromofluorobenzene	104%	103%	92%	56-136%
98-08-8	aaa-Trifluorotoluene	103%	101%	97%	50-144%

(a) Sample was not preserved to a pH < 2.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T10433
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T10416-5MS	EE018940.D	1	06/01/05	JH	n/a	n/a	GEE870
T10416-5MSD	EE018941.D	1	06/01/05	JH	n/a	n/a	GEE870
T10416-5	EE018939.D	1	06/01/05	JH	n/a	n/a	GEE870

The QC reported here applies to the following samples: Method: SW846 8021B

T10433-1, T10433-3

CAS No.	Compound	T10416-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.1	101	20.0	100	0	45-137/21
100-41-4	Ethylbenzene	ND		20	20.0	100	19.7	99	2	68-126/15
108-88-3	Toluene	ND		20	20.0	100	19.9	100	1	63-130/22
1330-20-7	Xylenes (total)	ND		60	60.9	102	59.8	100	2	72-125/19
95-47-6	o-Xylene	ND		20	20.4	102	20.2	101	1	70-128/20
	m,p-Xylene	ND		40	40.5	101	39.6	99	2	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T10416-5	Limits
460-00-4	4-Bromofluorobenzene	97%	100%	91%	56-136%
98-08-8	aaa-Trifluorotoluene	96%	97%	94%	50-144%

Groundwater Analytical Report – August 2005

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	08/30/05
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco No.)
Batch Identification:	T11331	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None

Verification Complete: *Brian Buttars – 09/13/05*
(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
1	Trip Blank	300805TB01	T11331-01	N		
1,2,3,4	Blanco No.	MW-23	T11331-02	Y	J	Benzene @ 3760 µg/l
					UJ	Toluene @ <5 µg/l
					J	Ethylbenzene @ 53.2 µg/l
					J	Xylenes, total @ 199 µg/l
					J	o-Xylene @ 18.7 µg/l
					J	m,p-Xylene @ 180 µg/l
1,5,6	Blanco No.	MW-27	T11331-03	Y	J	Benzene @ 16.6 µg/l
					J	Toluene @ 13.5 µg/l
					J	Ethylbenzene @ 383 µg/l
					J	Xylenes, total @ 1860 µg/l
					J	o-Xylene @ 298 µg/l
					J	m,p-Xylene @ 1560 µg/l
1,5	Blanco No.	MW-26	T11331-04	Y	J	Benzene @ 18.2 µg/l
					UJ	Toluene @ <5.0 µg/l
					J	Ethylbenzene @ 3.2 T µg/l
					J	Xylenes, total @ 30.4 µg/l
					J	o-Xylene @ 2.5 T µg/l
					J	m,p-Xylene @ 27.9 µg/l
1,2	Blanco No.	MW-19	T11331-05	Y	J	Benzene @ 2040 µg/l
					UJ	Toluene @ <20 µg/l
					J	Ethylbenzene @ 117 µg/l
					UJ	Xylenes, total @ <40 µg/l
					UJ	o-Xylene @ <20 µg/l
					UJ	m,p-Xylene @ <40 µg/l

DATA VERIFICATION WORKSHEET

Analytical Method:	**SW-846 8021B (BTEX)**	**MWH Job Number:**	**EPC-SJRB (Blanco No.)**
Laboratory:	**Accutest**	**Batch Identification:**	**T11331**

Verification Criteria								
Sample ID	**300805TB 01**	**Blanco No. MW-23**	**Blanco No. MW-27**	**Blanco No. MW-26**	**Blanco No. MW-19**			
Lab ID	**T11331-01**	**T11331-02**	**T11331-03**	**T11331-04**	**T11331-05**			
Holding Time	A[1]	A[1,2,3]	A[1,5]	A[1,5]	A[1,2]			
Analyte List	A	A	A	A	A			
Reporting Limits	A	A	A	A	A			
Surrogate Spike Recovery	A	A[4]	A[6]	A	A			
Trip Blank	A	A	A	A	A			
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A			
Initial Calibration	N	N	N	N	N			
Initial Calibration Verification (ICV)	N	N	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N	N	N			
Method Blank	A	A	A	A	A			
Laboratory Control Sample (LCS)	A	A	A	A	A			
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A	N/A			
Retention Time Window	N	N	N	N	N			
Injection Time(s)	N	N	N	N	N			
Hardcopy vs. Chain-of-Custody	A	A	A	A	A			
EDD vs. Hardcopy	N	N	N	N	N			
EDD vs. Chain of Custody	N	N	N	N	N			

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

1) Sample temperature at laboratory @ 1.5°C (4±2°C), data quality not affected.
2) Sample analyzed outside of holding time @ 9 days (7), introducing a possible low bias. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags, indicating possible false negatives.
3) Sample analyzed outside of holding time @ 10 days (diluted run – benzene only) (7), introducing a possible low bias. Qualify associated sample hit with a "J" flag, indicating the datum is estimated and possibly biased low.
4) Surrogate recovery, for run #1, outside acceptance criteria for 4-bromofluorobenzene @ 139% (56-136), indicating a possible high bias (benzene is the only analyte not reported from run #1). Qualify associated sample hits with a "J" flags, indicating the data are estimated and possibly biased high.

5) Sample analyzed outside of holding time @ 10 days (7), introducing a possible low bias. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags, indicating possible false negatives.

6) Surrogate recovery, for run #1, outside acceptance criteria for aaa-trifluorotoluene @ 32% (50-144), indicating a possible low bias. Qualify associated sample hits with "J" flags, indicating the data are estimated and possibly biased low. Qualify associated sample non-detects with "UJ" flags, indicating possible false negatives.

Gulf Coast
ACCUTEST.
Laboratories

09/12/05

Technical Report for

Montgomery Watson

Blanco North

D-MWH-05-08-03-MSG-01

Accutest Job Number: T11331

Sampling Date: 08/30/05

Report to:

MWH Americas, Inc.

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: **19**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4 5

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Accutest Laboratories

Sample Summary

Montgomery Watson

Job No: T11331

Blanco North
Project No: D-MWH-05-08-03-MSG-01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T11331-1	08/30/05	00:00	MN	08/31/05	AQ	Trip Blank Water	300805TB01
T11331-2	08/30/05	08:15	MN	08/31/05	AQ	Ground Water	MW-23
T11331-3	08/30/05	09:05	MN	08/31/05	AQ	Ground Water	MW-27
T11331-4	08/30/05	09:25	MN	08/31/05	AQ	Ground Water	MW-26
T11331-5	08/30/05	10:19	MN	08/31/05	AQ	Ground Water	MW-19

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T11331
Site:	Blanco North	**Report Date**	9/12/2005 4:13:36 PM

4 Samples and 1 Trip Blank were collected on 08/30/2005 and were received at Accutest on 08/31/2005 properly preserved, at 1.5 Deg. C and intact. These Samples received an Accutest job number of T11331. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GKK645

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T11363-2MS, T11363-2MSD were used as the QC samples indicated.
- T11331-5: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11331-3: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11331-2: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11331-2 for 4-Bromofluorobenzene: Outside control limits due to matrix interference. Confirmed by reanalysis.

Matrix AQ **Batch ID:** GKK647

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T11362-26MS, T11362-26MSD were used as the QC samples indicated.
- T11331-4: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11331-3: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11331-2: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11331-3 for aaa-Trifluorotoluene: Outside control limits due to matrix interference. Confirmed by reanalysis.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Accutest Laboratories

Report of Analysis

Client Sample ID:	300805TB01		
Lab Sample ID:	T11331-1	Date Sampled:	08/30/05
Matrix:	AQ - Trip Blank Water	Date Received:	08/31/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK08389.D	1	09/08/05	JH	n/a	n/a	GKK645
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.38	ug/l	
108-88-3	Toluene	ND	1.0	0.36	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.72	ug/l	
95-47-6	o-Xylene	ND	1.0	0.42	ug/l	
	m,p-Xylene	ND	2.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	86%		56-136%
98-08-8	aaa-Trifluorotoluene	80%		50-144%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-23		
Lab Sample ID:	T11331-2	Date Sampled:	08/30/05
Matrix:	AQ - Ground Water	Date Received:	08/31/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK08394.D	5	09/08/05	JH	n/a	n/a	GKK645
Run #2 [a]	KK08455.D	50	09/09/05	JH	n/a	n/a	GKK647

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	3760 [b]	50	19	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
100-41-4	Ethylbenzene	53.2	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	199	10	3.6	ug/l	
95-47-6	o-Xylene	18.7	5.0	2.1	ug/l	
	m,p-Xylene	180	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	139% [c]	88%	56-136%
98-08-8	aaa-Trifluorotoluene	80%	84%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2
(c) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-27		
Lab Sample ID:	T11331-3	Date Sampled:	08/30/05
Matrix:	AQ - Ground Water	Date Received:	08/31/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK08456.D	5	09/09/05	JH	n/a	n/a	GKK647
Run #2 [a]	KK08395.D	20	09/08/05	JH	n/a	n/a	GKK645

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	16.6	5.0	1.9	ug/l	
108-88-3	Toluene	13.5	5.0	1.8	ug/l	
100-41-4	Ethylbenzene	383	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	1860	10	3.6	ug/l	
95-47-6	o-Xylene	298	5.0	2.1	ug/l	
	m,p-Xylene	1560	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	94%	78%	56-136%
98-08-8	aaa-Trifluorotoluene	32% [b]	53%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	MW-26		
Lab Sample ID:	T11331-4	Date Sampled:	08/30/05
Matrix:	AQ - Ground Water	Date Received:	08/31/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK08457.D	5	09/09/05	JH	n/a	n/a	GKK647
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	18.2	5.0	1.9	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
100-41-4	Ethylbenzene	3.2	5.0	1.8	ug/l	J
1330-20-7	Xylenes (total)	30.4	10	3.6	ug/l	
95-47-6	o-Xylene	2.5	5.0	2.1	ug/l	J
	m,p-Xylene	27.9	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	102%		56-136%
98-08-8	aaa-Trifluorotoluene	60%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	T11331-5	Date Sampled:	08/30/05
Matrix:	AQ - Ground Water	Date Received:	08/31/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK08397.D	20	09/08/05	JH	n/a	n/a	GKK645
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2040	20	7.6	ug/l	
108-88-3	Toluene	ND	20	7.2	ug/l	
100-41-4	Ethylbenzene	117	20	7.0	ug/l	
1330-20-7	Xylenes (total)	ND	40	14	ug/l	
95-47-6	o-Xylene	ND	20	8.4	ug/l	
	m,p-Xylene	ND	40	14	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		56-136%
98-08-8	aaa-Trifluorotoluene	68%		50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 300805 MN01

ACCUTEST Laboratories

10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 852749418090 | Bottle Order Control #
Accutest Quote # | Accutest Job # T1133

Client / Reporting Information

Company Name: BC P&O
Address: 2 North Nevada
City: Colorado Springs State: Co Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 719 520 4433
Sampler's Name: MN

Project Information

Project Name: Blanco NFP
Street:
City: State:
Project #:
Fax #: 719 520 4716
Client Purchase Order #:

Requested Analysis

BTEX

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	ZnAc	H2SO4	None	NaHSO4	MEOH	DI/ICE	LAB USE ONLY
1	300805TB01		8/30/05	07:00	MN	WQ	2	✓								
2	MW-23		8/30/05	08:15	MN	WQ	2					✓				
3	MW-27		8/30/05	09:05	MN	WQ	2					✓				
4	MW-26		8/30/05	09:25	MN	WQ	2					✓				
5	MW-19		8/30/05	10:10	MN	WQ	2					✓				

Turnaround Time (Business Days)

- [X] 10 Day *STANDARD*
- [ ] 5 Day *RUSH*
- [ ] 3 Day *EMERGENCY*
- [ ] 2 Day *EMERGENCY*
- [ ] 1 Day *EMERGENCY*
- [ ] Other

Approved By: / Date:

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format

Commercial "A" = Results Only

Comments / Remarks

All samples are unpreserved

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received by	Relinquished by	Date Time	Received by
1 MN	8/30/05 16:00	1	2		2
Relinquished by:	Date Time:	Received by	Relinquished by:	Date Time	Received by:
3		3	4		4
Relinquished by:	8/31/05 10:00	Received by:	Custody Seal #	Preserved where applicable	On Ice: X	Cooler Temp: 1.5
5		5			

4.1 4

T11331: Chain of Custody
Page 1 of 2

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T11331 DATE/TIME RECEIVED: 8/31/05 / 10:00

CLIENT: El Paso INITIALS: AR

Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation):
1. (Y) N Sample received in undamaged condition. 2. Y (N) Samples received within temp. range.
3. Y (NA) Sample received with proper pH. 4. (Y) N Sample received in proper containers.
5. (Y) N Sample volume sufficient for analysis. 6. (Y) N Sample received with chain of custody.
7. (Y) N Chain of Custody matches **sample IDs and analysis** on containers.
8. (Y) N NA Custody seal received intact and tamper not evident on cooler.
9. Y N (NA) Custody seal received intact and tamper not evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	1-2	8/30	AQ	40ml	VREF	1,(2),3,4,5,6	U, <2, >12, (NA)
2-5	⊥	⊥	⊥	⊥	⊥	(1),2,3,4,5,6	(U), <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

AR 8-31-05

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer
PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments: Samples are unpreserved per COC

pH of waters checked excluding volatiles
pH of soils N/A

Delivery method: Courier: FE
Tracking#:

COOLER TEMP: 1.5 COOLER TEMP:
COOLER TEMP: COOLER TEMP:

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev.12/14/04, QAO

T11331: Chain of Custody
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GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T11331
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK645-MB	KK08376.D	1	09/08/05	JH	n/a	n/a	GKK645

The QC reported here applies to the following samples: Method: SW846 8021B

T11331-1, T11331-2, T11331-3, T11331-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.38	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.36	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.72	ug/l	
95-47-6	o-Xylene	ND	1.0	0.42	ug/l	
	m,p-Xylene	ND	2.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	95%	56-136%
98-08-8	aaa-Trifluorotoluene	88%	50-144%

Method Blank Summary

Job Number: T11331
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK647-MB	KK08437.D	1	09/09/05	JH	n/a	n/a	GKK647

The QC reported here applies to the following samples: Method: SW846 8021B

T11331-2, T11331-3, T11331-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.38	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.36	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.72	ug/l	
95-47-6	o-Xylene	ND	1.0	0.42	ug/l	
	m,p-Xylene	ND	2.0	0.72	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	56-136%
98-08-8	aaa-Trifluorotoluene	79%	50-144%

Blank Spike Summary

Job Number: T11331
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK645-BS	KK08377.D	1	09/08/05	JH	n/a	n/a	GKK645

The QC reported here applies to the following samples: Method: SW846 8021B

T11331-1, T11331-2, T11331-3, T11331-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.0	100	72-125
100-41-4	Ethylbenzene	20	19.3	97	76-125
108-88-3	Toluene	20	19.9	100	74-125
1330-20-7	Xylenes (total)	60	58.6	98	78-124
95-47-6	o-Xylene	20	19.5	98	78-124
	m,p-Xylene	40	39.1	98	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	96%	56-136%
98-08-8	aaa-Trifluorotoluene	87%	50-144%

Blank Spike Summary

Job Number: T11331
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK647-BS	KK08438.D	1	09/09/05	JH	n/a	n/a	GKK647

The QC reported here applies to the following samples: Method: SW846 8021B

T11331-2, T11331-3, T11331-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.4	102	72-125
100-41-4	Ethylbenzene	20	19.5	98	76-125
108-88-3	Toluene	20	20.3	102	74-125
1330-20-7	Xylenes (total)	60	60.1	100	78-124
95-47-6	o-Xylene	20	19.9	100	78-124
	m,p-Xylene	40	40.2	101	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	97%	56-136%
98-08-8	aaa-Trifluorotoluene	88%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T11331
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T11363-2MS	KK08385.D	1	09/08/05	JH	n/a	n/a	GKK645
T11363-2MSD	KK08386.D	1	09/08/05	JH	n/a	n/a	GKK645
T11363-2	KK08384.D	1	09/08/05	JH	n/a	n/a	GKK645

The QC reported here applies to the following samples: Method: SW846 8021B

T11331-1, T11331-2, T11331-3, T11331-5

CAS No.	Compound	T11363-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	20.2	101	19.9	100	1	45-137/21
100-41-4	Ethylbenzene	ND		20	19.4	97	19.3	97	1	68-126/15
108-88-3	Toluene	ND		20	20.1	101	19.9	100	1	63-130/22
1330-20-7	Xylenes (total)	ND		60	59.1	99	58.4	97	1	72-125/19
95-47-6	o-Xylene	ND		20	19.5	98	19.2	96	2	70-128/20
	m,p-Xylene	ND		40	39.6	99	39.2	98	1	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T11363-2	Limits
460-00-4	4-Bromofluorobenzene	95%	93%	101%	56-136%
98-08-8	aaa-Trifluorotoluene	90%	88%	95%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T11331
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T11362-26MS	KK08445.D	1	09/09/05	JH	n/a	n/a	GKK647
T11362-26MSD	KK08446.D	1	09/09/05	JH	n/a	n/a	GKK647
T11362-26	KK08444.D	1	09/09/05	JH	n/a	n/a	GKK647

5.3

The QC reported here applies to the following samples: Method: SW846 8021B

T11331-2, T11331-3, T11331-4

CAS No.	Compound	T11362-26 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	18.7	94	18.4	92	2	45-137/21
100-41-4	Ethylbenzene	ND		20	18.5	93	18.3	92	1	68-126/15
108-88-3	Toluene	ND		20	18.7	94	18.6	93	1	63-130/22
1330-20-7	Xylenes (total)	ND		60	57.1	95	56.6	94	1	72-125/19
95-47-6	o-Xylene	ND		20	19.2	96	19.1	96	1	70-128/20
	m,p-Xylene	ND		40	37.9	95	37.5	94	1	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T11362-26	Limits
460-00-4	4-Bromofluorobenzene	81%	87%	82%	56-136%
98-08-8	aaa-Trifluorotoluene	78%	85%	74%	50-144%

elpaso

VIA FEDERAL EXPRESS

August 9, 2005

Mr. Glen Von Gonten
New Mexico Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87504

RE: 2005 Annual Groundwater Report for the Blanco Plant
South Flare Pit and D Plant Areas

Dear Mr. Von Gonten

El Paso Natural Gas Company (EPNG) hereby submits the ***2005 Annual Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas***. The enclosed report details results of the annual groundwater sampling event, conducted in 2005 for monitoring of the South Flare Pit and D Plant areas.

If you have any questions concerning the enclosed report or require additional information, please call me at (713) 420-7361.

Sincerely,

Pamela Andersen for Ian Yanagisawa

Ian Yanagisawa P.E., P.G.
Principal Environmental Engineer

Enclosures: as stated

cc: Mr. Denny Foust, NMOCD, Aztec - w / enclosures; **via Federal Express**

Prepared for:

EL PASO NATURAL GAS COMPANY

614 Reilly Avenue
Farmington, New Mexico 87401

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AUG 10 2005

Oil Conservation Division
Environmental Bureau

2005 ANNUAL GROUNDWATER REPORT FOR THE BLANCO PLANT SOUTH FLARE PIT AND D PLANT AREAS

San Juan County, New Mexico

August 2005

Prepared by:

MWH
1801 California Street, Suite 2900
Denver, Colorado 80202
(303) 291-2222

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LIST OF ACRONYMS

CHC	Chlorinated Hydrocarbons
DCA	Dichloroethane
DCB	Dichlorobenzene
DCE	Dichloroethene
EPNG	El Paso Natural Gas Company
MWH	MWH Americas, Inc.
NMOCD	New Mexico Oil Conservation Division
NMWQCC	New Mexico Water Quality Control Commission
PCE	Tetrachloroethene
TCE	Trichloroethene

1.0 INTRODUCTION

This *2005 Annual Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas* (Report) has been prepared on behalf of El Paso Natural Gas Company (EPNG) to report the results of the 2005 annual groundwater sampling event at the Blanco Plant site, located near Bloomfield, New Mexico. This work has been performed according to the proposed actions outlined in the *2004 Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas* (MWH, 2004), which was submitted to New Mexico Oil Conservation Division (NMOCD) in August 2004. Proposed actions are as follows:

- All groundwater monitoring wells on the Blanco Plant and in the North Flare Pit area will be sampled annually and analyzed for nitrate+nitrite concentrations.
- Groundwater samples from monitoring wells in the D Plant Area (MW-12, MW-13, MW-14 and MW-15) will be analyzed for chlorinated hydrocarbon compounds (CHCs).
- The results of the nitrate+nitrite and CHC groundwater sampling will be reported to NMOCD in annual groundwater monitoring reports.
- In accordance with the approval letter from NMOCD, dated May 3, 2002, EPC will plug and abandon monitoring wells MW-10, MW-16, MW-17 and MW-18.

This work was initiated, pursuant to a NMOCD letter dated May 3, 2002, regarding remediation activities at EPNG's Blanco Plant. The regulatory driver for groundwater remediation at this site is the New Mexico Water Quality Control Commission's (NMWQCC) nitrate+nitrite standard of 10 mg/L. The *Groundwater Nitrate Work Plan for Blanco South Flare Pit and D Plant Areas* (the Work Plan) (MWH, 2002) was submitted to NMOCD in July 2002, and was conditionally approved by NMOCD in a letter dated February 21, 2003.

The Blanco Plant is located in San Juan County, New Mexico, approximately 1.5 miles northeast of the town of Bloomfield, New Mexico on San Juan County Road 4900. Figure 1.1, *Blanco Plant Site Layout*, presents the Blanco Plant site layout and location of the D Plant and South Flare Pit. The map also shows the location of the North Flare Pit area.

Section 2.0 of this report summarizes historic information related to groundwater nitrate concentrations at the site, including a description of previous investigations and a description of the geology/hydrogeology of the area. Section 3.0 presents the results of the groundwater sampling event in 2005, and Section 4.0 discusses continued activities at the site.

2.0 SITE BACKGROUND

2.1 PREVIOUS INVESTIGATIONS OF GROUNDWATER NITRATE

An initial assessment of site hydrogeology of the Blanco Plant area was conducted by Bechtel Environmental in 1989 (Bechtel, 1989). Six monitoring wells were installed and sampled during this investigation. High nitrate concentrations were identified in wells MW-2 (290 ppm) and MW-6 (51 ppm) at that time. It was concluded in this study that "the high concentration of nitrate in the upgradient well (MW-2) could not have been due to plant operations".

As part of a groundwater study by K.W. Brown & Associates, Inc (K.W. Brown, 1990) to investigate the extent of contamination resulting from a leaking underground storage tank in the D Plant Area, the source of elevated nitrate in groundwater was further investigated. A monitoring well, MW-19, was installed upgradient of MW-2. Sampling results from this investigation indicated high nitrate concentrations in MW-2 (200 ppm), MW-19 (90 ppm), MW-14 (210 ppm) and MW-15 (89 ppm). Inspection of the plant area at that time did not find a potential source for nitrate contamination.

Historic and recent groundwater nitrate+nitrite data from several rounds of groundwater sampling (1991 – 2005) at the site (including North Flare Pit wells) are presented in Table 2.1, *Groundwater Nitrate Analytical Data (1991 – 2005).*

2.2 SITE GEOLOGY/HYDROGEOLOGY

The geologic framework of the site has been summarized by Bechtel Environmental (Bechtel, 1989) and K.W. Brown and Associates (K.W. Brown, 1990). Based on these assessments, the plant area is located on Quaternary alluvium consisting of sand, silt, clay and gravel. At the plant site, the thickness of the alluvium varies from less than three feet to more than 75 feet (Bechtel, 1989). Underlying the alluvium is the Tertiary Nacimiento Formation consisting of interbedded coarse- to medium-grained arkosic sandstone, siltstone and shale which were deposited as both channel fill and floodplain deposits (Bechtel, 1989). Orientation of the channel-fill sandstone deposits may locally control groundwater flow due to higher hydraulic conductivities through these features.

An assessment of site hydrogeology of the Blanco Plant area was conducted by Bechtel Environmental in 1989 (Bechtel, 1989). Based on the information collected during this study, it was concluded that the direction of groundwater flow through the plant area is to the south-southwest through the site. The average hydraulic conductivity was estimated to be 2.1×10^{-4} centimeters per second. Depth to groundwater ranged from 50 feet (at MW-2) to nine feet (at MW-10) below ground surface (5564 to 5552 feet above sea level) (EPNG, 1989). These results were generally consistent with the findings of K.W. Brown (1990).

A potentiometric surface map for the site has been prepared based on water level measurements collected in May 2005, and is presented in Figure 2.1, *Groundwater Potentiometric Surface Map – May 2005.* Based on these data, groundwater is flowing to the southeast with a hydraulic gradient of 0.032 ft/ft in the Blanco D Plant site area and 0.057 ft/ft in the North Flare Pit area. Based on previous years data, at the southern

boundary of the site the groundwater gradient trends towards the east, likely as a result of groundwater mounding in that area due to recharge from Citizens Ditch. This has been consistent in the groundwater flow pattern of previous years.

3.0 2005 ANNUAL GROUNDWATER SAMPLING EVENT

Monitoring wells at the Blanco Plant and North Flare Pit area were sampled on May 31, 2005, and analyzed for nitrate+nitrite concentrations and/or CHCs, as described further below. Monitoring well MW-20 was damaged in 2000 and abandoned in 2002. In accordance with the approval letter from NMOCD, EPC plugged and abandoned monitoring wells MW-10, MW-16, MW-17 and MW-18 in December 2003.

3.1 GROUNDWATER NITRATE+NITRITE DATA

Groundwater samples were collected on May 30 and 31, 2005 from wells MW-8, MW-12, MW-13, MW-14, MW-15, MW-19, MW-23, MW-28, MW-29, and MW-30 using standard purging and sampling techniques and analyzed for nitrate+nitrite concentrations. Groundwater sampling was attempted at wells MW-2, MW-5, MW-6, MW-7, MW-24, and MW-26 at this time; however, these wells were either dry (MW-2, MW-5), did not contain enough water to sample (MW-6, MW-24), or did not recover enough to sample (MW-26). Field data and sampling information are presented on field sampling forms, included in Appendix A.

Analytical data are listed in Table 2.1, *Groundwater Nitrate Analytical Data (1991-2005)*, and laboratory analytical reports are included in Appendix B. Nitrate+nitrite concentrations were consistent with historic data for these wells. These data indicate that nitrate+nitrite concentrations have consistently exceeded NMWQCC standards in monitoring wells MW-14, MW-15, MW-28, MW-29 and MW-30. Monitoring well MW-2 has not been sampled since 1994 because the well has been dry (although data collected from 1991 through 1994 indicated elevated nitrate+nitrite concentrations at that location).

Groundwater nitrate+nitrite concentrations from the May 2005 sampling event are presented on Figure 3.1, *Groundwater Nitrate Data – May 2005*. The 10 mg/L isoconcentration contour is also presented on this figure to indicate areas in exceedance of the NMWQCC standard. Since 1994 through 2005, nitrate+nitrite concentrations in all of the wells in the North Flare Pit area have consistently been low and well below the NMWQCC standard. As shown in this figure, there is no obvious source or apparent trend in the nitrate+nitrite data. Instead, there appear to be two confined areas or "hot spots" of high nitrate+nitrite concentrations that are adjacent to wells with nitrate+nitrite concentrations consistently below NMWQCC standards. In addition, there is no indication that high nitrate+nitrite groundwater is migrating off-site. These results are consistent with the past several years of data.

3.2 GROUNDWATER CHLORINATED HYDROCARBON DATA

Samples from the four wells in the D Plant area were also analyzed for a suite of selected CHCs, in accordance with the site monitoring requirements The CHCs include tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethane (DCA), 1,2-dichlorobenzene (DCB), 1,1-dichloroethene (DCE), trans 1,2-DCE and cis 1,2-DCE. These compounds were targeted because they had been detected previously at the site. Annual sampling data from 2002 through 2005 are presented in Table 3.1, *Groundwater Chlorinated Hydrocarbon Analytical Data (2002 - 2005)*. As shown in this table, in 2005 the groundwater sample from MW-12 exceeded the U.S. Environmental Protection

Agency (USEPA) maximum contaminant level (MCL) for TCE of 5.0 µg/L (but did not exceed the NMWQCC TCE standard of 100 µg/L); and the groundwater sample from MW-13 exceeded the USEPA MCL for TCE and the NMWQCC standard for 1,1-DCA.

In the 2005 groundwater samples, PCE, the most highly-chlorinated solvent of the analyte group, was detected only in well MW-14 (at a concentration near the detection limit), and TCE was present in wells MW-12 and MW-13. The TCE concentration in MW-13 continued to decrease over time; however, the TCE concentration in upgradient well MW-12 is higher than previous years. Daughter products of these two compounds (DCE and DCA) have been detected in MW-12, MW-13, and MW-14, indicating that degradation of the CHC compounds is naturally occurring in the groundwater. There were no CHCs detected in well MW-15.

4.0 CONCLUSIONS

The following conclusions have been derived based on current and historic sampling and analyses at the site:

Nitrate+Nitrite Concentrations

- Nitrate+nitrite concentrations in the North Flare Pit area wells (MW-19, MW-23, MW24, MW26 and MW-27) have consistently been below NMWQCC standards during annual sampling events from 2000-2005.

- Nitrate+nitrite concentrations in the Blanco Plant area are generally stable, displaying neither increasing or decreasing trends. Specifically, concentrations have remained stable in two hot spots located near the D Plant and the South Flare Pit areas.

- Groundwater with elevated nitrate+nitrite concentrations does not appear to be migrating, based on 2000 through 2005 sample data.

Chlorinated Hydrocarbons

- Similar to previous years, 2005 groundwater samples from MW-12 and MW-13 exceeded Federal or NMWQCC standards for CHCs.

- Concentrations of TCE in MW-13 continue to decrease over time; however, the concentration of TCE in MW-12 is elevated compared to previous years. Several daughter products of TCE are present in the groundwater samples.

- CHCs appear to be degrading naturally and are expected to fall below NMWQCC standards over time.

5.0 RECOMMENDATIONS

As shown in Table 4.1, *Groundwater Sampling Schedule,* the following actions will be performed by EPNG to monitor groundwater nitrate+nitrite and CHC concentrations at the site:

- All groundwater monitoring wells in the South Flare Pit and D Plant areas of the Blanco Plant, including MW-2, will be sampled annually and analyzed for nitrate+nitrite concentrations.

- Nitrate+nitrite concentrations in the monitoring wells in the North Flare Pit area (MW-19, MW-23, MW-24, MW-26, and MW-27) have consistently been below standards for the past six annual sampling events (2000-2005); therefore, these wells will be removed from the annual monitoring program.

- Groundwater samples from monitoring wells in the D Plant Area (MW-12, MW-13, MW-14 and MW-15) will continue to be analyzed annually for CHC concentrations, as listed in Table 4.1.

- The results of the nitrate+nitrite and CHC groundwater sampling will be reported to NMOCD in annual groundwater monitoring reports (typically submitted in August of each year).

EPNG will notify NMOCD at least 48 hours in advance of all scheduled sampling activities, such that NMOCD has the opportunity to witness the events and split samples, if desired.

6.0 REFERENCES

Bechtel Environmental, 1989. *Groundwater Investigation Report, El Paso Natural Gas Company's Blanco Plant, San Juan County, New Mexico.* January 1989.

K.W. Brown and Associates, Inc, 1990. *Site Investigation of the Blanco Plant, San Juan County, New Mexico.* Prepared for El Paso Natural Gas Company. February 1990.

MWH, 2002. *Groundwater Nitrate Work Plan for Blanco South Flare Pit and D Plant Areas.* July 2002.

MWH, 2003. *Groundwater Nitrate Report for the Blanco Plant South Flare Pit and D Plant Areas.* April, 2003

MWH, 2003. *2003 Groundwater Report for the Blanco Plant south Flare Pit and D Plant Areas.* August 2003.

MWH, 2004. *2004 Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas.* August 2004.

TABLES

TABLE 2.1
GROUNDWATER NITRATE+NITRITE ANALYTICAL DATA (1991 - 2005)
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

Monitoring Well	Sample Date	Nitrate+Nitrite (mg/l)
NMOCD Standard: 10 mg/L		
MW-2	6/18/91	180
	2/23/93	256
	6/8/93	228
	9/29/93	233
	2/10/94	249
	5/29/02	dry
	6/3/03	dry
	5/17/04	dry
	5/30/05	dry
MW-5	6/18/91	0.08
	2/19/93	<1.0
	6/7/93	<1.0
	1/27/94	<1.0
	8/8/00	4.6
	8/8/00	4.6
	11/10/00	4
	9/24/02	dry
	6/3/03	dry
	5/17/04	dry
	5/30/05	dry
MW-6	6/19/91	110
	2/19/93	63.9
	6/7/93	76.4
	9/28/93	85.9
	10/7/93	94.5
	1/26/94	95.0
	8/20/94	1.7
	12/20/94	94
	2/16/95	90.6
	11/10/00	89
	9/24/02	95.1
	6/3/03	74
	5/17/04	dry
	5/30/05	not sampled
MW-7	6/18/91	0.28
	6/7/93	3
	9/27/93	<2.8
	5/29/02	dry
	9/24/02	dry
	6/3/03	dry
	5/17/04	dry
	5/30/05	dry
MW-8	6/18/91	<0.06
	2/19/93	2.0
	6/7/93	<1.0
	9/27/93	<1.0
	1/27/94	<1.0
	11/10/00	<0.1
	11/10/00	<0.1
	3/23/01	0.21
	3/23/01	0.21
	8/28/01	0.33
	5/28/02	0.26
	6/3/03	0.13
	5/17/04	0.43
	5/31/05	0.30
MW-10	6/18/91	0.74
	2/19/93	1.2
	6/7/93	2.2
	9/27/93	2.1
	1/27/94	2.0
	5/28/02	dry
	9/24/02	dry
	6/3/03	NS
	12/1/03	abandoned
MW-12	6/19/91	7.8
	2/25/93	7.8
	6/7/93	8.5
	9/28/93	9.1
	1/27/94	7.3
	8/8/00	<10
	11/9/00	5.7
	3/22/01	8.4
	8/28/01	8.0
	5/28/02	2.0
	6/3/03	6.7
	5/17/04	7.6
	5/31/05	8.6
MW-13	6/19/91	6.3
	2/24/93	16.5
	6/8/93	8.1
	9/28/93	4.1
	1/27/94	5.4
	8/8/00	<12.5
	11/9/00	9.8
	3/22/01	13
	8/28/01	7.9
	5/28/02	6.0
	6/3/03	5.8
	5/17/04	9.8
	5/31/05	8.2

Monitoring Well	Sample Date	Nitrate+Nitrite (mg/l)
NMOCD Standard: 10 mg/L		
MW-14	2/25/93	19.2
	6/8/93	17.5
	9/28/93	11.8
	1/27/94	15.4
	8/8/00	19
	11/13/00	0.24
	3/22/01	19
	8/28/01	20
	5/28/02	15
	6/3/03	15
	5/17/04	16
	5/31/05	24
MW-15	6/19/91	50
	2/24/93	5
	6/8/93	48.1
	9/28/93	45
	1/27/94	43.7
	8/8/00	35
	11/9/00	38
	3/22/01	25
	8/28/01	30
	5/28/02	24
	6/3/03	21
	5/17/04	40
	5/31/05	35
MW-16	6/19/91	0.07
	2/25/93	3.7
	6/8/93	<1.0
	6/3/03	NS
	12/1/03	abandoned
MW-17	2/25/93	15.3
	9/24/02	dry
	6/3/03	NS
	12/1/03	abandoned
MW-18	2/25/93	8.19
	6/8/93	<1.0
	9/28/93	<1.0
	9/24/02	3.1
	6/3/03	NS
	12/1/03	abandoned
MW-19	6/19/91	20
	2/25/93	11.9
	6/10/93	NA
	11/13/00	<0.1
	3/26/01	0.19
	5/30/02	0.13
	6/3/03	<0.10
	5/17/04	0.19
	5/31/05	3.5
MW-20	9/26/92	NA
	2/24/93	<1.0
	6/10/93	<1.0
	9/29/93	<1.0
	1/27/94	<1.0
	5/13/94	NA
	8/22/94	NA
	11/13/00	damaged
	6/3/03	abandoned
MW-23	9/26/92	0.62
	2/1/93	NA
	2/25/93	0.56
	6/8/93	<1.0
	9/29/93	<1.0
	2/10/94	<1.0
	5/13/94	NA
	8/22/94	NA
	11/13/00	0.12
	3/26/01	0.18
	5/30/02	0.23
	6/3/03	<0.10
	5/17/04	0.29
	5/31/05	0.40
MW-24	9/26/92	1.42
	2/23/93	<1.0
	6/10/93	<1.0
	9/29/93	<1.0
	2/10/94	<1.0
	5/13/94	NA
	8/22/94	NA
	11/13/00	0.1
	3/26/01	0.18
	5/30/02	0.15
	6/3/03	dry
	5/17/04	dry
	5/30/05	not sampled

Monitoring Well	Sample Date	Nitrate+Nitrite (mg/l)
NMOCD Standard: 10 mg/L		
MW-26	2/25/93	15
	6/10/93	8.2
	3/26/01	0.24
	5/30/02	0.26
	6/3/03	NS
	5/17/04	0.53
	5/30/05	not sampled
MW-27	2/26/93	<1.0
	6/10/93	<1.0
	9/30/93	<1.0
	2/2/94	<1.0
	5/14/94	NA
	11/13/00	0.28
	3/26/01	0.61
	5/30/02	0.21
	6/3/03	<0.10
	5/17/04	0.56
	5/31/05	0.60
MW-28	10/7/93	2.1
	2/2/94	2.8
	8/20/94	2.7
	12/20/94	0.33
	2/16/95	1.6
	8/10/00	25
	11/10/00	33
	3/23/01	34
	8/28/01	63
	5/28/02	83
	6/3/03	87
	5/17/04	82
	5/31/05	85
MW-29	10/7/93	8.3
	2/2/94	19.6
	8/20/94	28.8
	12/20/94	41
	2/16/95	28.1
	8/10/00	50
	11/10/00	66
	3/26/01	70
	8/28/01	59
	5/28/02	70
	6/3/03	79
	5/17/04	83
	5/31/05	97
MW-30	10/7/93	28.1
	2/2/94	57.1
	8/20/94	67.4
	2/16/95	91.3
	8/10/00	84
	11/10/00	70
	3/26/01	72
	8/28/01	74
	5/28/02	66
	6/3/03	90
	5/17/04	58
	5/31/05	58

< Indicates analyte not detected at the method detection limit (MDL). Value shown is the MDL.
Shaded values indicate exceedances of the NMWQCC Nitrate+Nitrite (as N) standard of 10 mg/L.

TABLE 3.1
GROUNDWATER CHLORINATED HYDROCARBON ANALYTICAL DATA (2002 - 2005)
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

Monitoring Well	Sample Date	Static Water Level (ft btoc)	Chlorinated Hydrocarbons by EPA M 8260 (ug/L)						
			1,1-DCA	1,2-DCB	1,1-DCE	trans 1,2-DCE	cis 1,2-DCE	TCE	PCE
NMWQCC Water Quality Standard:			25	NS	5.0	NS	NS	100	20
US EPA MCL:			NS	NS	7.0	100	70	5.0	5.0
MW-12	5/28/2002	20.95	21.0	5.2	<1.0	1.7	20.0	**8.0**	3.0
	6/3/2003	16.99	8.2	3.4	<2.0	<2.0	8.2	4.5	3.2
	5/17/2004	16.59	4.6	3.4	<2.0	<2.0	5.1	4.0	2.3
	5/31/2005	15.65	22.3	<2.0	<2.0	<2.0	18.8	**20.7**	<2.0
MW-13	5/28/2002	16.76	**61.0**	79.0	1.3	8.2	45.0	**39.0**	1.6
	6/3/2003	14.44	**53.8**	50.5	1.4	8.2	33.0	**35.1**	1.4
	5/17/2004	14.12	**41.2**	29.2	<2.0	4.0	21.2	**22.5**	<2.0
	5/31/2005	13.43	**50.7**	<2.0	<2.0	5.7	26.6	**21.3**	<2.0
MW-14	5/28/2002	21.57	8.7	<1.0	<1.0	<1.0	2.9	1.9	<1.0
	6/3/2003	19.85	9.5	<2.0	<2.0	<2.0	3.3	2.4	<2.0
	5/17/2004	19.78	5.7	<2.0	<2.0	<2.0	2.1	1.6	<2.0
	5/31/2005	18.81	4.7	<2.0	<2.0	<2.0	<2.0	<2.0	1.2
MW-15	5/28/2002	20.33	5.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	6/3/2003	18.85	6.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	5/17/2004	18.475	6.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
	5/31/2005	17.8	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

PCE: Tetrachloroethene
TCE: Trichloroethene
DCE: Dichloroethene
DCB: Dichlorobenzene
DCA: Dichloroethane

TABLE 4.1
GROUNDWATER SAMPLING SCHEDULE
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

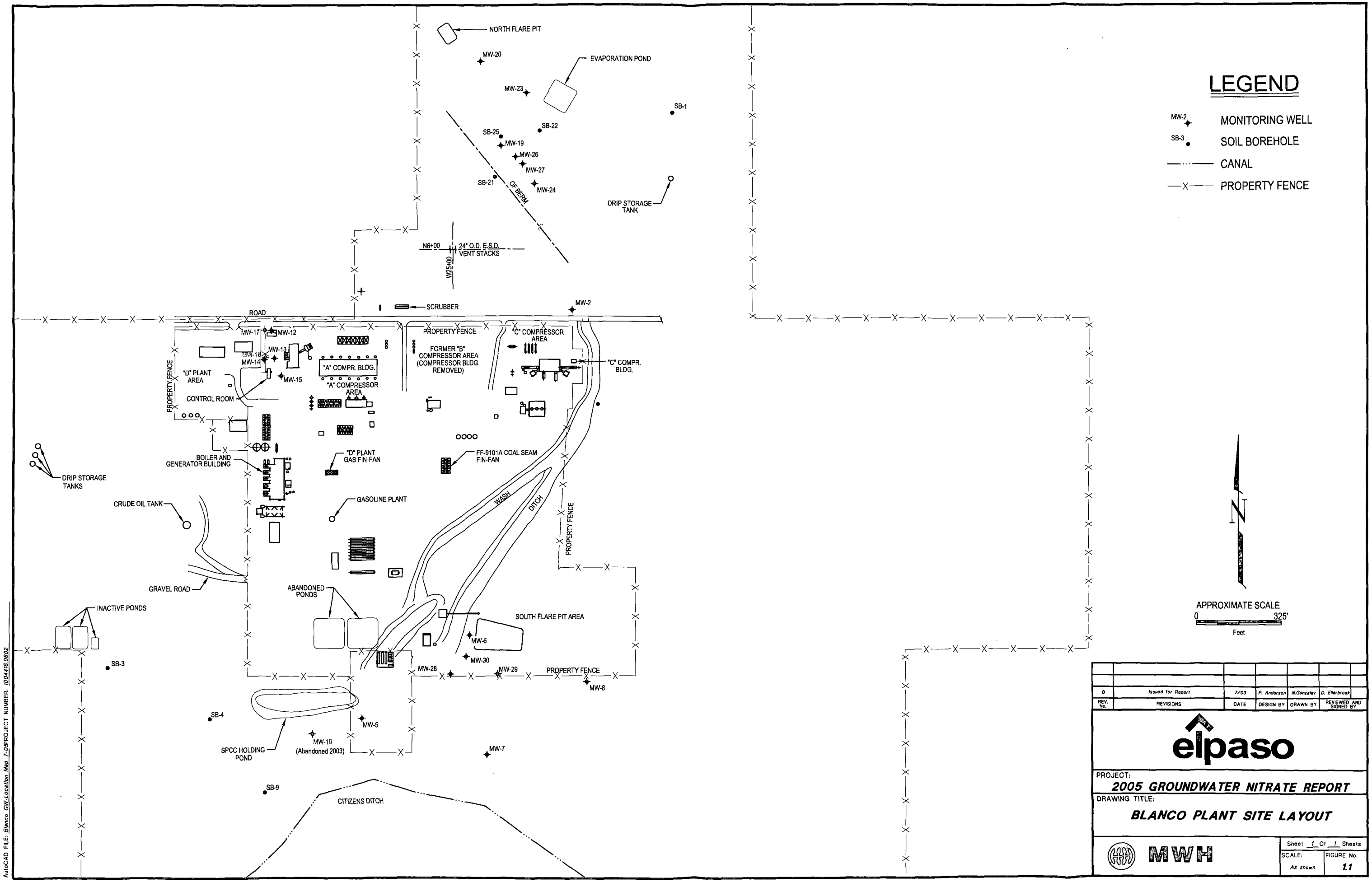
Monitoring Well	Analyses	Sampling Frequency
Blanco Plant Area		
MW-2	Nitrate+Nitrite	Annual
MW-5	Nitrate+Nitrite	Annual
MW-6	Nitrate+Nitrite	Annual
MW-7	Nitrate+Nitrite	Annual
MW-8	Nitrate+Nitrite	Annual
MW-28	Nitrate+Nitrite	Annual
MW-29	Nitrate+Nitrite	Annual
MW-30	Nitrate+Nitrite	Annual
D Plant Area		
MW-12	Nitrate+Nitrite, CHCs	Annual
MW-13	Nitrate+Nitrite, CHCs	Annual
MW-14	Nitrate+Nitrite, CHCs	Annual
MW-15	Nitrate+Nitrite, CHCs	Annual

CHCs: Chlorinated Hydrocarbons by EPA M 8260: 1,1-DCA, 1,1-DCE, 1,2-DCB, cis 1,2-DCE, trans 1,2-DCE, TCE and PCE.

Nitrate+Nitrite as N by EPA M 353.2, 354.1, or 4500.

PCE: Tetrachloroethene
TCE: Trichloroethene
DCE: Dichloroethene
DCB: Dichlorobenzene
DCA: Dichloroethane

FIGURES



LEGEND

- MW-2 — MONITORING WELL
- SB-3 — SOIL BOREHOLE
- CANAL
- PROPERTY FENCE

N

APPROXIMATE SCALE
0 325'
Feet

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
0	Issued for Report	7/03	P. Anderson	M.Gonzalez	D. Ellerbroak

elpaso

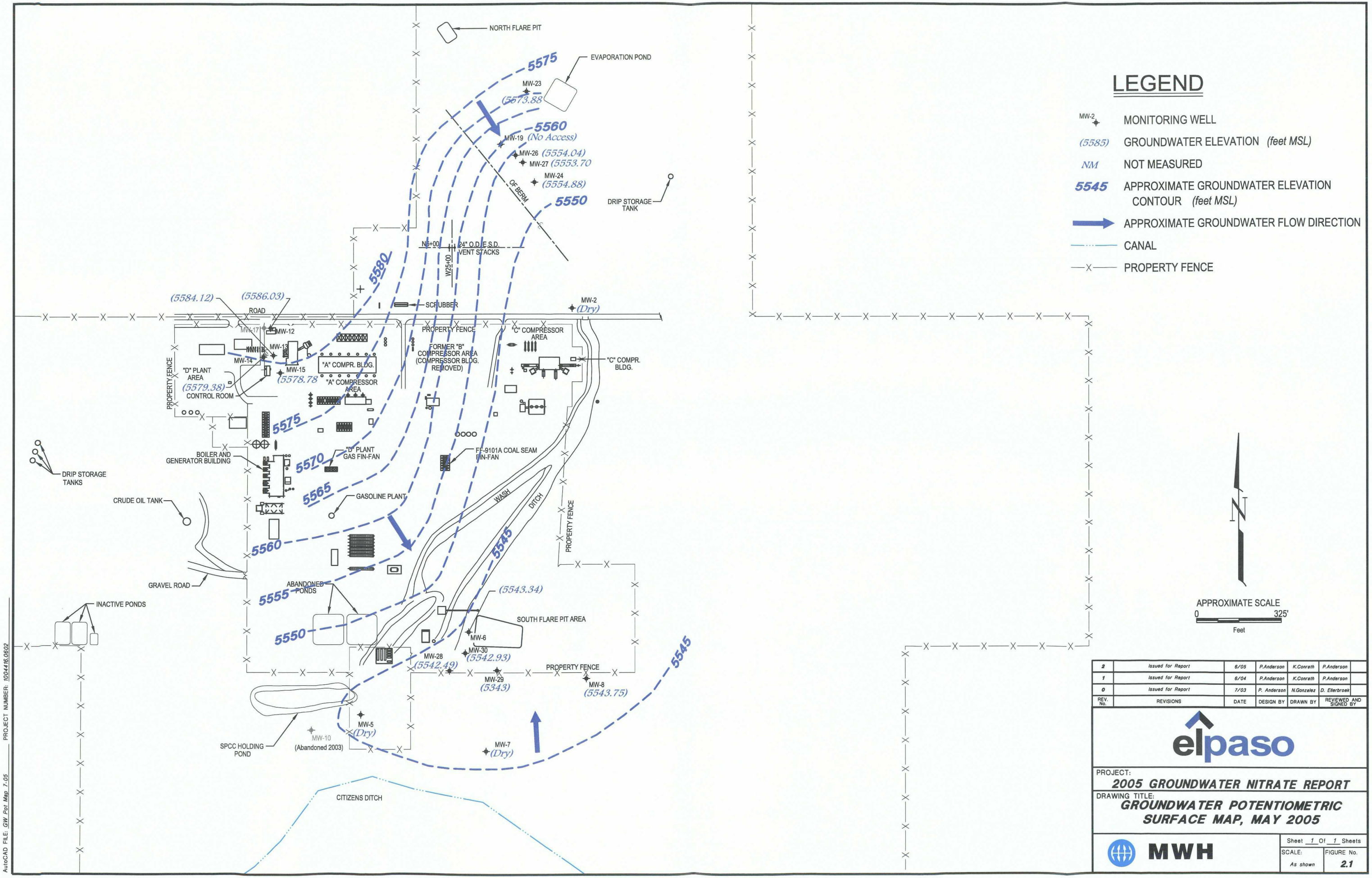
PROJECT:
2005 GROUNDWATER NITRATE REPORT

DRAWING TITLE:
BLANCO PLANT SITE LAYOUT

MWH

Sheet 1 Of 1 Sheets
SCALE: As shown
FIGURE No. 1.1

AutoCAD FILE: Blanco GW-Location Map 7_09 PROJECT NUMBER: 1004416.0602



LEGEND

- MW-2 — MONITORING WELL
- (5585) — GROUNDWATER ELEVATION *(feet MSL)*
- NM — NOT MEASURED
- 5545 — APPROXIMATE GROUNDWATER ELEVATION CONTOUR *(feet MSL)*
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- CANAL
- PROPERTY FENCE

N

APPROXIMATE SCALE
0 325'
Feet

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	Issued for Report	6/05	P.Anderson	K.Conrath	P.Anderson
1	Issued for Report	6/04	P.Anderson	K.Conrath	P.Anderson
0	Issued for Report	7/03	P. Anderson	N.Gonzalez	D. Ellerbroek

elpaso

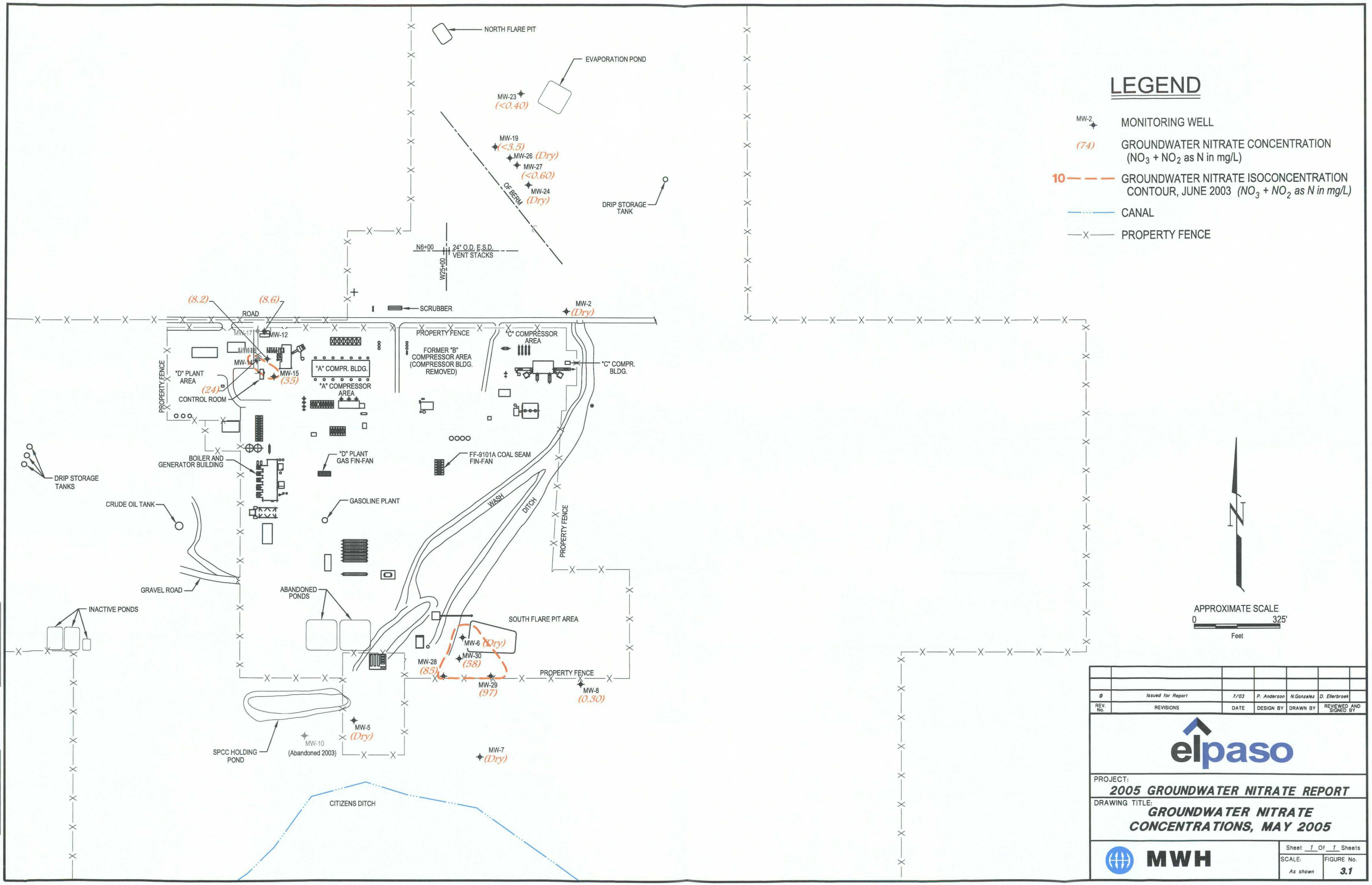
PROJECT:
2005 GROUNDWATER NITRATE REPORT

DRAWING TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP, MAY 2005

MWH

Sheet 1 Of 1 Sheets
SCALE: As shown
FIGURE No. 2.1

AutoCAD FILE: GW Pot Map 7-05 PROJECT NUMBER: 100416.0602



LEGEND

- MW-2 — MONITORING WELL
- (74) — GROUNDWATER NITRATE CONCENTRATION (NO_3 + NO_2 as N in mg/L)
- 10 — GROUNDWATER NITRATE ISOCONCENTRATION CONTOUR, JUNE 2003 (NO_3 + NO_2 as N in mg/L)
- CANAL
- PROPERTY FENCE

N

APPROXIMATE SCALE
0 325'
Feet

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
0	Issued for Report	7/03	P. Anderson	N.Gonzalez	D. Ellerbroek

elpaso

PROJECT: 2005 GROUNDWATER NITRATE REPORT

DRAWING TITLE: GROUNDWATER NITRATE CONCENTRATIONS, MAY 2005

MWH

Sheet 1 Of 1 Sheets
SCALE: As shown
FIGURE No. 3.1

AutoCAD FILE: GW_NO3 conc 7-05 PROJECT NUMBER: 5030073.011804

APPENDIX A

FIELD SAMPLING FORMS

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso

Location: Blanco NFP Well No: MW-23 Development **Sampling**

Project Manager MJN Date 5/30/05 Start Time 1202 Weather sunny 80s

Depth to Water 57.22 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 9.625 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
9.625 x .65	6.63 x 3		18.77 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1215	**6.67**	**6940**	**67.9**				**1**	**yellow tinge, sudsy, sheen**
	6.76	**7570**	**65.4**				**2**	**yellow tinge, sudsy, sheen**
	6.67	**8250**	**65.2**				**3**	**yellow tinge, sudsy, sheen**
	6.61	**8740**	**65.2**				**5**	**grey, sudsy, sheen**
	6.74	**9060**	**65.2**				**7.5**	**well is bailing down, grey**
1234	**6.79**	**9170**	**65.5**				**7.25**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1234	**6.79**	**9170**	**65.5**					**7.25**	**well has bailed dry**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-23 Sample Time 12335 5/30/05

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-26 Development **Sampling**
Project Manager MJN Date 5/30/05 Start Time 1356 Weather Sunny 80s
Depth to Water 67.16 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 0.47 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/oz to be removed
	Gallons	Ounces	
0.47 x .65	.306 x 3	39.17 x 3	117 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
1408	**6.59**	**7890**	**70.2**				**18**	**well has not fully recovered from previous weeks BTEX sampling**
	6.73	**7920**	**67.9**				**27**	**grey, HC odor, sheen**
	6.76	**8010**	**68.1**				**31**	**grey, HC odor, sheen**
1438	**6.78**	**8070**	**68.2**				**39**	**grey, HC odor, sheen**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1438	**6.78**	**8070**	**68.2**					**39**	**grey, HC odor, sheen**

COMMENTS: Well bailed dry on 5/30/05 not enough water to sample on 5/31/05 or 6/1/05. Water level had not recovered fully following 5/23/05 sampling when purged on 5/31/05

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-26 Sample Time none collected

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB na

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco NFP Client: MWH/EL Paso

Location: Blanco NFP Well No: MW-27 Development **Sampling**

Project Manager MJN Date 5/30/05 Start Time 1258 Weather sunny 80s

Depth to Water 67.58 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 1.7 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
1.7 x .16	0.27 x 3	34.81 x 3	104.45

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1313	**6.22**	**8870**	**71.0**				**22**	**grey, product, HC odor**
	6.60	**8880**	**69.7**				**32**	**grey, product, HC odor**
	6.55	**9370**	**70.3**				**36**	**grey, product, HC odor**
1323	**6.91**	**10470**	**69.7**				**38**	**well has bailed dry**

Final:

Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1323	**6.91**	**10470**	**69.7**					**38**	**well has bailed dry**

COMMENTS: Well bailed dry, returned to sample 5/31/05 and had to return on 6/1/05 to finish due to lack of water.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco NFP MW-27 Sample Time 0803 5/31/05

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco NFP Client: MWH/EL Paso

Location: Blanco NFP Well No: MW-19 Development **Sampling**

Project Manager MJN Date 5-31-05 Start Time 0700 Weather sunny 80s

Depth to Water NA Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height NA Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
na x .16	na x 3	x 3	na oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate

COMMENTS: a grab sample was collected due to access problems, water levels are not available, no pH, conductivity, or temperature measurements were collected.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal ____ Sample ID Blanco NFP MW-19 Sample Time 0745 5/31/05

VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco D Plant Client: MWH/EL Paso
Location: Blanco D Plant Area Well No: MW-12 Development **Sampling**
Project Manager MJN Date 5/31/05 Start Time 0852 Weather sunny 80s
Depth to Water 15.65 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 10.54 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer x Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
10.54 x .16	1.68 x 3		5.06

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0900	**7.96**	**6270**	**61.6**				**.25**	**clear**
	7.77	**6590**	**61.3**				**.5**	**clear**
	7.81	**6590**	**61.1**				**1**	**clear**
	7.54	**7000**	**61.3**				**2**	**clear**
	7.29	**7240**	**61.8**				**3**	**clear**
	7.34	**7340**	**62.3**				**4**	**clear**
	7.15	**7490**	**62.5**				**4.5**	**clear**
	7.30	**7500**	**62.3**				**4.75**	**clear**
	7.35	**7550**	**62.2**				**5.0**	**clear**
0925	**7.29**	**7590**	**62.1**				**5.25**	**clear**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0925	**7.29**	**7590**	**62.1**					**5.25**	**clear**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco D plant MW-12 Sample Time 0927
BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus
CHCs
MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco D Plant Client: MWH/EL Paso
Location: Blanco D Plant Area Well No: MW-13 Development **Sampling**
Project Manager MJN Date 5/31/05 Start Time 0920 Weather sunny 80s
Depth to Water 13.43 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.62 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
9.62 x .16	1.54 x 3	x 3	4.62

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0946	**6.7**	**6570**	**63.8**				**.25**	**clear**
	6.67	**7890**	**62.9**				**.5**	**clear**
	6.68	**6010**	**62.5**				**.75**	**clear**
	6.77	**6620**	**62.0**				**3**	**clear**
	6.75	**6810**	**61.5**				**4**	**clear**
	6.73	**6850**	**62.2**				**4.5**	**clear**
1018	**6.71**	**6780**	**62.1**				**4.75**	**clear**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1018	**6.71**	**6780**	**62.1**					**4.75**	**clear**

COMMENTS: unpreserved due to rxn of hcl w/ gw

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco D plant MW-13 Sample Time 1020

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus **CHCs**

MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco D Plant Client: MWH/EL Paso

Location: Blanco D Plant Area Well No: MW-14 Development **Sampling**

Project Manager MJN Date 5/31/05 Start Time 1442 Weather sunny 80s

Depth to Water 18.81 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 8.62 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
8.62 x .16	1.38 x 3	x 3	4.14

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1446	**6.50**	**6000**	**67.4**				**.25**	**clear**
	6.57	**6600**	**66.8**				**.5**	**clear**
	6.58	**6040**	**66.7**				**.75**	**clear**
	6.51	**7110**	**66.5**				**2.25**	**well is bailing down**
1502	**6.47**	**7150**	**66.4**				**2.375**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1502	**6.47**	**7150**	**66.4**					**2.375**	**well has bailed dry**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco D plant MW-14 Sample Time 1505

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus **CHCs**

MS/MSD_____ BD_____ BD Name/Time_____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco D plant Client: MWH/EL Paso
Location: Blanco D Plant Area Well No: MW-15 Development **Sampling**
Project Manager MJN Date 5/31/05 Start Time 1030 Weather sunny 80s
Depth to Water 17.80 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 8.98 Well Dia. 2"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
8.98 x .16	1.44 x 3	x 3	4.31

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1039	**4.35**	**8970**	**64.3**				**.25**	**yellow**
	4.02	**9070**	**64.0**				**.5**	**yellow**
	3.87	**9060**	**64.0**				**.75**	**yellow**
	3.30	**8860**	**64.7**				**3**	**yellow**
	3.43	**8760**	**64.6**				**4**	**yellow**
	3.28	**8850**	**64.5**				**4.25**	**yellow**
1104	**3.39**	**8780**	**64.3**				**4.56**	**yellow**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1104	**3.39**	**8780**	**64.3**					**4.56**	**yellow**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco D plant MW-15 Sample Time 1105

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus **CHCs**

MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco SFP Client: MWH/EL Paso
Location: Blanco SFP Well No: MW-8 Development **Sampling**
Project Manager MJN Date 5/31/05 Start Time 1413 Weather sunny 80s
Depth to Water 34.66 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.94 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐
Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		Gal/**oz** to be removed
	Gallons	Ounces	
1.94 x .65	1.26 x 3	x 3	3.78

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1417	**6.7**	**3720**	**64.5**				**0.5**	**clear**
	7.02	**4190**	**63.7**				**0.75**	**clear**
	7.13	**4170**	**63.3**				**1**	**well is bailing down, clear**
	7.05	**4180**	**63.3**				**1.25**	**clear**
1426	**7.14**	**4150**	**63.5**				**1.5**	**clear, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1426	**7.14**	**4150**	**63.5**					**1.5**	**clear, well has bailed down**

COMMENTS: Well bailed dry, collected partial sample and returned 6/1/05 to complete sampling but well had not recovered enough to finish. Sample container is half full.

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**
DO Monitor _____ Other _____
Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco SFP MW-8 Sample Time 1428 5/31/05

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate** **Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 310505TB01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco SFP Client: MWH/EL Paso

Location: Blanco SFP Well No: MW-28 Development **Sampling**

Project Manager MJN Date 5/31/05 Start Time 1129 Weather sunny 80s

Depth to Water 30.22 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 3.5 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
3.5 x .65	2.28 x 3		6.83

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1137	**6.20**	**3880**	**64.4**				**.75**	**clear**
	6.26	**3850**	**63.7**				**1.5**	**clear**
	6.27	**3860**	**63.5**				**2.25**	**clear**
	6.29	**3860**	**63.3**				**3.0**	**clear**
	6.29	**3880**	**63.7**				**4.5**	**clear**
	6.37	**3850**	**63.7**				**6.0**	**clear**
	6.31	**3860**	**63.0**				**6.75**	**clear**
1157	**6.30**	**3870**	**63.2**				**7.5**	**clear**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1157	**6.30**	**3870**	**63.2**					**7.5**	**clear**

COMMENTS:

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco SFP MW-28 Sample Time 1200

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco SFP Client: MWH/EL Paso

Location: Blanco SFP Well No: MW-29 Development **Sampling**

Project Manager MJN Date 5/31/05 Start Time 1208 Weather sunny 80s

Depth to Water 32.31 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 4.81 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
4.81 x .65	3.13 x 3		9.38

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1219	**6.28**	**4120**	**65.2**				**.75**	**clear**
	6.31	**4120**	**65.1**				**1.5**	**clear**
	6.36	**4100**	**64.9**				**2.25**	**clear**
	6.42	**4100**	**64.6**				**2.75**	**well is bailing down**
	6.44	**4100**	**64.6**				**3.25**	**clear**
	6.45	**4100**	**64.2**				**3.5**	**clear**
1226	**6.49**	**4090**	**64.2**				**3.75**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1516	**6.57**	**4620**	**68.7**					**3.5**	**Well has bailed dry**

COMMENTS: Well bailed dry

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco SFP MW-29 Sample Time 1228

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB____

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco SFP Client: MWH/EL Paso

Location: Blanco SFP Well No: MW-30 Development **Sampling**

Project Manager MJN Date 5/31/05 Start Time 1246 Weather sunny 80s

Depth to Water 32.28 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 4.62 Well Dia. 4"

Sampling Method: Submersible Pump ☐ Centrifugal Pump ☐ Peristaltic Pump ☐ Other ☐

Bottom Valve Bailer **x** Double Check Valve Bailer ☐ Stainless-Steel Kemmerer ☐

Criteria: 3 to 5 Casing Volumes of Water Removal **X** stabilization of Indicator Parameters **X** Other or bail dry

Gal/ft x ft of water	Water Volume in Well		**Gal**/oz to be removed
	Gallons	Ounces	
4.62 x .65	3.0 x 3		9.0

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1252	**6.34**	**3810**	**66.8**				**0.5**	**clear**
	6.38	**3800**	**66.4**				**1.0**	**clear**
	6.38	**3790**	**66.0**				**1.5**	**clear**
	6.41	**3750**	**66.7**				**3.5**	**clear**
	6.44	**3800**	**66.0**				**4.25**	**well is bailing down**
	6.50	**3800**	**66.0**				**5.00**	**clear**
1318	**6.57**	**3780**	**66.0**				**5.25**	**well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1318	**6.57**	**3780**	**66.0**					**5.25**	**well has bailed dry**

COMMENTS: Well bailed dry

INSTRUMENTATION: pH Meter **X** _____ Temperature Meter **x**

DO Monitor _____ Other _____

Conductivity Meter **X** _____

Water Disposal Rio Vista Sample ID Blanco SFP MW-30 Sample Time 1320

BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD _____ BD _____ BD Name/Time _____ TB 310505tb01

APPENDIX B

LABORATORY ANALYTICAL REPORTS

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 8260B (VOCS)	**Sample Collection Date(s):**	05/31/05
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco So.)
Batch Identification:	T10516	**Matrix:**	Water
MS/MSD Parent(s)[a]:	T10516-04	**Field Replicate Parent(s):**	None

Verification Complete: *Brian Buttars – 06/21/05*

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Blanco So.	MW-12	T10516-01	Y		
None	Blanco So.	MW-13	T10516-02	Y		
None	Blanco So.	MW-15	T10516-03	N		
None	Blanco So.	MW-14	T10516-04	Y		
None	Trip Blank	310505TB01	T10516-05	N		

DATA VERIFICATION WORKSHEET

Analytical Method:	SW-846 8260B (VOCS)	**MWH Job Number:**	EPC-SJRB (Blanco So.)
Laboratory:	Accutest	**Batch Identification:**	T10516

Verification Criteria								
Sample ID	**Blanco So. MW-12**	**Blanco So. MW-13**	**Blanco So. MW-15**	**Blanco So. MW-14**	**310505TB 01**			
Lab ID	**T10516-01**	**T10516-02**	**T10516-03**	**T10516-04**	**T10516-05**			
Holding Time	A	A	A	A	A			
Analyte List	A	A	A	A	A			
Reporting Limits	A	A	A	A	A			
Surrogate Spike Recovery	A	A	A	A	A			
Trip Blank	A	A	A	A	A			
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A			
Initial Calibration	N	N	N	N	N			
Initial Calibration Verification (ICV)	N	N	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N	N	N			
Method Blank	A	A	A	A	A			
Laboratory Control Sample (LCS)	A	A	A	A	A			
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	A	N/A			
Retention Time Window	N	N	N	N	N			
Injection Time(s)	N	N	N	N	N			
Hardcopy vs. Chain-of-Custody	A	A	A	A	A			
EDD vs. Hardcopy	N	N	N	N	N			
EDD vs. Chain of Custody	N	N	N	N	N			

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 353.2 (NO_3+NO_2)	**Sample Collection Date(s):**	05/31/05
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco So.)
Batch Identification:	T10516	**Matrix:**	Water
MS/MSD Parent(s)[a]:	T10516-04	**Field Replicate Parent(s):**	None

Verification Complete: *Brian Buttars – 06/21/05*

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Blanco So.	MW-12	T10516-01	Y		
None	Blanco So.	MW-13	T10516-02	Y		
None	Blanco So.	MW-15	T10516-03	Y		
None	Blanco So.	MW-14	T10516-04	Y		

DATA VERIFICATION WORKSHEET

Analytical Method:	SW-846 353.2 (NO_3+NO_2)	**MWH Job Number:**	EPC-SJRB (Blanco So.)
Laboratory:	Accutest	**Batch Identification:**	T10516

Verification Criteria								
Sample ID	Blanco So. MW-12	Blanco So. MW-13	Blanco So. MW-15	Blanco So. MW-14				
Lab ID	T10516-01	T10516-02	T10516-03	T10516-04				
Holding Time	A	A	A	A				
Analyte List	A	A	A	A				
Reporting Limits	A	A	A	A				
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A				
Field Duplicate/Replicate	N/A	N/A	N/A	N/A				
Initial Calibration	N	N	N	N				
Initial Calibration Verification (ICV)	N	N	N	N				
Continuing Calibration Verification (CCV)	N	N	N	N				
Method Blank	A	A	A	A				
Laboratory Control Sample (LCS)	A	A	A	A				
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N				
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A				
Analysis Time(s)	N	N	N	N				
Hardcopy vs. Chain-of-Custody	A	A	A	A				
EDD vs. Hardcopy	N	N	N	N				
EDD vs. Chain of Custody	N	N	N	N				

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

DATA VERIFICATION WORKSHEET

Analytical Method/Analytes: SW-846 353.2 (NO_3+NO_2) **Sample Collection Date(s):** 05/30-31/05

Laboratory: Accutest **MWH Job Number:** EPC-SJRB (Blanco So.)

Batch Identification: T10515 **Matrix:** Water

MS/MSD Parent(s)[a]: T10515-07 **Field Replicate Parent(s):** None

Lab Replicate Parent(s): T10515-07

Verification Complete: *Brian Buttars – 07/13/05*

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Blanco So.	MW-23	T10515-01	Y		
None	Blanco So.	MW-19	T10515-02	Y		
None	Blanco So.	MW-27	T10515-03	Y		
None	Blanco So.	MW-28	T10515-04	Y		
None	Blanco So.	MW-29	T10515-05	Y		
None	Blanco So.	MW-30	T10515-06	Y		
None	Blanco So.	MW-08	T10515-07	Y		

DATA VERIFICATION WORKSHEET
(Page 2 of 2)

Analytical Method:	SW-846 353.2 (NO_3+NO_2)	**MWH Job Number:**	EPC-SJRB (Blanco So.)
Laboratory:	Accutest	**Batch Identification:**	T10515

Verification Criteria								
Sample ID	**Blanco So. MW-23**	**Blanco So. MW-19**	**Blanco So. MW-27**	**Blanco So. MW-28**	**Blanco So. MW-29**	**Blanco So. MW-30**	**Blanco So. MW-08**	
Lab ID	**T10515-01**	**T10515-02**	**T10515-03**	**T10515-04**	**T10515-05**	**T10515-06**	**T10515-07**	
Holding Time	A	A	A	A	A	A	A	
Analyte List	A	A	A	A	A	A	A	
Reporting Limits	A	A	A	A	A	A	A	
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Initial Calibration	N	N	N	N	N	N	N	
Initial Calibration Verification (ICV)	N	N	N	N	N	N	N	
Continuing Calibration Verification (CCV)	N	N	N	N	N	N	N	
Method Blank	A	A	A	A	A	A	A	
Laboratory Control Sample (LCS)	A	A	A	A	A	A	A	
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N	N	N	
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A	N/A	N/A	A	
Laboratory Replicate	N/A	N/A	N/A	N/A	N/A	N/A	A	
Analysis Time(s)	N	N	N	N	N	N	N	
Hardcopy vs. Chain-of-Custody	A	A	A	A	A	A	A	
EDD vs. Hardcopy	N	N	N	N	N	N	N	
EDD vs. Chain of Custody	N	N	N	N	N	N	N	

(a) List QC batch identification if different than Batch ID
A indicates verification criteria were met
A/L indicates verification criteria met based upon Laboratory's QC Summary Form
X indicates verification criteria were not met
N indicates data review were not a project specific requirement
N/A indicates criteria are not applicable for the specified analytical method or sample
N/R indicates data not available for review

NOTES:

Gulf Coast
ACCUTEST
Laboratories

07/13/05

Technical Report for

Montgomery Watson

Blanco South Flare Pit

310505MN02

Accutest Job Number: T10515

Sampling Dates: 05/30/05 - 05/31/05

Report to:

MWH Americas, Inc.

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: **19**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4 5

Table of Contents

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Sample Summary

Montgomery Watson

Job No: T10515

Blanco South Flare Pit
Project No: 310505MN02

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T10515-1	05/30/05	12:35	MN	06/02/05	AQ	Ground Water	MW-23
T10515-2	05/31/05	07:45	MN	06/02/05	AQ	Ground Water	MW-19
T10515-3	05/31/05	08:03	MN	06/02/05	AQ	Ground Water	MW-27
T10515-4	05/31/05	12:00	MN	06/02/05	AQ	Ground Water	MW-28
T10515-5	05/31/05	12:28	MN	06/02/05	AQ	Ground Water	MW-29
T10515-6	05/31/05	13:20	MN	06/02/05	AQ	Ground Water	MW-30
T10515-7	05/31/05	14:28	MN	06/02/05	AQ	Ground Water	MW-8

ACCUTEST Laboratories

2

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson **Job No** T10515

Site: Blanco South Flare Pit **Report Date** 6/8/2005 5:18:33 PM

7 Samples were collected on between 05/30/2005 and 05/31/2005 and were received at Accutest on 06/02/2005 properly preserved, at 5.6 Deg. C and intact. These Samples received an Accutest job number of T10515. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Wet Chemistry By Method EPA 353.2

Matrix AQ **Batch ID:** *GN8266*

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T10515-7DUP, T10515-7MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-23		
Lab Sample ID:	T10515-1	Date Sampled:	05/30/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	0.40	0.050	mg/l	1	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-19		
Lab Sample ID:	T10515-2	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	3.5	0.50	mg/l	10	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-27		
Lab Sample ID:	T10515-3	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	0.60	0.050	mg/l	1	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.4 G

Client Sample ID:	MW-28		
Lab Sample ID:	T10515-4	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	85.0	5.0	mg/l	100	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-29		
Lab Sample ID:	T10515-5	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	97.0	5.0	mg/l	100	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-30		
Lab Sample ID:	T10515-6	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	58.0	5.0	mg/l	100	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

3.7 C

Client Sample ID:	MW-8		
Lab Sample ID:	T10515-7	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	0.30	0.050	mg/l	1	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 310505 MN#2

ACCUTEST Laboratories
10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 862067686365 | Bottle Order Control #
Accutest Quote # | Accutest Job # T10515

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 719 520 4433
Sampler's Name: M Nee

Project Information

Project Name: Blanco Plant
Street:
City State:
Project #:
Fax #: 719 520 4716
Client Purchase Order #:

Requested Analysis

Nitrate Nitrite

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles	Nitrate Nitrite	LAB USE ONLY
1	MW-23		53105	1235	MW	WG	1	✓	X	
2	MW-19		53105	0745	MW	WG	1	✓	X	
3	MW-27		53105	0803	MW	WG	1	✓	X	
4	MW-28		53105	1200	MW	WG	1	✓	X	
5	MW-29		53105	1228	MW	WG	1	✓	X	
6	MW-30		53105	1320	MW	WG	1	✓	X	
7	MW-8		53105	1428	MW	WG	1	✓	X	

Turnaround Time (Business Days)

- [x] 10 Day STANDARD — Approved By: / Date:
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Tier 1
- [ ] TRRP13
- [ ] EDD Format ____

Commercial "A" = Results Only

Comments / Remarks

bottle for MW-8 1/2 full
Analyze if possible

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler:	Date Time:	Received by:	Relinquished by	Date Time:	Received by:
1 6/1/05	1600	1	2 6/2/05 9:30		2
Relinquished by:	Date Time:	Received by:	Relinquished by	Date Time:	Received by:
3		3	4		4
Relinquished by:	Date Time	Received by:	Custody Seal #	Preserved where applicable ☐	On Ice ✓	Cooler Temp. 5.6
5		5				

4.1 4

T10515: Chain of Custody
Page 1 of 3

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T10515 DATE/TIME RECEIVED: 6/2/05 / 09:30

CLIENT: El Paso INITIALS: AR

Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation):

1. Y N Sample received in undamaged condition.
2. Y N Samples received within temp. range.
3. Y N Sample received with proper pH.
4. Y N Sample received in proper containers.
5. Y N Sample volume sufficient for analysis.
6. Y N Sample received with chain of custody.
7. Y N Chain of Custody matches sample IDs and analysis on containers.
8. Y N NA Custody seal received intact and tamper not evident on cooler.
9. Y N NA Custody seal received intact and tamper not evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1	5/30	1	AQ	P1000	II	(1),2,3,4,5,6	(U) <2, >12, NA
2-7	5/31	1	AQ	"	II	(1),2,3,4,5,6	(U) <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
			AR 6-2-05			1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

LOCATION: WI: Walk-In VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments:

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: FE

Tracking#:

COOLER TEMP: 5.6 COOLER TEMP: COOLER TEMP: COOLER TEMP:

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev.12/14/04, QAO

4.1 4

T10515: Chain of Custody

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ACCUTEST. Laboratories T10515

[redacted]

T10515

This portion can be removed for Recipient's records.

ate 6/1/05 FedEx Tracking Number 852067686354

ender's
ame Martin Nee Phone 505 334 2791

Company Lodestar Services

Address 26 CR 3500

y Flora Vista Dept./Floor/Suite/Room

State NM ZIP 87415

ur Internal Billing Reference

T10515: Chain of Custody
Page 3 of 3

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T10515
Account: MWHSLCUT - Montgomery Watson
Project: Blanco South Flare Pit

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Nitrogen, Nitrate + Nitrite	GN8266	0.050	<0.050	mg/l	0.500	0.49	96.0	89-112%

Associated Samples:
Batch GN8266: T10515-1, T10515-2, T10515-3, T10515-4, T10515-5, T10515-6, T10515-7

5.1

5

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T10515
Account: MWHSLCUT - Montgomery Watson
Project: Blanco South Flare Pit

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate + Nitrite	GN8266	T10515-7	mg/l	0.30	0.30	0.0	0-10%

Associated Samples:
Batch GN8266: T10515-1, T10515-2, T10515-3, T10515-4, T10515-5, T10515-6, T10515-7

5.2

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T10515
Account: MWHSLCUT - Montgomery Watson
Project: Blanco South Flare Pit

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate + Nitrite	GN8266	T10515-7	mg/l	0.30	0.100	0.40	100.0	80-119%

Associated Samples:
Batch GN8266: T10515-1, T10515-2, T10515-3, T10515-4, T10515-5, T10515-6, T10515-7

Gulf Coast ACCUTEST Laboratories

06/09/05

Technical Report for

Montgomery Watson

Blanco South Flare Pit

310505MN01

Accutest Job Number: T10516

Sampling Date: 05/31/05

Report to:

MWH Americas, Inc.

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: **28**

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino
Laboratory Manager

Sections: 1 2 3 4 5 6

Table of Contents

Sample Summary

Montgomery Watson

Job No: T10516

Blanco South Flare Pit
Project No: 310505MN01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T10516-1	05/31/05	09:27	MN	06/02/05	AQ	Ground Water	MW-12
T10516-2	05/31/05	10:20	MN	06/02/05	AQ	Ground Water	MW-13
T10516-3	05/31/05	11:05	MN	06/02/05	AQ	Ground Water	MW-15
T10516-4	05/31/05	15:05	MN	06/02/05	AQ	Ground Water	MW-14
T10516-5	05/31/05	07:00	MN	06/02/05	AQ	Trip Blank Water	310505TB01

ACCUTEST Laboratories

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson **Job No** T10516

Site: Blanco South Flare Pit **Report Date** 6/9/2005 4:31:37 PM

4 Samples and 1 Trip Blank were collected on 05/31/2005 and were received at Accutest on 06/02/2005 properly preserved, at 5.2 Deg. C and intact. These Samples received an Accutest job number of T10516. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ **Batch ID:** VY456

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T10464-7MS, T10464-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix AQ **Batch ID:** VY458

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T10516-4MS, T10516-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 353.2

Matrix AQ **Batch ID:** GN8266

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T10515-7DUP, T10515-7MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.

Accutest Laboratories Gulf Coast (ALGC) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALGC and as stated on the COC. ALGC certifies that the data meets the Data QualityObjectives for precision, accuracy and completeness as specified in the ALGC Quality Manual except as noted above. This report is to be used in its entirety. ALGC is not responsible for any assumptions of data quality if partial data packages are used

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	T10516-1	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Blanco South Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0064330.D	10	06/07/05	RR	n/a	n/a	VY456
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile special list.

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	22.3	20	10	ug/l	
75-35-4	1,1-Dichloroethylene	ND	20	10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	18.8	20	10	ug/l	J
95-50-1	o-Dichlorobenzene	ND	20	10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	20	10	ug/l	
127-18-4	Tetrachloroethylene	ND	20	10	ug/l	
79-01-6	Trichloroethylene	20.7	20	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		73-139%
17060-07-0	1,2-Dichloroethane-D4	100%		66-139%
2037-26-5	Toluene-D8	105%		77-148%
460-00-4	4-Bromofluorobenzene	105%		84-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	T10516-1	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	8.6	1.3	mg/l	25	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-13		
Lab Sample ID:	T10516-2	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Blanco South Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0064343.D	1	06/08/05	RR	n/a	n/a	VY458
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile special list.

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	50.7	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	26.6	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	5.7	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	21.3	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		73-139%
17060-07-0	1,2-Dichloroethane-D4	108%		66-139%
2037-26-5	Toluene-D8	99%		77-148%
460-00-4	4-Bromofluorobenzene	107%		84-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-13		
Lab Sample ID:	T10516-2	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	8.2	1.3	mg/l	25	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	T10516-3	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Blanco South Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0064344.D	10	06/08/05	RR	n/a	n/a	VY458
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile special list.

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	20	10	ug/l	
75-35-4	1,1-Dichloroethylene	ND	20	10	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	20	10	ug/l	
95-50-1	o-Dichlorobenzene	ND	20	10	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	20	10	ug/l	
127-18-4	Tetrachloroethylene	ND	20	10	ug/l	
79-01-6	Trichloroethylene	ND	20	10	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		73-139%
17060-07-0	1,2-Dichloroethane-D4	108%		66-139%
2037-26-5	Toluene-D8	101%		77-148%
460-00-4	4-Bromofluorobenzene	105%		84-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	T10516-3	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	35.0	0.25	mg/l	50	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	T10516-4	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Blanco South Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0064346.D	1	06/08/05	RR	n/a	n/a	VY458
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile special list.

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	4.7	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	1.2	2.0	1.0	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		73-139%
17060-07-0	1,2-Dichloroethane-D4	106%		66-139%
2037-26-5	Toluene-D8	104%		77-148%
460-00-4	4-Bromofluorobenzene	101%		84-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

3.4

Client Sample ID:	MW-14		
Lab Sample ID:	T10516-4	Date Sampled:	05/31/05
Matrix:	AQ - Ground Water	Date Received:	06/02/05
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	24.0	1.3	mg/l	25	06/08/05 12:07	LN	EPA 353.2

RL = Reporting Limit

Report of Analysis

Client Sample ID:	310505TB01		
Lab Sample ID:	T10516-5	Date Sampled:	05/31/05
Matrix:	AQ - Trip Blank Water	Date Received:	06/02/05
Method:	SW846 8260B	Percent Solids:	n/a
Project:	Blanco South Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0064345.D	1	06/08/05	RR	n/a	n/a	VY458
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Volatile special list.

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		73-139%
17060-07-0	1,2-Dichloroethane-D4	103%		66-139%
2037-26-5	Toluene-D8	108%		77-148%
460-00-4	4-Bromofluorobenzene	111%		84-150%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 310505MW01

ACCUTEST Laboratories
10165 Harwin Drive, Ste. 150, Houston, TX 77036
TEL. 713-271-4700 FAX: 713-271-4770
www.accutest.com

FED-EX Tracking # 852067686354 | Bottle Order Control # |
Accutest Quote # | Accutest Job # T10516

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Pope E-mail:
Phone #: 719 520 4433
Sampler's Name: M Nee

Project Information

Project Name: Blanco D Plant
Street:
City: State:
Project #:
Fax #: 719 520 4716
Client Purchase Order #:

Requested Analysis

Nitrate/Nitrite | CHCs | Temp

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	HNO3	H2SO4	NONE	NaHSO4	NaOH	ZnOAc	Nitrate/Nitrite	CHCs	Temp	LAB USE ONLY
1	MW-12		53105	0937	mw	WG	4	✓	✓						X	X		
2	MW-13		53105	1020	mw	WG	4	✓	✓						X	X		
3	MW-15		53105	1105	mw	WG	4	✓	✓						X	X		
4	MW-14		53105	1505	mw	WG	4	✓	✓						X	X		
5	310505TB01		53105	0700	mw	WQ	2		✓							X	X	

Turnaround Time (Business Days)

- ☒ 10 Day STANDARD — Approved By: / Date:
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ Other

Emergency & Rush T/A data available VIA LabLink

Data Deliverable Information

- ☐ Commercial "A"
- ☐ Commercial "B"
- ☐ Reduced Tier 1
- ☐ Full Tier 1
- ☐ TRRP13
- ☐ EDD Format _____

Commercial "A" = Results Only

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery

Relinquished by Sampler	Date Time	Received by	Relinquished by	Date Time	Received by
1 6/1/05	1600	1	2 10/26/05 9:30		2
Relinquished by	Date Time	Received by	Relinquished by	Date Time	Received by
3		3	4		4
Relinquished by	Date Time	Received by	Custody Seal #	Preserved where applicable ☐	On Ice	Cooler Temp
5		5			☒	5.0

4.1 4

T10516: Chain of Custody
Page 1 of 3

ACCUTEST

SAMPLE RECEIPT LOG

JOB #: T10516 DATE/TIME RECEIVED: 6/2/05/09:30

CLIENT: El Paso INITIALS: AR

Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation):

1. (Y) N Sample received in undamaged condition.
2. (Y) N Samples received within temp. range.
3. (Y) N Sample received with proper pH.
4. (Y) N Sample received in proper containers.
5. (Y) N Sample volume sufficient for analysis.
6. (Y) N Sample received with chain of custody.
7. (Y) N Chain of Custody matches sample IDs and analysis on containers.
8. (Y) N NA Custody seal received intact and tamper not evident on cooler.
9. Y N (NA) Custody seal received intact and tamper not evident on bottles.

SAMPLE or FIELD ID	BOTTLE #	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	PH
1-4	1-3	5/31	AQ	40mL	VREF	1,(2),3,4,5,6	U, <2, >12, (NA)
1-4	4	"	"	P1000	II	(1),2,3,4,5,6	(U), <2, >12, NA
5	1-2	"	"	40mL	VREF	1,(2),3,4,5,6	U, <2, >12, (NA)
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
				AR/6-2-05		1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA
						1,2,3,4,5,6	U, <2, >12, NA

LOCATION: WI: Walk-in VR: Volatile Refrig. SUB: Subcontract EF: Encore Freezer

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: Other

Comments:

pH of waters checked excluding volatiles

pH of soils N/A

Delivery method: Courier: FE

Tracking#:

COOLER TEMP: 52 COOLER TEMP:

COOLER TEMP: COOLER TEMP:

Method of sample disposal: (circle one) Accutest disposal Hold Return to Client

Form: SM012, Rev.12/14/04, QAO

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T10516: Chain of Custody

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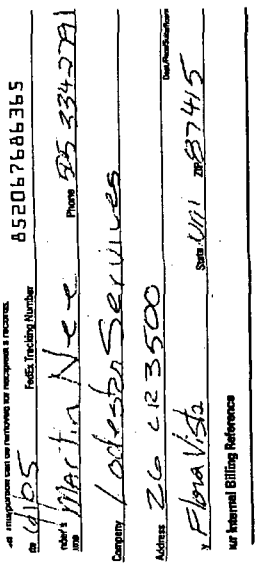

T10516

ACCUTEST LABORATORIES
CUSTODY SEAL CUSTODY SEAL

ACCUTEST LABORATORIES
CUSTODY SEAL CUSTODY SEAL

DATE / TIME SEAL 6105 1600 INITIALS: MJN

T10516: Chain of Custody
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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: T10516
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY456-MB	Y0064312.D	1	06/07/05	RR	n/a	n/a	VY456

The QC reported here applies to the following samples: Method: SW846 8260B

T10516-1

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	73-139%
17060-07-0	1,2-Dichloroethane-D4	97%	66-139%
2037-26-5	Toluene-D8	104%	77-148%
460-00-4	4-Bromofluorobenzene	104%	84-150%

Method Blank Summary

Job Number: T10516
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY458-MB	Y0064334.D	1	06/08/05	RR	n/a	n/a	VY458

The QC reported here applies to the following samples: Method: SW846 8260B

T10516-2, T10516-3, T10516-4, T10516-5

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	1.0	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l	
79-01-6	Trichloroethylene	ND	2.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	99%	73-139%
17060-07-0	1,2-Dichloroethane-D4	97%	66-139%
2037-26-5	Toluene-D8	104%	77-148%
460-00-4	4-Bromofluorobenzene	108%	84-150%

Blank Spike Summary

Job Number: T10516
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY456-BS	Y0064311.D	1	06/07/05	RR	n/a	n/a	VY456

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The QC reported here applies to the following samples: Method: SW846 8260B

T10516-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	25	25.9	104	63-125
75-35-4	1,1-Dichloroethylene	25	24.7	99	52-143
156-59-2	cis-1,2-Dichloroethylene	25	25.4	102	65-116
95-50-1	o-Dichlorobenzene	25	27.3	109	72-118
156-60-5	trans-1,2-Dichloroethylene	25	25.5	102	66-128
127-18-4	Tetrachloroethylene	25	23.7	95	72-128
79-01-6	Trichloroethylene	25	23.6	94	69-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	102%	73-139%
17060-07-0	1,2-Dichloroethane-D4	96%	66-139%
2037-26-5	Toluene-D8	108%	77-148%
460-00-4	4-Bromofluorobenzene	99%	84-150%

Blank Spike Summary

Job Number: T10516
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY458-BS	Y0064333.D	1	06/08/05	RR	n/a	n/a	VY458

The QC reported here applies to the following samples: Method: SW846 8260B

T10516-2, T10516-3, T10516-4, T10516-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	25	25.0	100	63-125
75-35-4	1,1-Dichloroethylene	25	24.0	96	52-143
156-59-2	cis-1,2-Dichloroethylene	25	24.3	97	65-116
95-50-1	o-Dichlorobenzene	25	26.0	104	72-118
156-60-5	trans-1,2-Dichloroethylene	25	25.1	100	66-128
127-18-4	Tetrachloroethylene	25	22.3	89	72-128
79-01-6	Trichloroethylene	25	22.9	92	69-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	73-139%
17060-07-0	1,2-Dichloroethane-D4	98%	66-139%
2037-26-5	Toluene-D8	104%	77-148%
460-00-4	4-Bromofluorobenzene	100%	84-150%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T10516
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T10464-7MS	Y0064319.D	1	06/07/05	RR	n/a	n/a	VY456
T10464-7MSD	Y0064320.D	1	06/07/05	RR	n/a	n/a	VY456
T10464-7	Y0064318.D	1	06/07/05	RR	n/a	n/a	VY456

The QC reported here applies to the following samples: Method: SW846 8260B

T10516-1

CAS No.	Compound	T10464-7 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	1.7	J	25	27.5	103	28.1	106	2	65-126/21
75-35-4	1,1-Dichloroethylene	ND		25	24.3	97	24.4	98	0	55-140/25
156-59-2	cis-1,2-Dichloroethylene	13.4		25	40.7	109	42.0	114	3	62-120/24
95-50-1	o-Dichlorobenzene	ND		25	26.5	106	26.1	104	2	68-120/20
156-60-5	trans-1,2-Dichloroethylene	ND		25	24.2	97	25.3	101	4	64-130/22
127-18-4	Tetrachloroethylene	9.6		25	33.0	94	33.2	94	1	69-132/21
79-01-6	Trichloroethylene	7.8		25	32.9	100	33.0	101	0	70-120/19

CAS No.	Surrogate Recoveries	MS	MSD	T10464-7	Limits
1868-53-7	Dibromofluoromethane	102%	102%	103%	73-139%
17060-07-0	1,2-Dichloroethane-D4	100%	99%	100%	66-139%
2037-26-5	Toluene-D8	106%	109%	105%	77-148%
460-00-4	4-Bromofluorobenzene	95%	97%	99%	84-150%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T10516
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T10516-4MS	Y0064347.D	1	06/08/05	RR	n/a	n/a	VY458
T10516-4MSD	Y0064348.D	1	06/08/05	RR	n/a	n/a	VY458
T10516-4	Y0064346.D	1	06/08/05	RR	n/a	n/a	VY458

The QC reported here applies to the following samples: Method: SW846 8260B

T10516-2, T10516-3, T10516-4, T10516-5

CAS No.	Compound	T10516-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	4.7		25	31.2	106	29.7	100	5	65-126/21
75-35-4	1,1-Dichloroethylene	ND		25	25.9	104	25.2	101	3	55-140/25
156-59-2	cis-1,2-Dichloroethylene	ND		25	24.4	98	24.1	96	1	62-120/24
95-50-1	o-Dichlorobenzene	ND		25	27.7	111	26.9	108	3	68-120/20
156-60-5	trans-1,2-Dichloroethylene	ND		25	27.0	108	26.5	106	2	64-130/22
127-18-4	Tetrachloroethylene	ND		25	24.3	97	23.4	94	4	69-132/21
79-01-6	Trichloroethylene	1.2	J	25	24.4	93	24.6	94	1	70-120/19

CAS No.	Surrogate Recoveries	MS	MSD	T10516-4	Limits
1868-53-7	Dibromofluoromethane	95%	95%	99%	73-139%
17060-07-0	1,2-Dichloroethane-D4	93%	100%	106%	66-139%
2037-26-5	Toluene-D8	108%	107%	104%	77-148%
460-00-4	4-Bromofluorobenzene	104%	102%	101%	84-150%

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T10516
Account: MWHSLCUT - Montgomery Watson
Project: Blanco South Flare Pit

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Nitrogen, Nitrate + Nitrite	GN8266	0.050	<0.050	mg/l	0.500	0.49	96.0	89-112%

Associated Samples:
Batch GN8266: T10516-1, T10516-2, T10516-3, T10516-4

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T10516
Account: MWHSLCUT - Montgomery Watson
Project: Blanco South Flare Pit

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Nitrogen, Nitrate + Nitrite	GN8266	T10515-7	mg/l	0.30	0.30	0.0	0-10%

Associated Samples:
Batch GN8266: T10516-1, T10516-2, T10516-3, T10516-4

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T10516
Account: MWHSLCUT - Montgomery Watson
Project: Blanco South Flare Pit

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate + Nitrite	GN8266	T10515-7	mg/l	0.30	0.100	0.40	100.0	80-119%

Associated Samples:
Batch GN8266: T10516-1, T10516-2, T10516-3, T10516-4

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