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September 29, 2006

Gw 49 - 2

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

RE: 2006 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 ***2006 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 June 2006 at 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,

for Ian Yanagisawa

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

Enclosures: as stated

Prepared for:

EL PASO NATURAL GAS COMPANY

elpaso

1001 Louisiana Street
Houston, Texas 77002

2006 ANNUAL GROUNDWATER REPORT FOR THE BLANCO PLANT SOUTH FLARE PIT AND D PLANT AREAS

San Juan County, New Mexico

September 2006

Prepared by:

MWH
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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	Perchloroethene
TCE	Trichloroethene

1.0 INTRODUCTION

This *2006 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 2006 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 *2005 Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas* (MWH, 2005), which was submitted to New Mexico Oil Conservation Division (NMOCD) in August 2005. Those proposed actions were as follows:

- All groundwater monitoring wells in the Blanco Plant South Flare Pit and D Plant areas will be sampled annually and analyzed for nitrate+nitrite concentrations.
- Groundwater monitoring wells in the North Flare Pit area (MW-19, MW-23, MW-24, MW-26, and MW-27) will be removed from the annual nitrate+nitrite sampling event.
- 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.

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 2006, 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 – 2006) at the site (including North Flare Pit wells) are presented in Table 2.1.

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 x 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 contour map for the site has been prepared based on water level measurements collected in June 2006, and is presented in Figure 2.1. Groundwater is generally flowing to the southeast, with a hydraulic gradient of 0.025 ft/ft in the Blanco D Plant site area and 0.054 ft/ft in the North Flare Pit area. The groundwater flow direction

in the South Flare Pit area appears to be influenced as well by apparent mounding caused by recharge from Citizens Ditch. These results are consistent with previous years' data.

3.0 2006 ANNUAL GROUNDWATER SAMPLING EVENT

Monitoring wells at the Blanco Plant were sampled on June 8, 2006, 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, EPNG 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 June 8, 2006 from wells MW-8, MW-12, MW-13, MW-14, MW-15, MW-28, MW-29, and MW-30 using standard sampling techniques and analyzed for nitrate+nitrite concentrations. Groundwater sampling was attempted at wells MW-2, MW-5, MW-6, and MW-7; however, these wells were either dry (MW-2, MW-5, MW-7), or did not contain enough water to sample (MW-6). Field data and sampling information are presented on field sampling forms, included in Appendix A.

Analytical data are listed in Table 2.1, 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 June 2006 sampling event are presented on Figure 3.1. The inferred 10 mg/L isoconcentration contour is also presented on this figure to depict the approximate 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 below the NMWQCC standard.

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 perchloroethene (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 during previous site characterization work. Annual sampling data from 2002 through 2006 are presented in Table 3.1. Nearly all of the 2006 chlorinated hydrocarbon results were below their applicable U.S. Environmental Protection Agency (USEPA) maximum contaminant levels (MCLs) and NMWQCC standards. Exceedances of these standards were only observed in monitoring well MW-13, which had a TCE concentration of 26.9 ug/L (MCL is 5.0 ug/L) and a 1,1-DCA concentration of 48.8 ug/L (NMWQCC standard is 25 ug/L).

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 Blanco Plant area have generally been stable over the previous 5-6 years, displaying no clear increasing or decreasing trends.

Chlorinated Hydrocarbons

- Only the groundwater sample collected from MW-13 exceeded either Federal or NMWQCC standards for CHCs. This is generally consistent with historic results, although TCE exceedances have occasionally been observed in monitoring well MW-12 to the north.

- The PCE and TCE concentrations in MW-13 appear to be naturally attenuating over time. The stable concentrations of cis-1,2-DCE, trans-1,2-DCE, and 1,1-DCE may indicate that reductive dechlorination is occurring within the dissolved phase plume.

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 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 continue to be analyzed annually for CHC concentrations, as listed in Table 4.1.

- Wells MW-2, MW-5 and MW-7 have been dry since 2002. All current evidence suggests it is unlikely these wells will produce sufficient water for sampling in the future. Therefore, pending approval by NMOCD, EPNG will abandon the wells in accordance with NMOCD guidelines.

- 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.

MWH, 2005. *2005 Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas.* August 2005.

TABLES

TABLE 2.1
GROUNDWATER NITRATE+NITRITE ANALYTICAL DATA (1991 - 2006)
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
	6/8/06	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
	6/8/06	dry
MW-6	6/19/91	110
	2/19/93	63.5
	6/7/93	76.4
	9/28/93	85.9
	10/7/93	94.5
	1/26/94	95.8
	8/20/94	1.7
	12/20/94	94
	2/16/95	90.6
	11/10/00	59
	9/24/02	95.1
	6/3/03	74
	5/17/04	dry
	5/30/05	not sampled
	6/8/06	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
	6/8/06	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
	6/8/06	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

Monitoring Well	Sample Date	Nitrate+Nitrite (mg/l)
NMOCD Standard: 10 mg/L		
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
	6/8/06	6.5
MW-13	6/19/91	6.3
	2/24/93	10.9
	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
	6/8/06	8.2
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	13
	8/28/01	20
	5/28/02	15
	6/3/03	15
	5/17/04	16
	5/31/05	24
	6/8/06	14
MW-15	6/19/91	50
	2/24/93	5
	6/8/93	48.1
	9/28/93	43
	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	20
	5/31/05	35
	6/8/06	17
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

< 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 2.1
GROUNDWATER NITRATE+NITRITE ANALYTICAL DATA (1991 - 2006)
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

Monitoring Well	Sample Date	Nitrate+Nitrite (mg/l)
	NMOCD Standard: 10 mg/L	
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	70
	2/25/93	10.6
	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
	6/8/06	not sampled
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
	6/8/06	not sampled
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
	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	23
	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
	6/8/06	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
	6/8/06	not sampled
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	53
	3/23/01	34
	8/28/01	63
	5/28/02	83
	6/3/03	87
	5/17/04	82
	5/31/05	85
	6/8/06	68
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	58
	5/28/02	70
	6/3/03	79
	5/17/04	88
	5/31/05	97
	6/8/06	71
MW-30	10/7/93	28.1
	2/2/94	57.1
	8/20/94	67.6
	2/16/95	91.3
	8/10/00	84
	11/10/00	70
	3/26/01	72
	8/28/01	76
	5/28/02	66
	6/3/03	58
	5/17/04	52
	5/31/05	58
	6/8/06	50

< 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 - 2006)
BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

Monitoring Well	Sample Date	Depth to Water (ft btoc)	Chlorinated Hydrocarbons by EPA Method 8260B (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**	**NA**	**5.0**	**NA**	**NA**	**100**	**20**
US EPA MCL:			**NA**	**NA**	**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
	6/8/2006	18.62	8.7	4.5	<2.0	0.87	10.7	4.7	2.5
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
	6/8/2006	15.60	**48.8**	53.1	5.2	5.2	35.8	**26.9**	<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
	6/8/2006	20.03	8.9	<2.0	<2.0	<2.0	3.4	1.8	<2.0
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
	6/8/2006	19.68	4.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

DCA: Dichloroethane DCE: Dichloroethene PCE: Perchloroethene
DCB: Dichlorobenzene NA: Not applicable TCE: Trichloroethene

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

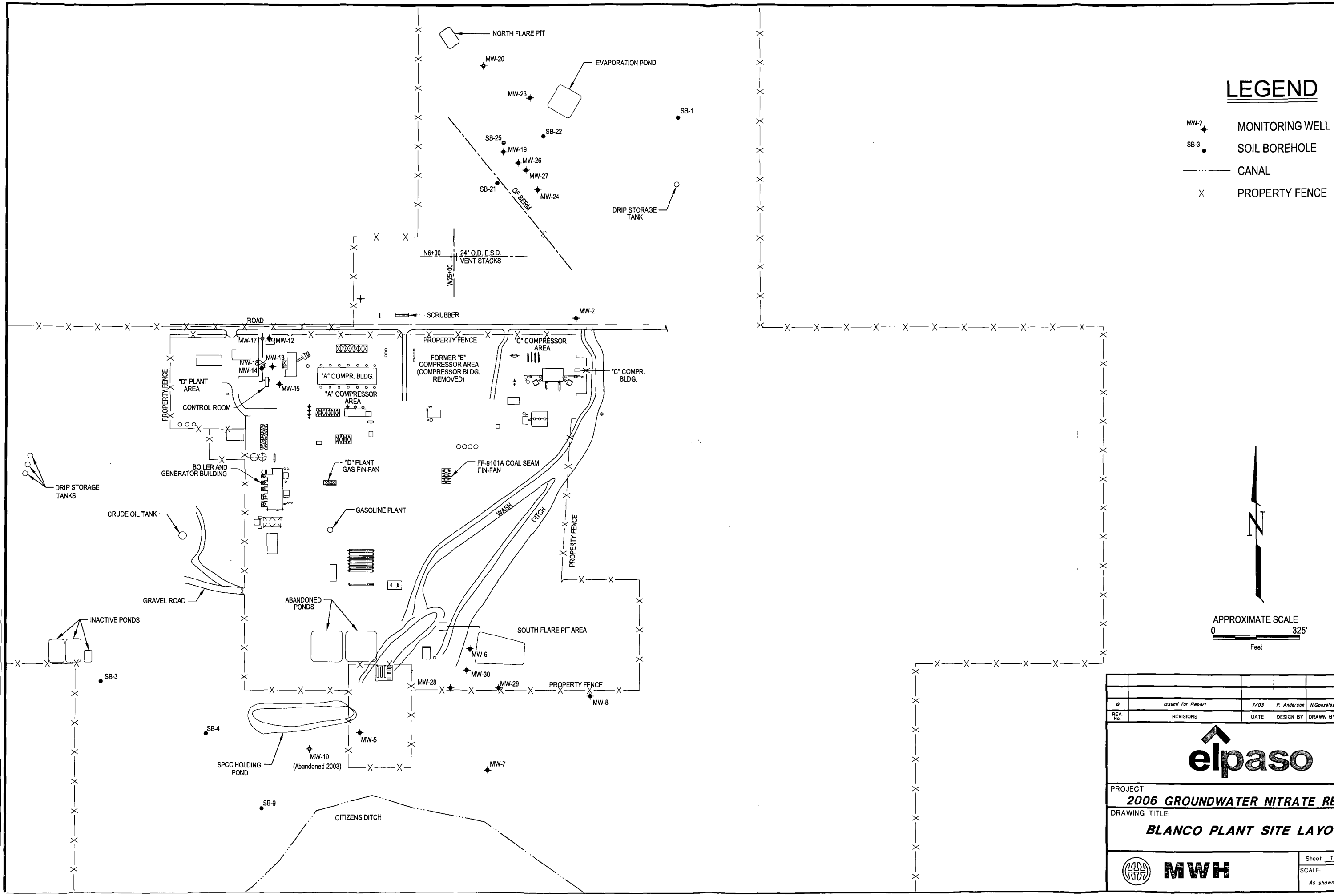
Monitoring Well	Analyses	Sampling Frequency
Blanco Plant Area		
MW-2	Nitrate+Nitrite	Annual
MW-5	Nitrate+Nitrite	Annual
MW-6	Nitrate+Nitrite	Annual
MW-7	Nitrate+Nitrite	Annual
MW-8	Nitrate+Nitrite	Annual
MW-28	Nitrate+Nitrite	Annual
MW-29	Nitrate+Nitrite	Annual
MW-30	Nitrate+Nitrite	Annual
D Plant Area		
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 Method 8260B: 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 Method 353.2, 354.1, or 4500.

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

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	N.Gonzalez	D. Ellerbrock

elpaso

PROJECT:
2006 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 7-03 PROJECT NUMBER: 10044.06.0602

19,000E
29,000E
39,000E
49,000E
59,000E
38,000N
28,000N
18,000N
8,000N

NORTH FLARE PIT
EVAPORATION POND
MW-23 (5573.66)
MW-19 (No Access)
MW-26 (5555.05))
MW-27 (5553.16)
MW-24 (5554.82)
OF BERM
DRIP STORAGE TANK
N6+00
24" O.D. E.S.D. VENT STACKS
W25+00
5575
5580
5560
5550
MW-13 (5581.95)
(5583.06)
ROAD
SCRUBBER
MW-2 (Dry)
MW-12
MW-18
MW-14
MW-15
PROPERTY FENCE
"A" COMPR. BLDG.
FORMER "B" COMPRESSOR AREA (COMPRESSOR BLDG. REMOVED)
"C" COMPRESSOR AREA
"C" COMPR. BLDG.
"D" PLANT AREA
(5578.16)
CONTROL ROOM
(5578.90)
"A" COMPRESSOR AREA
5575
5570
BOILER AND GENERATOR BUILDING
"D" PLANT GAS FIN-FAN
FF-9101A COAL SEAM FIN-FAN
DRIP STORAGE TANKS
5565
GASOLINE PLANT
WASH
DITCH
CRUDE OIL TANK
5560
PROPERTY FENCE
GRAVEL ROAD
ABANDONED PONDS
5545
(5543.35)
INACTIVE PONDS
5555
SOUTH FLARE PIT AREA
MW-6
MW-30 (5543.47)
5550
MW-28 (5543.41)
PROPERTY FENCE
MW-29 (5543.54)
MW-8 (5543.72)
5545
MW-5 (Dry)
MW-10 (Abandoned 2003)
SPCC HOLDING POND
MW-7 (Dry)
CITIZENS DITCH

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
3	ISSUED FOR REPORT	8/06	J.HURLEY	W.GRUNDVIG	J.SMITH
2	ISSUED FOR REPORT	6/05	P.ANDERSON		P.ANDERSON
1	ISSUED FOR REPORT	6/04	P.ANDERSON	K.CONRATH	P.ANDERSON
0	ISSUED FOR REPORT	7/03	P.ANDERSON	N.GONZALAS	D.ELLERBROEK

elpaso

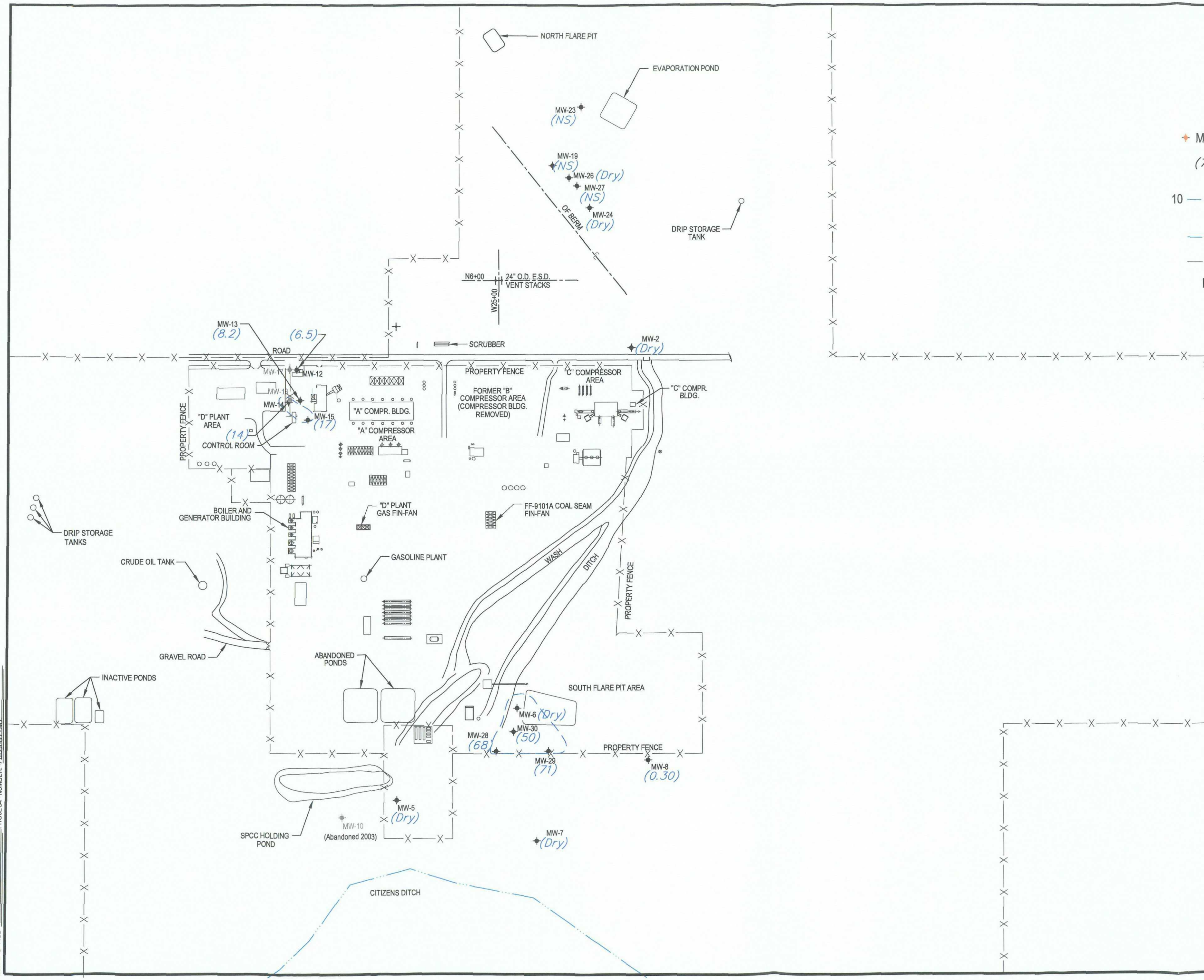
PROJECT:
2006 GROUNDWATER NITRATE REPORT

DRAWING TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP, JUNE 2006

MWH

Sheet 1 Of 1 Sheets
SCALE: AS SHOWN
Figure No. 2.1

AutoCAD FILE: *Intercpt/nt_2-1-GWPOTmap_7.* NUMBER: *1004210107*



LEGEND

MW-2	MONITORING WELL
(74)	GROUNDWATER NITRATE CONCENTRATION ($NO_3 + NO_2$ as N in mg/L)
10 — — —	GROUNDWATER NITRATE ISOCONCENTRATION CONTOUR, JUNE 2006 ($NO_3 + NO_2$ as N in mg/L)
—··—	CANAL
—X—	PROPERTY FENCE
NS	NOT SAMPLED

N

APPROXIMATE SCALE
0 325'
Feet

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
3	ISSUED FOR REPORT	8/06	J.HURLEY	W.GRUNDVIG	J.SMITH
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.GONZALES	J.ELLERBROEK

elpaso

PROJECT:
2006 GROUNDWATER NITRATE REPORT

DRAWING TITLE:
GROUNDWATER NITRATE CONCENTRATIONS, JUNE 2006

MWH

Sheet 1 Of 1 Sheets
SCALE: noted
FIGURE No. 3.1

ACAD FILE: ... 3.1GW NO3 conc PROJECT NUMBER: ...

APPENDIX A

FIELD SAMPLING FORMS

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** 5-18-06 and 5-19-06
Site Name Blanco

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	0925	-	-	well is dry TD 58.76
MW-19	1047	-	-	no access
MW-23	0942	-	57.37	well purged and sampled 5/19/06, looks static
MW-24	1205	-	67.14	not enough water in well to sample TD 67.19
MW-26	1107	-	65.58	well purged and sampled 5/23/05 not recovered not static
MW-27	1142	-	68.07	well purged and sampled 5/23/05 not recovered not static
MW-5	1612	-	-	Dry hole TD 21.15
MW-6	1318	-	30.97	not enough water to sample TD 31.22, may not be static
MW-7	0810	-	-	Well is dry TD is 21.24
MW-8	0821	-	34.61	
MW-28	0904	-	30.25	
MW-29	1150	-	32.27	
MW-30	1238	-	32.19	
MW-12	1432	-	18.92	
MW-13	1335	-	15.58	
MW-14	0730	-	19.86	
MW-15	1510	-	19.61	

Comments

Signature: Ashley L. Ager Date: May 19, 2006

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** 6-8-2006
Site Name Blanco

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	-	-	-	well is dry TD 58.76
MW-19	-	-	-	no access
MW-23	1205	-	57.44	well purged and sampled 5/19/06, looks static
MW-24		-		not enough water in well to sample TD 67.19
MW-26	1305	-	66.15	Well had not fully recovered since previous sampling on 05/19/06. Not static
MW-27	1328	-	68.12	Well had not fully recovered since previous sampling on 05/19/06. Not static
MW-5	-	-	-	Dry hole TD 21.15
MW-6	1045	-	30.94	not enough water to sample TD 31.22, may not be static
MW-7	-	-	-	Well is dry TD is 21.24
MW-8	1137	-	34.69	
MW-28	0930	-	29.30	
MW-29	1015	-	31.77	
MW-30	1028	-	31.74	
MW-12	0810	-	18.62	
MW-13	0836	-	15.60	
MW-14	1053	-	20.03	
MW-15	0858	-	19.68	
MW-30N	0704	-	77.58	

Comments

Signature: Ashley L. Ager Date: June 8, 2006

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 06/08/06 Start Time 1137 Weather raining, 60s

Depth to Water 34.69 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 1.86 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	
1.86 x .65	1.2 x 3	x 3	3.6

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1139	**7.26**	**4520**	**62.7**				**0.25**	**clear**
1142	**7.32**	**4240**	**61.6**				**0.50**	**Bailing down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1145	**7.33**	**4250**	**61.2**				**0.65**	**clear, well has bailed down**

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-8 Sample Time 1150

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 D Plant Client: MWH/EL Paso
Location: Blanco D Plant Area Well No: MW-12 Development **Sampling**
Project Manager MJN Date 06/08/06 time 0810 Weather cloudy, 70s
Depth to Water 18.62 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 7.93 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	
7.93 x .16	1.27 x 3		3.8

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0810	**5.48**	**5080**	**63.2**				**0.25**	**clear**
	5.53	**5310**	**62.5**				**0.50**	**clear**
	5.37	**5380**	**62.2**				**0.75**	**clear**
	5.42	**5420**	**62.2**				**1.0**	**clear**
	5.48	**5490**	**62.3**				**2.0**	**Cloudy**
	5.38	**5740**	**62.9**				**3.0**	**Cloudy**
	5.39	**5730**	**62.2**				**3.5**	**Cloudy**
0827	**5.38**	**5720**	**62.2**				**3.75**	**Cloudy**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0828	**5.39**	**5720**	**62.0**				**4.0**	**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 0830
BTEX VOCs Alkalinity TDS Cations Anions **Nitrate Nitrite** Ammonia TKN NMWQCC Metals Total Phosphorus **CHCs**
MS/MSD_____ BD_____ BD Name/Time_____ TB____

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 06/08/06 Start Time 0836 Weather cloudy, 70s
Depth to Water 15.60 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 7.45 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

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	**Gal**/oz to be removed
7.45 x .16	1.19 x 3	x 3	3.58

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0839	**4.95**	**7810**	**64.7**				**0.25**	**clear**
	6.02	**7910**	**64.5**				**0.50**	**clear**
	6.02	**7890**	**64.1**				**0.75**	**Cloudy**
	6.00	**8150**	**63.5**				**1.0**	**Cloudy**
	5.99	**8070**	**63.5**				**2.0**	**Cloudy**
	6.00	**8220**	**63.9**				**3.0**	**Cloudy**
0853	**6.03**	**8150**	**63.7**				**3.25**	**Cloudy**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0855	**6.02**	**8200**	**63.7**				**3.75**	**Cloudy, silty**

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 0856

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

MS/MSD_____ BD_____ BD Name/Time_____ TB____

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 06/08/06 Start Time 10.53 Weather drizzling, 60s
Depth to Water 20.03 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 7.4 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

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	**Gal**/oz to be removed
7.4 x .16	1.18	x 3	3.6

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1055	**6.83**	**6950**	**66.6**				**0.25**	**clear**
	6.73	**7240**	**65.6**				**0.50**	**clear**
	6.75	**7310**	**65.3**				**0.75**	**Clear**
1107	**6.74**	**7330**	**64.9**				**1**	**Well is bailing down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1108	**6.75**	**7320**	**65.0**				**1.3**	**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 1109

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

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-28 Development **Sampling**
Project Manager MJN Date 06/08/06 Start Time 0930 Weather cloudy, 70s
Depth to Water 29.60 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 3.65 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
3.65 x .65	2.37 x 3		7.1

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0933	**5.99**	**4010**	**67.5**				**0.25**	**Silty, brown, cloudy**
	5.95	**3650**	**66.6**				**1.0**	**Silty, not getting enough water in bailers; fish for bailers in well; retrieve two**
	5.94	**3890**	**66.2**				**1.25**	**Try fishing again, nothing recovered**
	6.42	**3940**	**65.7**				**1.75**	**Silty**
	6.43	**4020**	**65.4**				**2.25**	**Cloudy and silty**
	6.46	**4070**	**65.4**				**3.25**	**Cloudy**
	6.45	**3950**	**65.7**				**4.25**	**Cloudy**
	6.45	**3.96**	**65.6**				**5.25**	**Cloudy**
	6.47	**4050**	**66.3**				**6.25**	**Cloudy**
1005	**6.50**	**4.04**	**65.5**				**6.50**	**Cloudy**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1007	**6.51**	**4070**	**65.2**				**7.25**	**Cloudy and silty**

COMMENTS: spent time retrieving bailers from bottom of well. Recovered two, maybe another one at bottom.

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 1009
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-29 Development **Sampling**

Project Manager MJN Date 06/08/06 Start Time 1015 Weather cloudy, 70s

Depth to Water 31.77 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 5.35 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
5.35 x .65	3.48 x 3		10.4

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
10:17	**6.77**	**4150**	**66.7**				**1.0**	**Clear**
	6.72	**4120**	**65.5**				**3.0**	**Cloudy**
	6.73	**4150**	**64.8**				**3.75**	**Bailing down**
10:20	**6.80**	**4080**	**64.4**				**3.50**	**Almost dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
10:22	**6.82**	**4070**	**64.0**				**4.0**	**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 1024

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 06/08/06 Start Time 1028 Weather cloudy, 70s

Depth to Water 31.74 Depth to Product na Product Thickness na Measuring Point TOC

Water Column Height 5.16 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
5.16 x .65	3.35 x 3		10.0

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1030	**6.65**	**3850**	**65.6**				**1**	**clear**
	7.10	**3770**	**65.0**				**2**	**Silty brown**
	6.70	**3880**	**64.7**				**3**	**Silty**
	6.66	**3870**	**64.7**				**3.75**	**Silty, bailing down**
1035	**6.70**	**3900**	**65.1**				**4.35**	**silty**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1038	**4.95**	**3940**	**65.0**				**4.95**	**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 1040

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

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

APPENDIX B

LABORATORY ANALYTICAL REPORT

Gulf Coast ACCUTEST Laboratories

LET'S ALL IN THE CHEMISTRY

06/15/06

Technical Report for

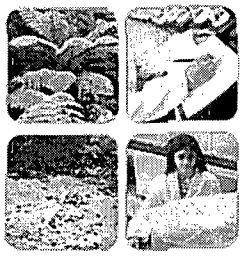
Montgomery Watson

Blanco South Flare Pit

D-ALAB-BLANCOPLTN-003

Accutest Job Number: T13775

Sampling Date: 06/08/06



Report to:

MWH Americas, Inc.
1801 California St. Suite 2900
Denver, CO 80202
jennifer.a.hurley@mwhglobal.com

ATTN: Ms. Jennifer Hurley

Total number of pages in report: 34

ACCUTEST LABORATORIES 50 YEARS 1956-2006

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

-1-

Accutest Laboratories

Sample Summary

Montgomery Watson

Job No: T13775

Blanco South Flare Pit
Project No: D-ALAB-BLANCOPLTN-003

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
T13775-1	06/08/06	08:30	MN	06/09/06	AQ	Ground Water	MW-12
T13775-2	06/08/06	08:56	MN	06/09/06	AQ	Ground Water	MW-13
T13775-3	06/08/06	09:25	MN	06/09/06	AQ	Ground Water	MW-15
T13775-4	06/08/06	11:09	MN	06/09/06	AQ	Ground Water	MW-14
T13775-5	06/08/06	11:50	MN	06/09/06	AQ	Ground Water	MW-8
T13775-6	06/08/06	10:09	MN	06/09/06	AQ	Ground Water	MW-28
T13775-7	06/08/06	10:24	MN	06/09/06	AQ	Ground Water	MW-29
T13775-8	06/08/06	10:40	MN	06/09/06	AQ	Ground Water	MW-30
T13775-9	06/08/06	07:00	MN	06/09/06	AQ	Trip Blank Water	080606TB01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T13775
Site:	Blanco South Flare Pit	**Report Date**	6/15/2006 1:41:53 PM

8 Samples and 1 Trip Blank were collected on 06/08/2006 and were received at Accutest on 06/09/2006 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of T13775. 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:** VB1265

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T13687-4MS, T13687-4MSD were used as the QC samples indicated.

Matrix AQ **Batch ID:** VF1920

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T13775-4MS, T13775-4MSD were used as the QC samples indicated.

Matrix AQ **Batch ID:** VZ1240

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 353.2

Matrix AQ **Batch ID:** GN10022

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T13693-1DUP, T13693-1MS 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

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-12		
Lab Sample ID:	T13775-1	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
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	Z23228.D	1	06/13/06	JH	n/a	n/a	VZ1240
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	8.7	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	10.7	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	4.5	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	0.87	2.0	0.75	ug/l	J
127-18-4	Tetrachloroethylene	2.5	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	4.7	2.0	0.63	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	116%		73-139%
17060-07-0	1,2-Dichloroethane-D4	110%		66-139%
2037-26-5	Toluene-D8	108%		77-148%
460-00-4	4-Bromofluorobenzene	117%		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

3.1

Client Sample ID:	MW-12		
Lab Sample ID:	T13775-1	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	6.5	1.0	mg/l	20	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-13		
Lab Sample ID:	T13775-2	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
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	B119282.D	1	06/12/06	LJ	n/a	n/a	VB1265
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	48.8	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	5.2	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	35.8	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	53.1	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	5.2	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	26.9	2.0	0.63	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	93%		73-139%
17060-07-0	1,2-Dichloroethane-D4	94%		66-139%
2037-26-5	Toluene-D8	92%		77-148%
460-00-4	4-Bromofluorobenzene	86%		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:	T13775-2	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	8.2	1.0	mg/l	20	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-15		
Lab Sample ID:	T13775-3	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
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	B119283.D	1	06/12/06	LJ	n/a	n/a	VB1265
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	4.3	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.63	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		73-139%
17060-07-0	1,2-Dichloroethane-D4	96%		66-139%
2037-26-5	Toluene-D8	94%		77-148%
460-00-4	4-Bromofluorobenzene	92%		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:	T13775-3	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	17.0	2.5	mg/l	50	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-14		
Lab Sample ID:	T13775-4	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
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	F0072251.D	1	06/13/06	LJ	n/a	n/a	VF1920
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	8.9	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	3.4	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	1.8	2.0	0.63	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	98%		73-139%
17060-07-0	1,2-Dichloroethane-D4	94%		66-139%
2037-26-5	Toluene-D8	95%		77-148%
460-00-4	4-Bromofluorobenzene	92%		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-14		
Lab Sample ID:	T13775-4	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	14.0	1.3	mg/l	25	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-8		
Lab Sample ID:	T13775-5	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		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	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-28		
Lab Sample ID:	T13775-6	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	68.0	5.0	mg/l	100	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-29		
Lab Sample ID:	T13775-7	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	71.0	5.0	mg/l	100	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-30		
Lab Sample ID:	T13775-8	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
		Percent Solids:	n/a
Project:	Blanco South Flare Pit		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate + Nitrite	50.0	5.0	mg/l	100	06/14/06 11:40	LN	EPA 353.2

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	080606TB01		
Lab Sample ID:	T13775-9	**Date Sampled:**	06/08/06
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/06
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	F0072247.D	1	06/13/06	LJ	n/a	n/a	VF1920
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	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.63	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	96%		66-139%
2037-26-5	Toluene-D8	99%		77-148%
460-00-4	4-Bromofluorobenzene	95%		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 080606 MW#1

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

FED-EX Tracking # 856809112353 | Bottle Order Control #
Accutest Quote # | Accutest Job # T13775

Client / Reporting Information

Company Name: El Paso
Address: PO Box 2511
City: Houston State: TX Zip: 77252
Project Contact: IAN YANIGOSAWA E-mail:
Phone #: 713 420 7361
Sampler's Name: M Nea

Project Information

Project Name: Blanco D Plant SFP
Street:
City: State:
Project #:
Fax #: 713 445 9283
Client Purchase Order #:

Requested Analysis

Nitrate, Nitrite; ACE, TEG, DEA, 2EB, DGB

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	BUMMA # / MEOH Vial #	Collection Date	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: EB	MeOH	H2SO4	HNO3	HCl	NaOH	ZnAc	Nitrate, Nitrite	ACE, TEG, DEA, 2EB, DGB	LAB USE ONLY
1	MW-12		6/8/06	0830	MN	WG	4	3			1				X	X	
2	MW-13		6/8/06	0856	MN	WG	4				4				X	X	
3	MW-15		6/8/06	0925	MN	WG	4				4				X	X	
4	MW-14		6/8/06	1109	MN	WG	4	3			1				X	X	
5	MW-8		6/8/06	1150	MN	WG	1				1				X		
6	MW-28		6/8/06	1009	MN	WG	1				1				X		
7	MW-29		6/8/06	1024	MN	WG	1				1				X		
8	MW-30		6/8/06	1040	MN	WG	1				1				X		
9	080606 TB#1		6/8/06	0700	MN	WG	1	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

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

Relinquished by:	Date Time:	Received by:	Relinquished by	Date Time:	Received by:
1	6/8/06 1630	1 Paul Nez 6/9/06	2		2
3		3	4		4
5		5	Custody Seal #	Preserved where applicable ☐	On Ice: 28 Cooler Temp: 3.0C

4.1 4

T13775: Chain of Custody
Page 1 of 2

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T13775

DATE/TIME RECEIVED: 6/9/06 945

CLIENT: El Paso

INITIALS: BN

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	6/8/06	GW	40ml	VREF	1,[✓ 2],3,4,5,6	[✓ U], <2, >12, NA
⊥	4	⊥	⊥	500ml	1Bx	[✓ 1],2,3,4,5,6	[✓ U], <2, >12, NA
5-8	1	⊥	⊥	⊥	⊥	[✓ 1],2,3,4,5,6	[✓ U], <2, >12, NA
9	1	–	T.B	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
						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#:

COOLER TEMP: 3.0°C

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

T13775: Chain of Custody

Page 2 of 2

GC/MS Volatiles

5

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB1265-MB	B119266.D	1	06/12/06	LJ	n/a	n/a	VB1265

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-2, T13775-3

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.63	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	94%	73-139%
17060-07-0	1,2-Dichloroethane-D4	103%	66-139%
2037-26-5	Toluene-D8	103%	77-148%
460-00-4	4-Bromofluorobenzene	97%	84-150%

Method Blank Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1240-MB	Z23227.D	1	06/13/06	JH	n/a	n/a	VZ1240

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-1

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.63	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	115%	73-139%
17060-07-0	1,2-Dichloroethane-D4	108%	66-139%
2037-26-5	Toluene-D8	109%	77-148%
460-00-4	4-Bromofluorobenzene	115%	84-150%

Method Blank Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1920-MB	F0072245.D	1	06/13/06	LJ	n/a	n/a	VF1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-4, T13775-9

CAS No.	Compound	Result	RL	MDL	Units	Q
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.68	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.83	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.50	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.75	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.74	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.63	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	97%	73-139%
17060-07-0	1,2-Dichloroethane-D4	93%	66-139%
2037-26-5	Toluene-D8	99%	77-148%
460-00-4	4-Bromofluorobenzene	101%	84-150%

Blank Spike Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB1265-BS	B119265.D	1	06/12/06	LJ	n/a	n/a	VB1265

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-2, T13775-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	25	23.6	94	63-125
75-35-4	1,1-Dichloroethylene	25	23.1	92	52-143
156-59-2	cis-1,2-Dichloroethylene	25	23.2	93	65-116
95-50-1	o-Dichlorobenzene	25	24.1	96	72-118
156-60-5	trans-1,2-Dichloroethylene	25	23.1	92	66-128
127-18-4	Tetrachloroethylene	25	24.9	100	72-128
79-01-6	Trichloroethylene	25	24.9	100	69-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	90%	73-139%
17060-07-0	1,2-Dichloroethane-D4	91%	66-139%
2037-26-5	Toluene-D8	127%	77-148%
460-00-4	4-Bromofluorobenzene	97%	84-150%

Blank Spike Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF1920-BS	F0072244.D	1	06/13/06	LJ	n/a	n/a	VF1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-4, T13775-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	25	23.1	92	63-125
75-35-4	1,1-Dichloroethylene	25	23.2	93	52-143
156-59-2	cis-1,2-Dichloroethylene	25	22.9	92	65-116
95-50-1	o-Dichlorobenzene	25	29.6	118	72-118
156-60-5	trans-1,2-Dichloroethylene	25	22.6	90	66-128
127-18-4	Tetrachloroethylene	25	25.0	100	72-128
79-01-6	Trichloroethylene	25	23.0	92	69-120

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	99%	73-139%
17060-07-0	1,2-Dichloroethane-D4	96%	66-139%
2037-26-5	Toluene-D8	101%	77-148%
460-00-4	4-Bromofluorobenzene	96%	84-150%

Blank Spike/Blank Spike Duplicate Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ1240-BS	Z23226.D	1	06/13/06	JH	n/a	n/a	VZ1240
VZ1240-BSD	Z23231.D	1	06/13/06	JH	n/a	n/a	VZ1240

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	25	25.2	101	25.9	104	3	63-125/30
75-35-4	1,1-Dichloroethylene	25	23.1	92	24.3	97	5	52-143/30
156-59-2	cis-1,2-Dichloroethylene	25	23.3	93	23.3	93	0	65-116/30
95-50-1	o-Dichlorobenzene	25	24.0	96	23.6	94	2	72-118/30
156-60-5	trans-1,2-Dichloroethylene	25	24.4	98	23.4	94	4	66-128/30
127-18-4	Tetrachloroethylene	25	25.5	102	25.8	103	1	72-128/30
79-01-6	Trichloroethylene	25	23.7	95	24.2	97	2	69-120/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	116%	117%	73-139%
17060-07-0	1,2-Dichloroethane-D4	113%	112%	66-139%
2037-26-5	Toluene-D8	111%	109%	77-148%
460-00-4	4-Bromofluorobenzene	96%	96%	84-150%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T13687-4MS	B119274.D	1	06/12/06	LJ	n/a	n/a	VB1265
T13687-4MSD	B119275.D	1	06/12/06	LJ	n/a	n/a	VB1265
T13687-4	B119272.D	1	06/12/06	LJ	n/a	n/a	VB1265

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-2, T13775-3

CAS No.	Compound	T13687-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	ND		25	22.5	90	23.6	94	5	65-126/21
75-35-4	1,1-Dichloroethylene	ND		25	22.7	91	21.6	86	5	55-140/25
156-59-2	cis-1,2-Dichloroethylene	1.3	J	25	25.1	95	26.2	100	4	62-120/24
95-50-1	o-Dichlorobenzene	ND		25	21.6	86	22.8	91	5	68-120/20
156-60-5	trans-1,2-Dichloroethylene	ND		25	22.7	91	21.6	86	5	64-130/22
127-18-4	Tetrachloroethylene	ND		25	24.2	97	24.4	98	1	69-132/21
79-01-6	Trichloroethylene	ND		25	24.3	97	24.8	99	2	70-120/19

CAS No.	Surrogate Recoveries	MS	MSD	T13687-4	Limits
1868-53-7	Dibromofluoromethane	93%	99%	93%	73-139%
17060-07-0	1,2-Dichloroethane-D4	91%	91%	95%	66-139%
2037-26-5	Toluene-D8	100%	101%	92%	77-148%
460-00-4	4-Bromofluorobenzene	89%	97%	95%	84-150%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T13775
Account: MWHSLCUT Montgomery Watson
Project: Blanco South Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T13775-4MS	F0072254.D	1	06/13/06	LJ	n/a	n/a	VF1920
T13775-4MSD	F0072255.D	1	06/13/06	LJ	n/a	n/a	VF1920
T13775-4	F0072251.D	1	06/13/06	LJ	n/a	n/a	VF1920

The QC reported here applies to the following samples: **Method:** SW846 8260B

T13775-4, T13775-9

CAS No.	Compound	T13775-4 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3	1,1-Dichloroethane	8.9		25	33.8	100	34.3	102	1	65-126/21
75-35-4	1,1-Dichloroethylene	ND		25	25.0	100	25.1	100	0	55-140/25
156-59-2	cis-1,2-Dichloroethylene	3.4		25	27.2	95	27.7	97	2	62-120/24
95-50-1	o-Dichlorobenzene	ND		25	24.0	96	23.8	95	1	68-120/20
156-60-5	trans-1,2-Dichloroethylene	ND		25	26.4	106	24.9	100	6	64-130/22
127-18-4	Tetrachloroethylene	ND		25	26.5	106	24.8	99	7	69-132/21
79-01-6	Trichloroethylene	1.8	J	25	26.6	99	26.3	98	1	70-120/19

CAS No.	Surrogate Recoveries	MS	MSD	T13775-4	Limits
1868-53-7	Dibromofluoromethane	94%	94%	98%	73-139%
17060-07-0	1,2-Dichloroethane-D4	94%	97%	94%	66-139%
2037-26-5	Toluene-D8	96%	97%	95%	77-148%
460-00-4	4-Bromofluorobenzene	92%	95%	92%	84-150%

General Chemistry

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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: T13775
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	GN10022	0.050	<0.050	mg/l	0.500	0.49	98.0	89-112%

Associated Samples:
Batch GN10022: T13775-1, T13775-2, T13775-3, T13775-4, T13775-5, T13775-6, T13775-7, T13775-8

6.1

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DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T13775
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	GN10022	T13693-1	mg/l	3.9	4.0	2.5	0-10%

Associated Samples:
Batch GN10022: T13775-1, T13775-2, T13775-3, T13775-4, T13775-5, T13775-6, T13775-7, T13775-8

6.2

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MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: T13775
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	GN10022	T13693-1	mg/l	3.9	1.00	5.0	110.0	80-119%

Associated Samples:
Batch GN10022: T13775-1, T13775-2, T13775-3, T13775-4, T13775-5, T13775-6, T13775-7, T13775-8

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DATA VERIFICATION WORKSHEET

Analytical Method/Analytes:	SW-846 8260B	**Sample Collection Date(s):**	6/8/06
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco SFP)
Batch Identification:	T13775	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None

Verification Complete: *Betty Van Pelt*
(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Blanco D Plant SFP	MW-12	T13775-1	Y		1,1-DCA @ 8.7 µg/l cis-1,2-DCE @ 10.7 µg/l o-DCBZ @ 4.5 µg/l trans-1,2-DCE @ 0.87 J µg/l PCE @ 2.5 µg/l TCE @ 4.7 µg/l
None	Blanco D Plant SFP	MW-13	T13775-2	Y		1,1-DCA @ 48.8 µg/l 1,1-DCE @ 5.2 µg/l cis-1,2-DCE @ 35.8 µg/l o-DCBZ @ 53.1 µg/l trans-1,2-DCE @ 5.2 µg/l TCE @ 26.9 µg/l
None	Blanco D Plant SFP	MW-15	T13775-3	Y		1,1-DCA @ 4.3 µg/l
None	Blanco D Plant SFP	MW-14	T13775-4	Y		1,1-DCA @ 8.9 µg/l cis-1,2-DCE @ 3.4 µg/l TCE @ 1.8 µg/l
None	Blanco D Plant SFP	080606TB01	T13775-9	N		

DCA = dichloroethane
DCE = dichloroethene
DCBZ = dichlorobenzene
PCE = tetrachloroethene
TCE = trichloroethene

DATA VERIFICATION WORKSHEET

Analytical Method:	SW-846 8021B (BTEX)	**MWH Job Number:**	EPC-SJRB (Blanco NFP)
Laboratory:	Accutest	**Batch Identification:**	T13775

Verification Criteria								
Sample ID	BLANCO SFP MW-12	BLANCO SFP MW-13	BLANCO SFP MW-15	BLANCO SFP MW-14	080606TB 01			
Lab ID	T13775-1	T13775-2	T13775-3	T13775-4	T13775-9			
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	**Sample Collection Date(s):**	6/8/06
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco SFP)
Batch Identification:	T13775	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None

Verification Complete: *Betty Van Pelt*

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Blanco D Plant SFP	MW-12	T13775-1	Y		Nitrate/nitrite @ 6.5 mg/l
None	Blanco D Plant SFP	MW-13	T13775-2	Y		Nitrate/nitrite @ 8.2 mg/l
None	Blanco D Plant SFP	MW-15	T13775-3	Y		Nitrate/nitrite @ 17.0 mg/l
None	Blanco D Plant SFP	MW-14	T13775-4	Y		Nitrate/nitrite @ 14.0 mg/l
None	Blanco D Plant SFP	MW-8	T13775-5	Y		Nitrate/nitrite @ 0.30 mg/l
None	Blanco D Plant SFP	MW-28	T13775-6	Y		Nitrate/nitrite @ 68.0 mg/l
None	Blanco D Plant SFP	MW-29	T13775-7	Y		Nitrate/nitrite @ 71.0 mg/l
None	Blanco D Plant SFP	MW-30	T13775-8	Y		Nitrate/nitrite @ 50.0 mg/l

DATA VERIFICATION WORKSHEET

Analytical Method:	**SW-846 8021B (BTEX)**	**MWH Job Number:**	**EPC-SJRB (Blanco NFP)**
Laboratory:	**Accutest**	**Batch Identification:**	**T13775**

Verification Criteria								
Sample ID	**BLANCO SFP MW-12**	**BLANCO SFP MW-13**	**BLANCO SFP MW-15**	**BLANCO SFP MW-14**	**BLANCO SFP MW-8**	**BLANCO SFP MW-28**	**BLANCO SFP MW-29**	**BLANCO SFP MW-30**
Lab ID	**T13775-1**	**T13775-2**	**T13775-3**	**T13775-4**	**T13775-5**	**T13775-6**	**T13775-7**	**T13775-8**
Holding Time	A	A	A	A	A			
Analyte List	A	A	A	A	A			
Reporting Limits	A	A	A	A	A			
Surrogate Spike Recovery	N/A	N/A	N/A	N/A	N/A			
Trip Blank	N/A	N/A	N/A	N/A	N/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).

elpaso

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OCT 24 2006

Oil Conservation Division
Environmental Bureau

Via Federal Express

October 20, 2006

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

GW 49-2

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 "2006 Blanco North Flare Pit Annual Report". The enclosed report details sparge system operation and maintenance and groundwater sampling for the fourth quarter 2005 through third quarter 2006, and recommends additional site investigation activities for 2006/2007.

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

Sincerely,

Bart T. Wilking

Bart T. Wilking
Project Manager
Environmental Remediation
El Paso Corporation

Enclosures: as stated

Prepared for:

elpaso

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

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OCT 24 2006

Oil Conservation Division
Environmental Bureau

2006 BLANCO NORTH FLARE PIT ANNUAL REPORT

SAN JUAN COUNTY, NEW MEXICO

October 2006

Prepared by:

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

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

ACRONYMS

AS	air sparging
bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene and total xylenes
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
O&M	operation and maintenance
psig	pounds per square inch, gauge
scfm	standard cubic feet per minute

1.0 Introduction

This *2006 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 2005 through September 2006 (i.e., the reporting period). Data collected prior to this period, free-product removal data, and construction details of the AS system were included in the *2003 Blanco North Flare Pit Pilot Air Sparging System Report* (MWH, 2003a) (2003 AS System Report), the *2004 Blanco North Flare Pit Annual Report* (MWH 2004), and the *2005 Blanco North Flare Pit Annual Report* (MWH 2005). 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 the 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), the *2004 Blanco North Flare Pit Annual Report* (MWH 2004), and the *2005 Blanco North Flare Pit Annual Report* (MWH 2005). These documents summarize 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 central area of the Site to remediate dissolved-phase hydrocarbon contamination and reduce BTEX concentrations to below NMWQCC standards. This section discusses system operation and monitoring activities.

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 sparge well construction, including the geologic borelog and monitoring well installation report, are included in the 2003 AS System Report. The AS system was prepared for start-up in January/February 2003. However, operation of the AS system was delayed pending free-product removal efforts in MW-26, which were completed in June 2003. The AS system was placed into operation in June 2003 and has operated since then, with the exceptions of downtime due to electrical supply and maintenance related issues, and quarterly brief shutdowns during groundwater monitoring events. During the reporting period, the AS system was turned off until January 2006 due to power supply issues at the Site.

The AS system operates on a 12-hour on/off cycle in order to periodically break up the developed airflow channels in the formation. While running, the AS system injects approximately 5 to 9 scfm of air at a pressure of 4 to 16 psig. Subsequent to the AS system re-start in January 2006, the system consistently ran between 11 and 12 hours per day, based on the meter readings.

System operation and maintenance (O&M) was conducted generally every two weeks. During each O&M event, air pressure measurements were collected at each wellhead using a magnehelic gauge, and groundwater field parameters, including water levels, pH, temperature, specific conductance and dissolved oxygen, were measured. Following each visit, a field report was prepared to summarize all operation and monitoring data and report any problems. Field operation and monitoring reports for the period between October 2005 and September 2006 are included in Appendix A, and selected data are summarized in Table 1, *AS System Operation and Monitoring Data (February 2003 – September 2006).* 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. Minimal-to-no effects were observable in monitoring wells MW-23 (upgradient of system), MW-24 (virtually dry), and 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 2003 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 May 2006, three new monitoring wells were installed (MW-31, MW-32, and MW-33), shown in Figures 4 and 5, in an effort to more accurately characterize the Site. 11.25 ft of free-product was measured in MW-32 in August 2006, and 8.73 ft of product was measured in the well in September 2006. A pneumatic skimmer has since been installed in MW-32 and is currently recovering free-product. Well installation diagrams and borehole logs are included in Appendix D.

2.3 GROUNDWATER SAMPLING

Quarterly groundwater monitoring has been conducted at five monitoring wells in the North Flare Pit area (MW-19, MW-23, MW-26, MW-27, and MW-33). Sampling events were performed in November 2005, February 2006, May 2006, June 2006, and August 2006. The samples collected during the May 2006 event were ruined during shipment, and the wells were re-sampled in June 2006. 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 along with the historic data in Table 2, *Groundwater Monitoring Analytical Data (June 1991 – September 2006).* 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 5, *Benzene Concentrations in Groundwater.* These maps also present the groundwater flow direction based on water levels measured during the respective sampling events. Figure 6, *Historic Benzene Concentrations in Groundwater, 1991 – 2006*, presents trends in historic benzene concentrations in wells MW-19, MW-23, MW-26, MW-27, and MW-33.

As shown in Table 2 and Figure 6, groundwater BTEX concentrations have generally decreased subsequent to product recovery and air sparging activities. The largest decreases have occurred in MW-19, where the benzene concentration was reduced from 10,100 micrograms per liter (µg/L) in June 2003 to 18.6 µg/L in June 2006; and in MW-26, where free-product was present in June 2003 and the benzene concentration has since been reduced to 2.7 µg/L, as of the August 2006 sampling event. These wells were also the locations where the physical effects of the AS system (induced wellhead air pressure and increased dissolved oxygen concentrations) have been most pronounced. The data indicate that the focused remedial efforts at the Site have been effective.

3.0 Conclusions and Recommendations

Based on the monitoring data from the reporting period, the following conclusions can be drawn:

1. Product recovery and air sparging activities have been effective at removing free-product and reducing dissolved phase BTEX concentrations.

2. The groundwater quality in the area of monitoring well MW-23 does not appear to be improving. Remedial efforts have not been implemented in this area. EPTPC had planned to expand the AS system into this area, but the discovery of free product in new monitoring well MW-32 led to postponement of the expansion plans until additional source material delineation and subsequent Site evaluation can be completed.

3. The occurrence of free-product in monitoring well MW-32 indicates that hydrocarbon source material is still present on the Site, and this material may be affecting groundwater quality upgradient from the present AS system.

Therefore, EPTPC has the following recommendations with respect to future Site activities:

1. Groundwater monitoring frequency should be modified from quarterly to a semiannual basis. Sampling will return to a quarterly basis at such time when site closure will be contemplated. Table 3 shows the proposed sampling schedule.

2. Water and product levels will be gauged on a quarterly basis to provide data to support the current remedial efforts.

3. The AS system will continue to be operated approximately 12 hours per day.

4. Free-product recovery will continue in monitoring well MW-32.

5. Delineation of the area near the former North Flare Pit will be conducted. The intent of the characterization will be identification of the approximate free-product extent and to assess dissolved phase BTEX concentrations in that area.

6. Site data will be reported to the NMOCD on an annual basis, typically in October.

4.0 REFERENCES

MWH, 2002. *Work Plan for the Blanco North Flare Pit.* Prepared for El Paso Field Services. July 2002.

MWH, 2003a. *2003 Blanco North Flare Pit Pilot Air Sparging System Report.* Prepared for El Paso Field Services. October 2003.

MWH, 2003b. *Blanco North Flare Pit Work Plan Update Technical Memorandum.* Prepared for El Paso Field Services. June 2003.

MWH, 2004. *2004 Blanco North Flare Pit Annual Report.* Prepared for El Paso Field Services. October 2004.

MWH, 2005. *2005 Blanco North Flare Pit Annual Report.* Prepared for El Paso Tennessee Pipeline Company. October 2005.

TABLES

TABLE 1
AS SYSTEM OPERATION AND MONITORING DATA (FEBRUARY 2003 - SEPTEMBER 2006)
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
11/17/05	dry	nm	57.29	67.12	66.14	67.68
1/31/06	dry	nm	57.13	67.12	65.14	67.64
2/15/06	dry	63.85	57.08	67.11	64.96	67.79
3/1/06	dry	nm	57.3	67.11	65.54	67.77
4/3/06	dry	nm	57.4	67.11	64.67	67.85
4/18/06	dry	nm	57.39	67.1	64.8	67.89
4/28/06	dry	nm	57.24	67.11	64.92	64.9
6/15/06	dry	nm	57.27	67.11	65.59	68.07
7/17/06	dry	nm	57.53	67.11	64.92	67.72
7/31/06	dry	nm	57.29	67.13	65.36	68.2
8/15/06	dry	nm	57.42	67.1	65.39	68.25
9/18/06	dry	nm	57.46	67.13	65.43	68.27

TABLE 1
AS SYSTEM OPERATION AND MONITORING DATA (FEBRUARY 2003 - SEPTEMBER 2006)
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
1/31/06	nm	2.47	0.98	nm	3.72	1.02
2/15/06	nm	1.85	0.72	nm	4.18	0.75
3/1/06	nm	2.80	0.88	nm	5.41	1.17
4/3/06	nm	2.04	1.03	nm	4.76	0.89
4/18/06	nm	2.70	0.75	nm	5.66	0.79
4/28/06	nm	2.99	0.92	nm	5.20	0.83
6/15/06	nm	2.10	1.02	nm	4.25	1.07
7/17/06	nm	nm	0.79	nm	5.42	0.68
7/31/06	nm	2.59	0.59	nm	5.33	1.40
8/15/06	nm	2.88	0.67	nm	4.92	1.19
9/18/06	nm	3.90	0.49	nm	5.02	1.80

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

TABLE 1
AS SYSTEM OPERATION AND MONITORING DATA (FEBRUARY 2003 - SEPTEMBER 2006)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

	Induced Air Pressure at Well (inches H2O)					
Date	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
1/31/06	nm	5.60	0.00	0.06	<10	0.16
2/15/06	nm	5.50	0.00	0.15	<10	0.40
3/1/06	nm	7.00	0.00	0.10	<10	0.21
4/3/06	nm	4.00	0.00	0.05	<10	0.73
4/18/06	nm	1.00	0.00	0.08	0.40	0.04
4/28/06	nm	6.00	0.00	0.55	9.50	0.04
6/15/06	nm	2.90	0.00	0.05	9.90	0.15
7/17/06	nm	0.15	0.00	0.10	>10	0.23
7/31/06	nm	5.30	0.00	0.05	>10	0.40
8/15/06	nm	4.40	0.00	0.05	6.50	0.06
9/18/06	nm	4.80	0.00	0.03	8.80	0.06

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

TABLE 2
GROUNDWATER MONITORING ANALYTICAL DATA (JUNE 1991 - AUGUST 2006)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

			Analytical Parameters			
Monitoring Well	**Sample Date**	**Static Water Level (ft BTOC)**	**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			
	11/17/05	dry	Well Dry - No Sample Collected			
	2/21/06	dry	Well Dry - No Sample Collected			
	6/8/06	dry	Well Dry - No Sample Collected			
	8/15/06	dry	Well Dry - No Sample Collected			
MW-19	6/19/91		**8,600**	**210**	<25.0	**4,200**
	9/26/92	*nm*	<1.0	<1.0	<1.0	<1.0
	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
	11/17/05	nm	**3,730**	<20	**340**	<40
	2/21/06	nm	**20.1**	<5	**9**	**4.4**
	6/8/06	nm	**18.6**	<1	<1	**2.9**
	8/15/06	nm	Well Damaged - No Sample Collected.			
MW-20	2/24/93		<0.5	<0.5	<0.5	<0.5
	6/10/93		<2.0	<2.0	<2.0	<2.0
	9/29/93		<2.0	<2.0	<2.0	<2.0
	1/27/94		<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
	11/13/00	41.00	Well Damaged - No Sample Collected.			
	6/2/03	NA	Well Damaged and abandoned in 2002.			

TABLE 2
GROUNDWATER MONITORING ANALYTICAL DATA (JUNE 1991 - AUGUST 2006)
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

			Analytical Parameters			
Monitoring Well	Sample Date	Static Water Level (ft BTOC)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)
		NMWQCC Standard:	10	750	750	620
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
	11/17/05	57.29	5,280	2.6	203	863
	2/21/06	57.25	4,900	4.9	57	710
	6/8/06	57.44	3,470	<1	<1	373
	8/15/06	57.40	6,490	26.6	165.0	1,270
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			
	11/17/05	67.12	Not Enough Water to Sample - TD 67.19			
	2/21/06	67.11	Not Enough Water to Sample - TD 67.19			
	6/8/06	nm	Not Enough Water to Sample - TD 67.19			
	8/15/06	67.12	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	9.6	139	466
	12/18/03	65.16	307	<0.5	158	685
	5/17/04	65.54	109	14.3	87.1	280
	8/23/04	66.11	29.5	<5	40	93.6
	11/22/04	66.37	19.0	<1	3.5	56.8
	2/23/05	66.12	22.7	<10	<10	11
	5/23/05	66.25	38.0	6.3	62.3	173
	8/30/05	66.08	18.2	<5	3.2	30.4
	11/17/05	66.14	14.2	<5	17	34.8
	2/21/06	65.21	13.6	<2	<2	2.9
	6/8/06	66.15	2.4	<1	1.8	3.6
	8/15/06	65.92	2.7	21	11.1	41

TABLE 2
GROUNDWATER MONITORING ANALYTICAL DATA (JUNE 1991 - AUGUST 2006)
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-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**
	11/17/05	67.68	**26.3**	**4**	**175**	**1,070**
	2/21/06	67.28	**41.3**	<5	<5	**264**
	6/8/06	68.12	**2.0**	<1	**3.2**	**156**
	8/15/06	68.57	**7.0**	<5	<5	<2
MW-33	6/8/06		**1.1**	**4.2**	<1	**4.5**
	8/15/06	71.71	**30.1**	**37.7**	<50	**24.6**

Notes:

BTOC = Below Top of Casing
NA = Not Applicable
"<" = Analyte not detected at or above the reporting limit (RL). Value shown is the RL.
1. Shaded data indicate exceedance of New Mexico Water Quality Control Commission's (NMWQCC) standards.
2. All detected concentrations are shown in bold type.

TABLE 3
GROUNDWATER MONITORING SCHEDULE
BLANCO NORTH FLARE PIT - SAN JUAN COUNTY, NEW MEXICO

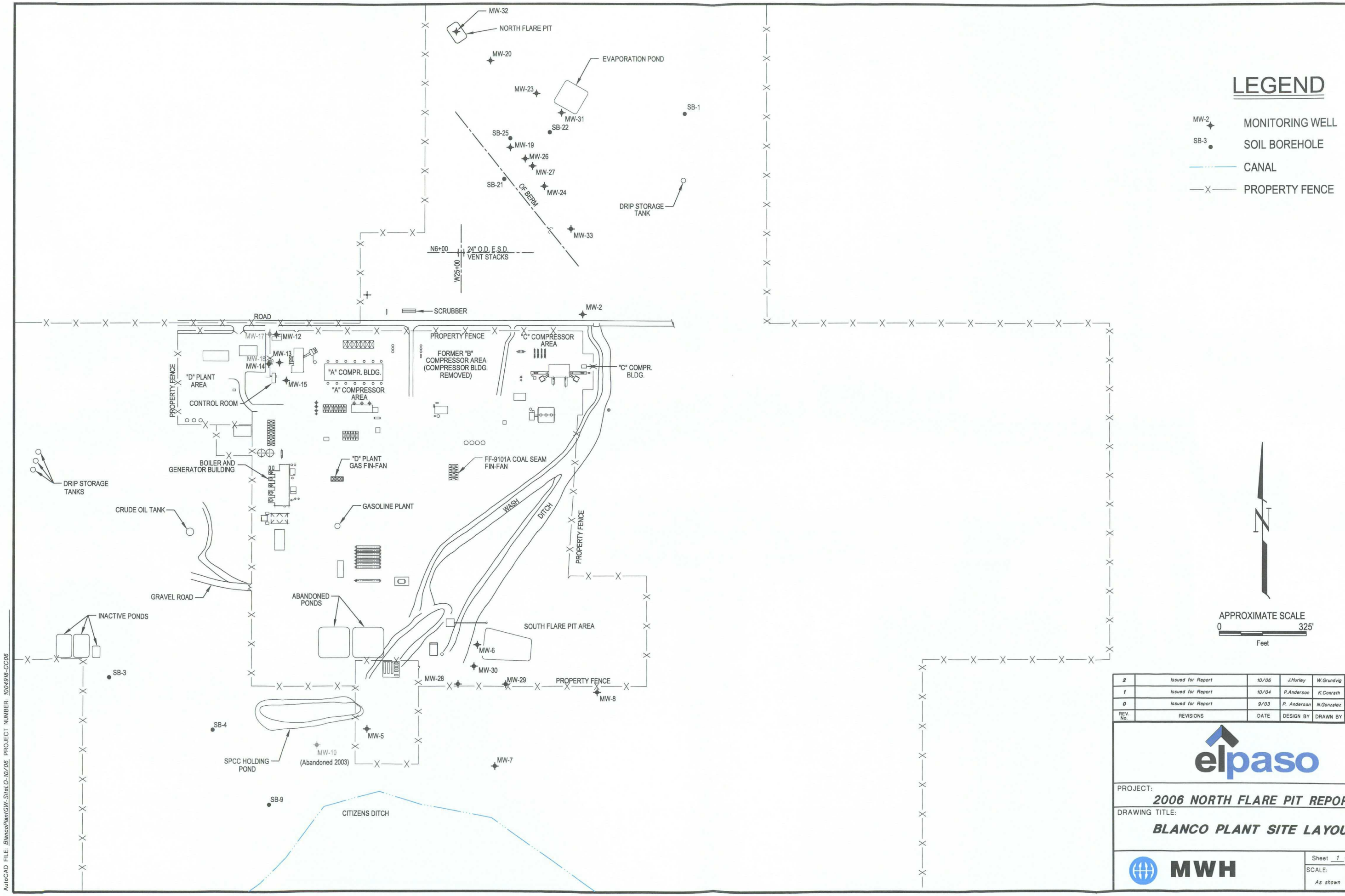
Monitoring Well	Monitoring Schedule	Analyses
North Flare Pit Area		
MW-2	Semiannually	Field Parameters, BTEX
MW-19	Semiannually	Field Parameters, BTEX
MW-23	Semiannually	Field Parameters, BTEX
MW-24	Semiannually	Field Parameters, BTEX
MW-26	Semiannually	Field Parameters, BTEX
MW-27	Semiannually	Field Parameters, BTEX
MW-33	Semiannually	Field Parameters, BTEX

Notes:

1. Field Parameters include temperature, pH, dissolved oxygen and specific conductance.
2. The next quarterly sampling event is tenatively scheduled for November 2006.
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
- CANAL
- PROPERTY FENCE

APPROXIMATE SCALE
0 325'
Feet

REV. No.	REVISIONS	DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	Issued for Report	10/06	J.Hurley	W.Grundvig	J.Smith
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

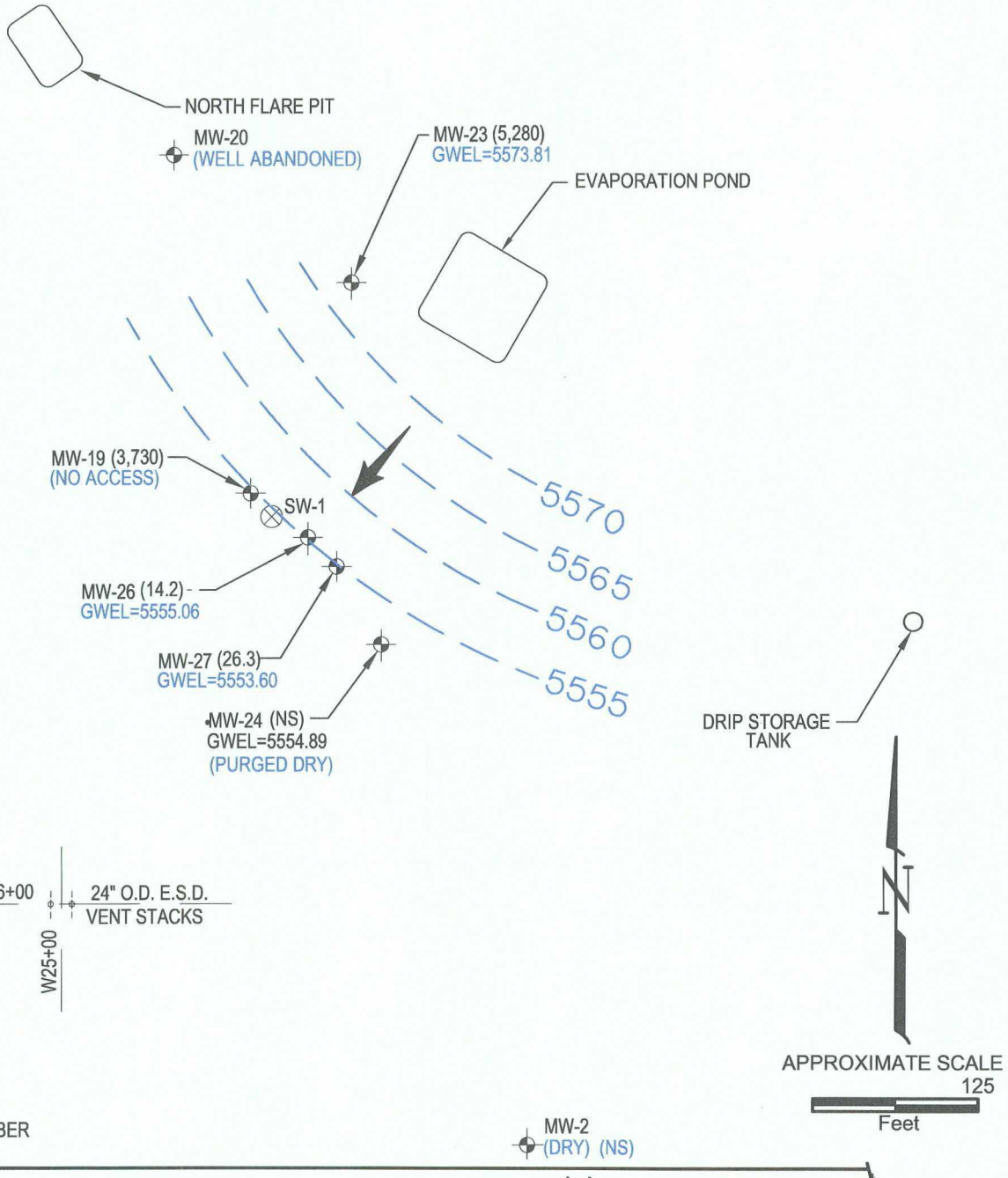
PROJECT:
2006 NORTH FLARE PIT REPORT

DRAWING TITLE:
BLANCO PLANT SITE LAYOUT

MWH

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

AutoCAD FILE: BlancoPlantGW-SiteLO-10-06 PROJECT NUMBER: 1004918-CC06



LEGEND

MW-23	GROUNDWATER MONITORING WELL	GWEL	GROUNDWATER ELEVATION, - NOVEMBER, 2005 (FT ABOVE MEAN SEA LEVEL)
(4,480)	(BENZENE CONCENTRATION IN ug/L)	SW-1	AIR SPARGING WELL LOCATION
→	APPROXIMATE GROUNDWATER FLOW DIRECTION	5555	APPROXIMATE GROUNDWATER CONTOURS (FT. MSL)
		(NS)	NOT SAMPLED

REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	ISSUED FOR NOVEMBER, REPORT	9/06	J.Hurley	W.Grundvig	J.Smith
1	ISSUED FOR MAY, 2006 REPORT	07/06	J.Hurley	W.Grundvig	J.Smith
0	ISSUED FOR AUGUST, 06 REPORT	2006	J.Hurley	K.Conrath	C.Cole

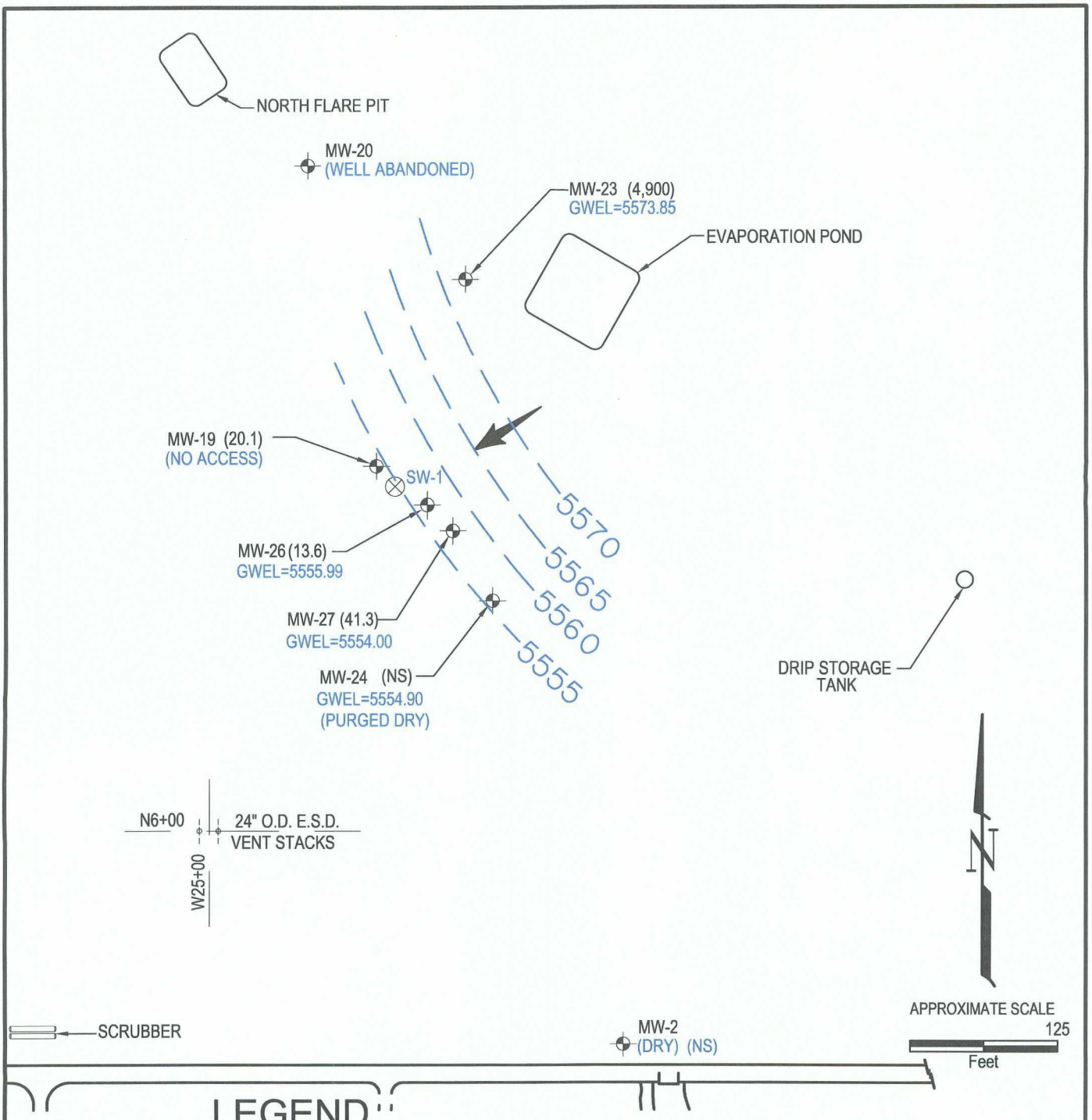
MWH

PROJECT No.: 1004918.CC06
AutoCAD FILE: BenzConcGWnov-06.dwg
SCALE: As Shown
FIGURE No: 2

elpaso

2006 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, NOVEMBER, 2005



LEGEND

MW-23 (4,480)	GROUNDWATER MONITORING WELL (BENZENE CONCENTRATION IN ug/L)	GWEL	GROUNDWATER ELEVITION,- FEBRUARY,2006 (FT ABOVE MEAN SEA LEVEL)
→	APPROXIMATE GROUNDWATER FLOW DIRECTION	SW-1 ⊗	AIR SPARGING WELL LOCATION
		5555	APPROXIMATE GROUNDWATER CONTOURS (FT. MSL)
		(NS)	NOT SAMPLED

REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
0	ISSUED FOR FEBRUARY, 2006 REPORT	9/06	J.Hurley	W.Grundvig	J.Smith

MWH

PROJECT No.: 1004918.CC06
AutoCAD FILE: BenzConcGWfeb-06.dwg
SCALE: As Shown
FIGURE No: 3

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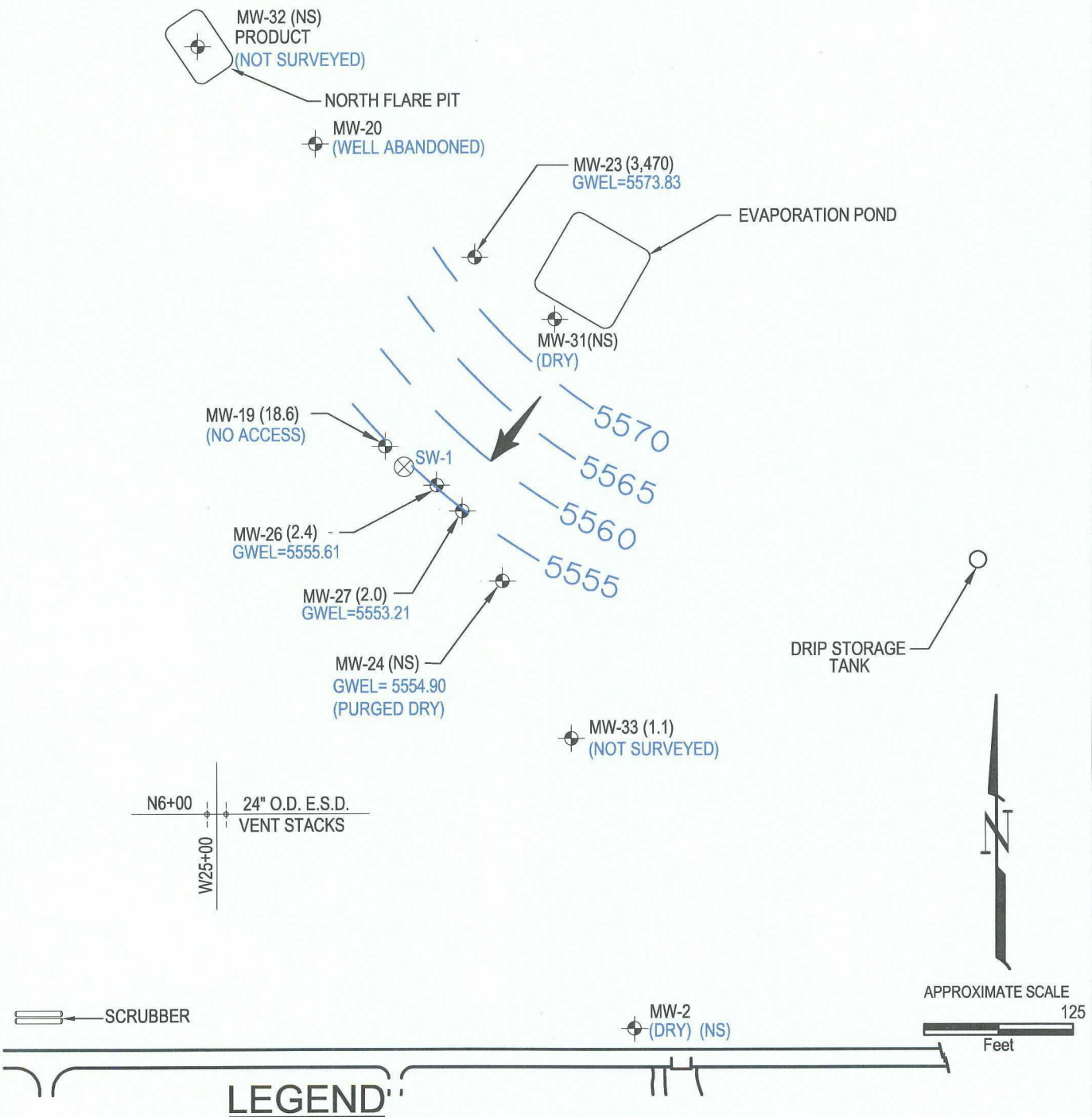
2006 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, FEBRUARY, 2006



LEGEND

MW-23 (4,480)	GROUNDWATER MONITORING WELL (BENZENE CONCENTRATION IN ug/L)	GWEL	GROUNDWATER ELEVATION,- JUNE, 2006 (FT ABOVE MEAN SEA LEVEL)
→	APPROXIMATE GROUNDWATER FLOW DIRECTION	SW-1 ⊗	AIR SPARGING WELL LOCATION
PRODUCT	FREE PRODUCT PRESENT IN WELL.	5555	APPROXIMATE GROUNDWATER CONTOURS (FT. MSL)
		(NS)	NOT SAMPLED

REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
2	ISSUED FOR JUNE, REPORT	9/06	J.Hurley	W.Grundvig	J.Smith
1	ISSUED FOR MAY REPORT	07/06	J.Hurley	W.Grundvig	J.Smith
0	ISSUED FOR AUGUST,06 REPORT	9/05	P.Anderson	K.Conrath	C.Cole

MWH

PROJECT No.: 1004918.CC06
AutoCAD FILE: BenzConcGWJune-06.dwg
SCALE: As Shown
FIGURE No: 4

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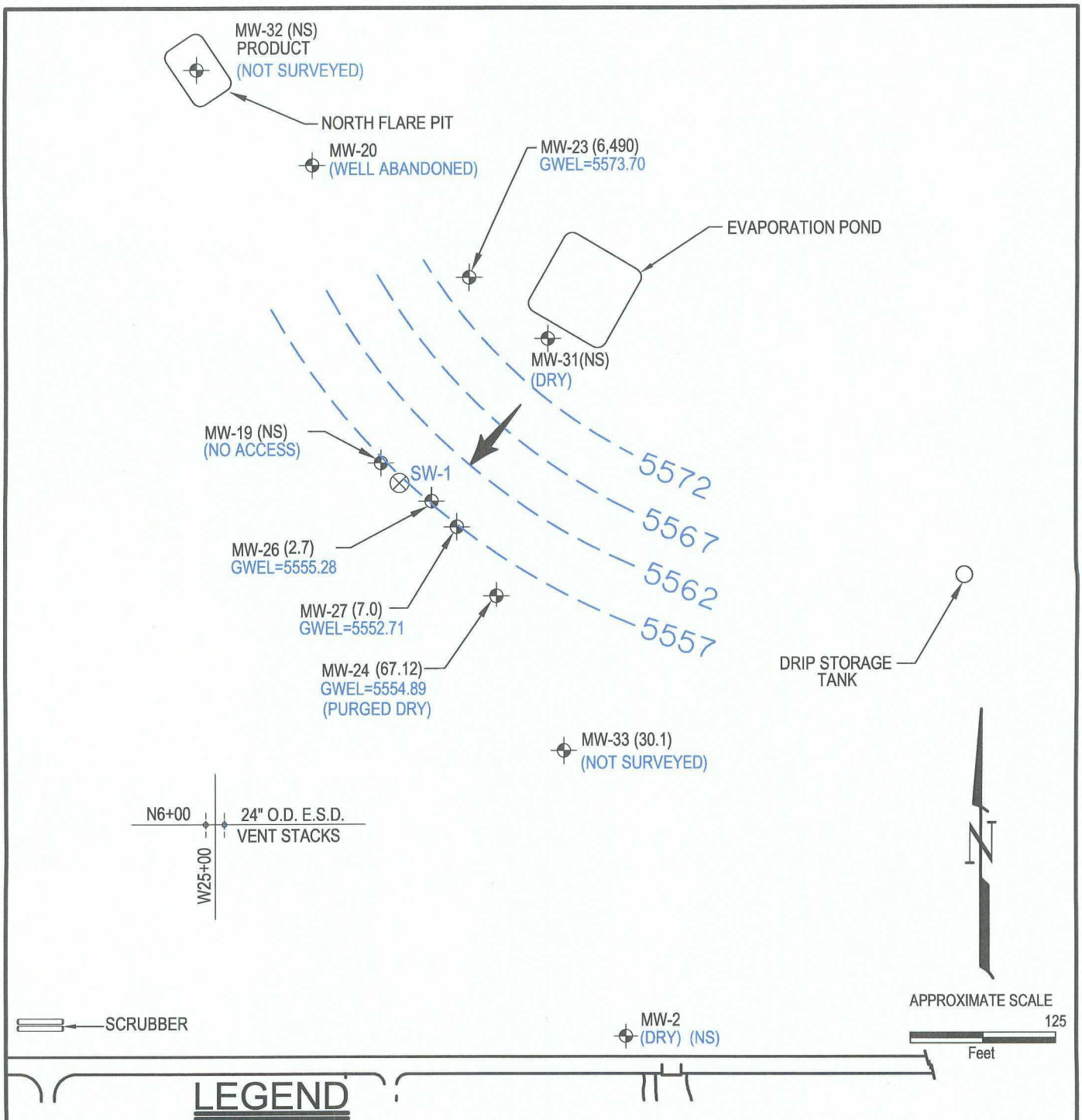
2006 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, JUNE, 2006



LEGEND

MW-23 ⊕	GROUNDWATER MONITORING WELL	GWEL	GROUNDWATER ELEVATION, AUG., 2006 (FT. ABOVE MEAN SEA LEVEL)
(4,480)	(BENZENE CONCENTRATION IN ug/L)	SW-1 ⊗	AIR SPARGING WELL LOCATION
→	APPROXIMATE GROUNDWATER FLOW DIRECTION	5555 —	APPROXIMATE GROUNDWATER CONTOURS (FT. MSL)
PRODUCT	FREE PRODUCT PRESENT IN WELL	(NS)	NOT SAMPLED

REV. No.	REVISIONS	REV. DATE	DESIGN BY	DRAWN BY	REVIEWED AND SIGNED BY
1	ISSUED FOR AUGUST, 06 REPORT	9/06	J.Hurley	W.Grundvig	J.Smith
0	ISSUED FOR AUGUST, 05 REPORT	9/06	P.Anderson	K.Conrath	P.Anderson

MWH

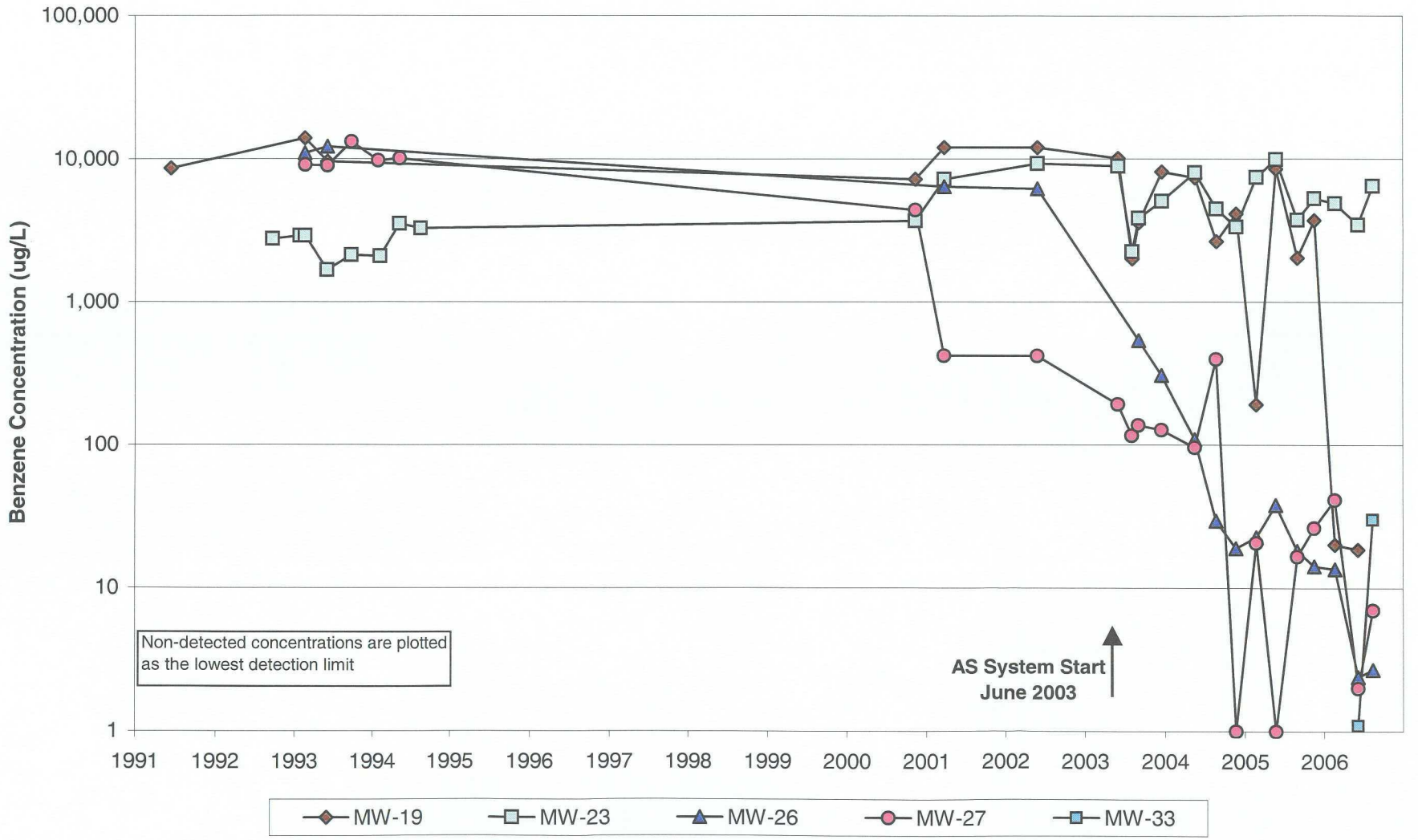
PROJECT No.: 1004918.CC06
AutoCAD FILE: BenConcGWaug06.dwg
SCALE: As Shown
FIGURE No: 5

elpaso

2006 NORTH FLARE PIT REPORT

BENZENE CONCENTRATIONS IN GROUNDWATER, AUGUST, 2006

FIGURE 6
Historic Benzene Concentrations in Groundwater, 1991 - 2006
2006 Blanco North Flare Pit Annual Report



APPENDIX A
AS System Operation and Monitoring 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: November 2, 2005

Re: Blanco North Site Visit

I stopped by the Enterprise Blanco Office to introduce myself and speak with Mr. Wesley Von Brommer who was not in. I spoke with Harold Graves. Mr. Graves told me that he has no idea how long it would take to get the electricity back on at the North Flare Pit site. He said he thought they had the wires run but still had to install rectifiers and such. Advised that I would be sampling this month.

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

Memo

To: Jennifer Hurley, MWH

From: Martin Nee, Lodestar Services.

CC: File

Date: January 16, 2006

Re: Blanco North

1/16/05 1100 – 1630 hrs Site Visit.

Picked up the compressor and brought it to Western Tool Crib. They advised that the water level did not get high enough to damage the compressor. It didn't get in the controls or in the air filters, and apparently water in the electric motor won't hurt it as long as it is dried. We started the compressor and it appears to run fine. I purchased and replaced 50' of 3/8" 300 PSI air line. The compressor building was emptied and the dried mud shoveled out. The compressor was rewired, started, and ran for 10 minutes at approximately 20 PSI and 7 SCFM.. The compressor was turned off and the clock reset to operate from 2400 hrs to 1200 hrs daily. The meter reads 40785 minutes. I will check on the compressor 1/17/05.

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

Memo

To: Jennifer Hurley, MWH

From: Martin Nee, Lodestar Services.

CC: File

Date: January 18, 2006

Re: North Flare Pit

1/18/06 0905 hrs, Site Visit.

Visited site while compressor was running.

Previous meter reading on 011606 at 1600 hrs: 40785

Latest meter reading on 011806 at 0905 hrs: 42009

Compressor is running at 14 psi, and 7 scfm

Sparge system operated 1224 minutes or 20.4 hrs

System appears to be operating properly. Will begin Semi Monthly O&M on 013106.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: January 31, 2006

Re: Blanco North

1/31/05 0841 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	57.13	6.10	54.8	>15650	0.98	0
MW-24	67.12	NA	NA	NA	na	0.06
MW-27	67.64	6.41	58.2	6770	1.02	0.16
MW-19	NA	6.55	58.2	112470	2.47	5.6
MW-26	65.14	6.42	58.7	6230	3.72	<10

System Pressure 14psi, flow 7.0 scfm

The system operated 152 hrs since 1/18/06, approximately 11 hrs per day.

There was 0.6 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: February 15, 2006

Re: Blanco North

1/31/05 0841 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	6.35	63.9	16470	0.72	0
MW-24	67.11	NA	NA	NA	na	0.15
MW-27	67.79	6.52	66.1	7260	0.75	0.40
MW-19	63.85	6.77	65.6	12830	1.85	5.5
MW-26	64.96	6.63	64.4	5770	4.18	<10

System Pressure 10 psi, flow 7.0 scfm

The system operated 178 hrs since 1/31/06, approximately 12 hrs per day.

There was 0.6 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley, MWH

From: Martin Nee, Lodestar Services.

CC: File

Date: February 20, 2006

Re: North Flare Pit

022006 0731 hrs, Site Visit.

Turned system off for sampling on 022106

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: March 1, 2006

Re: Blanco North

3/1/06 1001 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	57.30	6.24	63.3	16240	0.88	0
MW-24	67.11	NA	NA	NA	na	0.10
MW-27	67.77	6.54	68.8	12060	1.17	0.21
MW-19	na	6.65	67.7	17500	2.80	7.0
MW-26	65.54	6.71	67.9	8470	5.41	<10

System Pressure 8 psi, flow 7.5 scfm

The system operated 161 hrs since 2/15/06, approximately 11.5 hrs per day.

There was 0.6 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: March 15, 2006

Re: Blanco North

3/15/06 0900 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	57.28	6.22	64.1	17160	0.87	0
MW-24	67.11	NA	NA	NA	na	0.15
MW-27	67.75	6.51	67.2	12380	1.49	0.17
MW-19	NA	6.65	67.1	18640	2.11	7.0
MW-26	65.78	6.63	68.1	8740	5.02	<10

System Pressure 8 psi, flow 7.5 scfm

The system operated 175 hrs since 3/1/06, approximately 12 hrs per day.

There was 0.6 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: April 3, 2006

Re: Blanco North

4/03/06 0900 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	57.40	6.27	58.8	17980	1.03	0
MW-24	67.11	NA	NA	NA	na	0.05
MW-27	67.85	6.56	61.7	13720	089	0.725
MW-19	NA	6.68	60.5	19260	2.04	4.0
MW-26	64.67	6.76	61.2	10130	4.76	<10

System Pressure 10 psi, flow 8 scfm

The system operated 210 hrs since 3/15/06, approximately 12 hrs per day.

There was 0.84 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: April 18, 2006

Re: Blanco North

4/03/06 0900 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	57.39	6.54	67.2	14420	0.75	0
MW-24	67.10	NA	NA	NA	na	0.08
MW-27	67.89	6.69	69.4	8030	0.79	0.04
MW-19	NA	6.95	71.5	11870	2.70	1.0
MW-26	64.80	7.27	70.2	6900	5.66	0.4

System Pressure 0psi, flow 0 scfm System off for approximately 1 hr.

The system operated 180 hrs since 4/03/06, approximately 12 hrs per day.

There was 0.84 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: April 28, 2006

Re: Blanco North

4/28/06 1039 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	57.24	6.64	67.2	>20,000	0.92	0
MW-24	67.11	NA	NA	NA	na	0.55
MW-27	67.90	6.67	73.4	15,380	0.83	0.04
MW-19	NA	6.64	69.5	>20,000	2.99	6.0
MW-26	64.92	6.91	67.5	1,550	5.20	9.5

System Pressure 10 psi, flow 7.5 scfm.

The system operated 115 hrs since 4/18/06, approximately 11.53 hrs per day.

There was 0.84 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: May 16, 2006

Re: Blanco North

5/16/06 0820 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	57.43	6.58	63.3	>20,000	0.85	0
MW-24	67.11	NA	NA	NA	na	0.05
MW-27	68.00	6.63	64.6	14390	0.70	0.6
MW-19	NA	6.70	65.1	>20,000	3.32	5.7
MW-26	64.94	6.74	63.4	10390	6.03	7.95

System Pressure 4 psi, flow 7.0 scfm.

The system operated 209 hrs since 4/28/06, approximately 11.66 hrs per day.

There was 0.84 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: May 31, 2006

Re: Blanco North

5/31/06 0953 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	57.44	6.48	66.2	17480	0.96	0
MW-24	67.11	NA	NA	NA	na	0.21
MW-27	68.05	6.63	68.3	9710	1.05	0.5
MW-19	NA	6.62	68.8	14040	2.92	4.0
MW-26	65.71	6.78	65.5	6860	5.41	>10

System Pressure 6 psi, flow 8.0 scfm.

The system operated 160 hrs since 5/16/06, approximately 10.7 hrs per day. Local Enterprise construction may have had power off for some period. There was 0.84 inches of water in MW-24, probably condensate in the end cap. No physical characteristics were measured.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: June 15, 2006

Re: Blanco North

6/15/06 0853 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	na	65.2	16830	1.02	0
MW-24	67.11	na	na	na	na	0.05
MW-27	68.07	na	68.3	11820	1.07	0.15
MW-19	NA	na	68.2	15960	2.10	2.9
MW-26	65.59	na	67.1	8050	4.25	9.9

System Pressure 4 psi, flow 8.5 scfm.

The system operated 74 hrs since 5/31/06, an average of 4.93 hrs per day. The system was off from 5/31/06 to 6/9/06 for groundwater sampling. Local Enterprise construction may have had power off for some period as the clock read 2330 hrs during the site visit. The clock was reset. There was not enough water in MW-24 to determine physical characteristics.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: June 30, 2006

Re: Blanco North

6/30/06 0733 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	57.24	6.64	65.5	17630	0.91	0
MW-24	67.11	na	na	na	na	0.5
MW-27	67.90	6.61	67.1	12210	0.86	0.03
MW-19	NA	6.87	66.9	15970	3.07	6.2
MW-26	64.92	6.92	66.8	7990	5.42	>10

System Pressure 4 psi, flow 8.5 scfm.

The system operated 178 hrs since 6/15/06, an average of 11.84 hrs per day. There was not enough water in MW-24 to determine physical characteristics.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: July 17, 2006

Re: Blanco North

7/17/06 1453 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	57.53	6.01	69.6	>2000	0.79	0
MW-19	na	6.87	77.2	17090	na	0.15
MW-26	64.92	6.92	66.8	7990	5.42	>10
MW-27	67.72	6.32	72.9	11870	0.68	0.23
MW-24	67.11	na	na	na	na	0.10

System Pressure: 0 psi, flow : 0 scfm.

The system operated 201 hrs since 6/30/06, an average of 11.82 hrs per day. There was not enough water in MW-24 to determine physical characteristics.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: July 31, 2006

Re: Blanco North

7/31/06 1013 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	57.29	6.48	66.5	17350	0.59	0
MW-19	na	6.90	71.3	15510	2.59	5.30
MW-26	65.36	6.87	67.8	7640	5.33	>10
MW-27	68.20	6.69	72.6	6200	1.40	0.4
MW-24	67.13	na	na	na	na	0.05

System Pressure: 7 psi, flow : 8 scfm.

The system operated 162 hours since 7/17/06, an average of 11.57 hrs per day. There was not enough water in MW-24 to determine physical characteristics.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: August 15, 2006

Re: Blanco North

8/15/06 0903 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	57.42	6.53	65.5	18680	0.67	0
MW-19	na	6.87	67.5	15560	2.88	4.4
MW-26	65.39	6.84	66.3	7660	4.92	6.5
MW-27	68.25	6.51	71.5	11020	1.19	0.06
MW-24	67.1	na	na	na	na	0.05

System Pressure: 6 psi, flow : 7.5 scfm.

The system operated 163 hours since 8/31/06, an average of 11.65 hrs per day. There was not enough water in MW-24 to determine physical characteristics. Turned system off for 8/15/06 samping.

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

Memo

To: Jennifer Hurley

From: Martin Nee

CC: File

Date: September 18, 2006

Re: Blanco North

09/18/06 0921 hrs 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	57.46	6.87	55.6	14520	0.49	0
MW-19	na	7.39	59.2	15220	3.9	4.8
MW-26	65.43	7.37	65.1	7400	5.02	8.8
MW-27	68.27	6.97	65.1	11100	1.8	0.06
MW-24	67.13	na	na	na	na	0.03

System Pressure: 6 psi, flow : 8 scfm.

The system operated 150 hours since 9/05/06, an average of 11.57 hrs per day. There was not enough water in MW-24 to determine physical characteristics. Recovered 0.98 gallons of product since 9/11/06. Changed pump to cycyle for 10 minutes once per day on 9/19/06.

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

PRODUCT RECOVERY/WATER LEVEL DATA

Project Name_	**San Juan Basin Ground Water**	**Project No.**	**30001.0**
Project Manager	**MJN**		
Client Company	**MWH**	**Date**	**9/11/06**
Site Name	**Blanco NFP**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Product Thickness	Volume Removed
MW-32	**1405**	**58.17**	**66.9**	**8.73**	**55.58**

Comments
DTP in drum is 2.01 BTOD , 0.59 feet of product accumulated since 9/8/06. This is approximately 11.58 gallons. Pump pressure is 55 psi, tank pressure is 2500 psi. Pump time is 1 hr 3 minutes. Pump ran approximately 20 minutes since 9/8/06. Reset controller to pump 10 minutes three times per day.

Signature: Martin J. Nee Date: September 11, 2006

APPENDIX B
Groundwater Sampling Field Forms

Groundwater Sampling Field Forms – November 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**	**November 17, 2005**
Site Name	**Blanco**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	**0913**	-	-	**well is dry TD 58.76**
MW-19		-		**collected grab sample, no water level**
MW-23		-	**57.29**	**well purged and sampled**
MW-24		-	**67.12**	**not enough water in well to sample TD 67.19**
MW-26		-	**66.14**	**well purged and sampled**
MW-27		-	**67.68**	**well purged and sampled**

Comments: The area around compressor house and MW-19, 24, 26, 27 flooded and dried out prior to this visit. Water seeped into the compressor house and partially submerged the two air-sparge compressors as well as the vacuum diaphragm pump. There remains no electricity at the site.

Signature: Martin J. Nee Date: November 17, 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 11/17/05 Start Time 1210 Weather sunny 50s
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
1220	**6.78**	**7260**	**58.7**				**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
1220	**6.78**	**7260**	**58.7**					**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. Samples are unpreserved.

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 1235 11/17/05

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

MS/MSD _____ BD _____ BD Name/Time _____ TB 171105TB01

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 11/17/05 Start Time 0931 Weather sunny 40s
Depth to Water 57.29 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.56 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	
9.56 x .65	6.21 x 3		18.63 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0937	**6.93**	**14040**	**58.8**				**1**	**clear, sudsy, HC odor**
	6.85	**14450**	**57.8**				**4**	**grey, HC odor, sheen, sudsy**
	6.93	**14700**	**56.8**				**7.4**	**grey, HC odor, sheen, sudsy, well is bailing down**
0957	**7.08**	**14870**	**57.1**				**7.71**	**grey, HC odor, sheen, sudsy, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0957	**7.08**	**14870**	**57.1**					**7.71**	**grey, HC odor, sheen, sudsy, well has bailed down**

COMMENTS: Samples are unpreserved

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 1000 11/17/05

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

MS/MSD _____ BD _____ BD Name/Time _____ TB 171105tb01

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 11/17/05 Start Time 1133 Weather Sunny 40s
Depth to Water 66.14 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.46 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	
1.46 x .65	0.95 x 3	121 x 3	364 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
1143	**6.73**	**5330**	**62.8**				**34**	**grey, hydrocarbon odor**
	6.84	**4960**	**63.0**				**58**	**grey, hydrocarbon odor, well is bailing down**
	6.82	**4760**	**62.3**				**74**	**grey, hydrocarbon odor**
	6.84	**4720**	**61.3**				**88**	**grey, hydrocarbon odor**
	6.92	**4720**	**61.5**				**96**	**grey, hydrocarbon odor**
1200	**6.93**	**4730**	**61.4**				**104**	**grey, hydrocarbon odor, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1200	**6.93**	**4730**	**61.4**					**104**	**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 11/17/05 1205

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

MS/MSD _____ BD _____ BD Name/Time _____ TB 171105tb01

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 1059 Weather sunny 50s
Depth to Water 67.68 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.6 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	
1.6x .16	0.256 x 3	33 x 3	98

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1107	**6.51**	**2590**	**59.8**				**20**	**dark grey, HC odor, sheen**
	6.56	**2610**	**60.2**				**30**	**dark grey, HC odor, sheen, well is bailing down**
1124	**6.59**	**2620**	**59.7**				**38**	**dark grey, HC odor, sheen, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1124	**6.59**	**2620**	**59.7**					**38**	**dark grey, HC odor, sheen, well has bailed down**

COMMENTS: Samples are unpreserved. Recent flooding around the monitoring wells was above the top of protective casing. The top of casing is approximately 12 inches above ground and high water marks on the guard posts indicate a water depth of 21 inches. The annular space was filled with water as was the bailer suspended in the well. The water in the annular space was bailed out.

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 1125 11/17/05

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

MS/MSD _____ BD _____ BD Name/Time _____ TB 171105tb01

Groundwater Sampling Field Forms – February 2006

✦ 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** February 21, 2006
Site Name Blanco

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	0854	-	-	well is dry TD 58.76
MW-19		-		collected grab sample, no water level
MW-23		-	57.25	well purged and sampled
MW-24		-	67.11	not enough water in well to sample TD 67.19
MW-26		-	65.21	well purged and sampled
MW-27		-	67.28	well purged and sampled

Comments:

Signature: Martin J. Nee Date: February 21, 2006

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 022106 Start Time 1156 Weather sunny 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

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	Gal/**oz** to be removed
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
1152	**6.67**	**7860**	**54.3**				**4**	**grey with black sediment, hydrocarbon odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1152	**6.67**	**7860**	**54.3**					**4**	**grey with black sediment, hydrocarbon odor**

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

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 1156 022106
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 022106TB01

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 022106 Start Time 0854 Weather sunny 40s
Depth to Water 57.25 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.34 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
9.34 x .65	6.07 x 3		18.22 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0911	**6.18**	**15480**	**62.3**				**5**	**clear, sudsy, HC odor**
	6.21	**15920**	**61.1**				**7.5**	**grey, HC odor, sheen, sudsy, well is bailing down**
0922	**6.56**	**15950**	**60.1**				**7.75**	**grey, HC odor, sheen, sudsy, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0922	**6.56**	**15950**	**60.1**					**7.75**	**grey, HC odor, sheen, sudsy, well has bailed down**

COMMENTS: Samples are unpreserved

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 0940 022106
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 210206tb01

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 022106 Start Time 1044 Weather Sunny 40s
Depth to Water 65.21 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 2.38 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
2.38 x .65	1.54 x 3	198 x 3	594 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
1101	**6.73**	**7290**	**65.3**				**56**	**grey, hydrocarbon odor**
	6.76	**7150**	**64.5**				**96**	**grey, hydrocarbon odor, well is bailing down**
	6.63	**7050**	**64.0**				**128**	**grey, hydrocarbon odor**
	6.65	**6970**	**63.5**				**150**	**grey, hydrocarbon odor**
	6.64	**6950**	**63.6**				**168**	**grey, hydrocarbon odor**
	6.67	**6900**	**63.6**				**172**	**grey, hydrocarbon odor**
	6.62	**6830**	**63.3**				**182**	**grey, hydrocarbon odor**
1125	**6.69**	**6830**	**63.7**				**186**	**grey, hydrocarbon odor, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1125	**6.69**	**6830**	**63.7**					**186**	**grey, hydrocarbon odor, well has bailed down**

COMMENTS: Samples are unpreserved

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 1130 022106
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 022106tb01

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 022106 Start Time 1001 Weather sunny 4s
Depth to Water 67.73 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.55 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

Water Volume in Well			
Gal/ft x ft of water	Gallons	Ounces	Gal/**oz** to be removed
1.55 .16	x 3	32 x 3	95

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1016	**6.50**	**8780**	**58.7**				**16**	**dark grey, HC odor, sheen**
	6.57	**8770**	**59.5**				**24**	**dark grey, HC odor, sheen, well is bailing down**
1029	**6.62**	**8560**	**58.1**				**28**	**dark grey, HC odor, sheen, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1029	**6.62**	**8560**	**58.1**					**28**	**dark grey, HC odor, sheen, well has bailed down**

COMMENTS: Samples are unpreserved.

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 1032 022106

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

MS/MSD_____ BD_____ BD Name/Time_____ TB 210206tb01

Groundwater Sampling Field Forms – June 2006

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**	**6-8-2006**
Site Name	**Blanco**		

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	-	-	-	well is dry TD 58.76
MW-19	-	-	-	no access
MW-23	1205	-	57.44	well purged and sampled 5/19/06, looks static
MW-24		-		not enough water in well to sample TD 67.19
MW-26	1305	-	66.15	Well had not fully recovered since previous sampling on 05/19/06. Not static
MW-27	1328	-	68.12	Well had not fully recovered since previous sampling on 05/19/06. Not static
MW-5	-	-	-	Dry hole TD 21.15
MW-6	1045	-	30.94	not enough water to sample TD 31.22, may not be static
MW-7	-	-	-	Well is dry TD is 21.24
MW-8	1137	-	34.69	
MW-28	0930	-	29.30	
MW-29	1015	-	31.77	
MW-30	1028	-	31.74	
MW-12	0810	-	18.62	
MW-13	0836	-	15.60	
MW-14	1053	-	20.03	
MW-15	0858	-	19.68	
MW-30N	0704	-	77.58	

Comments

Signature: Ashley L. Ager Date: June 8, 2006

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 060806 Start Time 1240 Weather sunny 70s
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

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

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

COMMENTS: collected grab sample without purging due to well structural problems. Could not measure water levels. Only enough water in well to collect sample. Not enough water to measure parameters. 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 NFP MW-19 Sample Time 1258
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 NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-23 Development **Sampling**
Project Manager MJN Date 060806 Start Time 1205 Weather raining, 60s
Depth to Water 57.44 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.41 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
9.41 x .65	6.1 x 3		18.3 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1205	**6.31**	**13480**	**63.3**				**1**	**grey, sheen, sudsy**
	4.16	**13900**	**62.5**				**2**	**grey, sheen, sudsy**
	3.84	**13620**	**62.6**				**3**	**grey, sheen, sudsy**
1228	**3.34**	**13570**	**62.2**				**5**	**grey, sheen, sudsy, well is bailing down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1233	**3.94**	**13870**	**61.7**				**5.5**	**grey, sheen, sudsy, well has bailed dry**

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 NFP MW-23 Sample Time 1235
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 NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-26 Development **Sampling**
Project Manager MJN Date 06/08/06 Start Time 1307 Weather sunny 70s
Depth to Water 66.15 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.45 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
1.45 x .65	0.94 x 3		2.8 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
1310	**6.98**	**7120**	**68.6**				**16 oz**	**dark grey, sheen, HC odor**
	6.98	**5940**	**66.6**				**20**	**well is bailing down**
	6.97	**5670**	**65.9**				**24**	**dark grey, sheen, HC odor**
1312	**7.01**	**5540**	**66.2**				**76**	**dark grey, sheen, HC odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1315	**6.95**	**5540**	**65.9**				**86 oz**	**well is dry**

COMMENTS: Well bailed dry. 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 NFP MW-26 Sample Time 1317

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 NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-27 Development **Sampling**
Project Manager MJN Date 06/08/06 Start Time 1328 Weather sunny 80s
Depth to Water 68.12 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.16 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

	Water Volume in Well		
Gal/ft x ft of water	Gallons	Ounces	Gal/**oz** to be removed
1.16 x .16	0.19 x 3	24.78 x 3	74.34oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
1328	**6.82**	**8040**	**71.4**				**6**	**grey, product, HC odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
1330	**6.83**	**8400**	**70.4**				**10 oz**	**well has bailed dry**

COMMENTS: Well bailed dry. unpreserved due to rxn of hcl w/ gw. Well had not fully recovered since previous sampling event on 05/19/06.

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 1332
VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus
BTEX

MS/MSD_____ BD_____ BD Name/Time_____ TB__

WELL DEVELOPMENT AND SAMPLING LOG

Project No.:30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-30 Development **Sampling**
Project Manager MJN Date 6/08/06 Start Time 0704 Weather pc/rain 70s
Depth to Water 77.58 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 5.05 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	
5.05 x .65	0.81 x 3	104	2.42 (342 oz)

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0733	**8.36**	**7280**	**63.0**				**32**	**clear**
	8.55	**7260**	**63.3**				**55**	**clear**
	8.38	**7440**	**62.6**				**78**	**clear**
	8.30	**7460**	**62.6**				**148**	**clear, well is bailing down**
	8.20	**7390**	**62.5**				**164**	**clear**
	8.10	**7450**	**62.5**				**172**	**clear**
	8.10	**7530**	**62.4**				**180**	**clear**
	8.09	**7570**	**62.4**				**186**	**clear**
	8.08	**7550**	**62.3**				**190**	**clear**
	8.09	**7590**	**62.3**				**194**	**clear**
	8.12	**7630**	**62.4**				**196**	**clear**
0750	**8.10**	**7530**	**62.4**				**200**	**clear, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0750	**8.10**	**7530**	**62.4**				**200**	**clear, well has bailed dry**

COMMENTS: Well bailed dry and did not recover, returned later in day to sample

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

Water Disposal Rio Vista Sample ID Blanco NFP MW-30 Sample Time 6/8/06 1345

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

MS/MSD_____ BD_____ BD Name/Time_____ TB **080606 tb02**

Groundwater Sampling Field Forms – August 2006

✦ 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** 08/15/2006
Site Name Blanco

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Comments
MW-2	0705	-	-	well is dry TD 58.76
MW-19	0800	-	-	no access
MW-23	0712	-	57.40	
MW-24	0920	-	67.12	probably not static, TD is 67.19
MW-26	0811	-	65.92	
MW-27	0846	-	68.57	
MW-31	1026			well is dry, TD 73.46
MW-32	0928	55.68	66.93	11.25 feet of product
MW-33	1033		71.71	
		-		

Comments

Signature: Martin Nee Date: 8/15/06

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 081506 Start Time 0705 Weather cloudy, 70s
Depth to Water 57.70 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 9.45 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	
9.45 x .65	6.14 x 3		18.43 gal

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0717	**6.22**	**18540**	**64.7**				**1**	**grey, sheen, sudsy, hydrocarbon odor**
	6.19	**18620**	**63.4**				**2**	**grey, sheen, sudsy, hydrocarbon odor**
	6.24	**18680**	**63.2**				**3**	**grey, sheen, sudsy, hydrocarbon odor**
	6.23	**18760**	**62.9**				**5**	**grey, sheen, sudsy, hydrocarbon odor**
0755	**6.29**	**18820**	**63.0**				**7.75**	**grey, sheen, sudsy, hydrocarbon odor, well has bailed down**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0755	**6.29**	**18820**	**63.0**				**7.75**	**grey, sheen, sudsy, hydrocarbon odor, well has bailed down**

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 NFP MW-23 Sample Time 8/15/06 0739
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 150806TB01

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 08/15/06 Start Time 0811 Weather cloudy 70s
Depth to Water 65.92 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 1.67 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	
1.67 x .65	1.08 x 3		2.8 gal/416 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz.)	Comments/ Flow rate
0822	**6.8**	**7480**	**65.8**				**40**	**grey, hydrocarbon odor**
	6.84	**7370**	**64.7**				**64**	**grey, hydrocarbon odor, slight sheen, well is bailing down**
	6.84	**7340**	**64.5**				**88**	**grey, hydrocarbon odor, slight sheen**
	6.89	**7350**	**64.7**				**104**	**grey, hydrocarbon odor, slight sheen**
	6.87	**7370**	**64.8**				**114**	**grey, hydrocarbon odor, slight sheen**
0841	**6.80**	**7360**	**64.7**				**124**	**grey, hydrocarbon odor, slight sheen, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
0841	**6.80**	**7360**	**64.7**				**124**	**grey, hydrocarbon odor, slight sheen, well has bailed dry**

COMMENTS: Well bailed dry. 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 NFP MW-26 Sample Time 8/15/06 0843
BTEX VOCs Alkalinity TDS Cations Anions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total Phosphorus

MS/MSD_____ BD_____ BD Name/Time_____ TB 150806tb01

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 8/15/06 Start Time 0846 Weather cloudy 80s
Depth to Water 68.57 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 0.71 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	
0.71 x .16	0.11 x 3	14 x 3	43.6 oz

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
0906	**6.40**	**10730**	**70.1**				**8**	**grey, hydrocarbon odor**
0910	**6.48**	**10620**	**69.8**				**14**	**grey, hydrocarbon odor**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
0910	**6.48**	**10620**	**69.8**					**14**	**grey, hydrocarbon odor**

COMMENTS: Well bailed dry. 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 NFP MW-27 Sample Time 8/15/06 0911

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

MS/MSD_____ BD_____ BD Name/Time_____ TB 150806tb01

WELL DEVELOPMENT AND SAMPLING LOG

Project No.: 30001.0 Project Name: Blanco NFP Client: MWH/EL Paso
Location: Blanco NFP Well No: MW-33 Development **Sampling**
Project Manager MJN Date 8/15/06 Start Time 0928 Weather cloudy 80s
Depth to Water 71.71 Depth to Product na Product Thickness na Measuring Point TOC
Water Column Height 10.91 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	
10.91 x .65	1.75 x 3		5.24

Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0928	**7.10**	**10810**	**67.6**				**.25**	**clear**
	7.11	**10620**	**64.9**				**.5**	**clear**
	7.16	**10580**	**64.4**				**.75**	**clear**
	7.19	**10600**	**64.5**				**1**	**clear**
	7.20	**10600**	**64.9**				**2**	**clear**
1008	**7.19**	**10640**	**65.2**				**2.3475**	**clear, well has bailed dry**

Final: Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
1008	**7.19**	**10640**	**65.2**					**2.3475**	**clear, well has bailed dry**

COMMENTS: Well bailed dry, collected sample out of last bailer

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

Water Disposal Rio Vista Sample ID Blanco NFP MW-33 Sample Time 8/15/06 1010

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

MS/MSD_____ BD_____ BD Name/Time_____ TB 150806tb01

APPENDIX C
Groundwater Analytical Laboratory Reports

Groundwater Analytical Report – November 2005

Gulf Coast ACCUTEST Laboratories

11/21/05

Technical Report for

Montgomery Watson

Blanco North

D-ALAB-BLANCOPLTN-003

Accutest Job Number: T11913

Sampling Date: 11/17/05

Report to:

MWH Americas, Inc.

pamela.j.anderson@us.mwhglobal.com

ATTN: Pam Anderson

Total number of pages in report: 13

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: T11913

Blanco North
Project No: D-ALAB-BLANCOPLTN-003

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
T11913-1	11/17/05	07:00	MN	11/18/05	AQ	Trip Blank Water	171105TB01
T11913-2	11/17/05	10:00	MN	11/18/05	AQ	Ground Water	MW-23
T11913-3	11/17/05	11:25	MN	11/18/05	AQ	Ground Water	MW-27
T11913-4	11/17/05	12:05	MN	11/18/05	AQ	Ground Water	MW-26
T11913-5	11/17/05	12:35	MN	11/18/05	AQ	Ground Water	MW-19

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T11913
Site:	Blanco North	**Report Date**	11/21/2005 2:11:08 PM

4 Samples and 1 Trip Blank were collected on 11/17/2005 and were received at Accutest on 11/18/2005 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of T11913. 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:** GKK697

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T11886-6MS, T11886-6MSD were used as the QC samples indicated.
- T11913-5: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11913-4: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11913-3: Sample was not preserved to a pH < 2; reported results are considered minimum values.
- T11913-2: 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:	171105TB01		
Lab Sample ID:	T11913-1	Date Sampled:	11/17/05
Matrix:	AQ - Trip Blank Water	Date Received:	11/18/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK09906.D	1	11/18/05	JH	n/a	n/a	GKK697
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	109%		56-136%
98-08-8	aaa-Trifluorotoluene	98%		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

Report of Analysis

Client Sample ID:	MW-23		
Lab Sample ID:	T11913-2	Date Sampled:	11/17/05
Matrix:	AQ - Ground Water	Date Received:	11/18/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK09907.D	5	11/18/05	JH	n/a	n/a	GKK697
Run #2 [a]	KK09908.D	50	11/18/05	JH	n/a	n/a	GKK697

	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	5280 [b]	50	19	ug/l	
108-88-3	Toluene	2.6	5.0	1.8	ug/l	J
100-41-4	Ethylbenzene	203	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	863	10	3.6	ug/l	
95-47-6	o-Xylene	22.9	5.0	2.1	ug/l	
	m,p-Xylene	840	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	133%	101%	56-136%
98-08-8	aaa-Trifluorotoluene	75%	81%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2

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-27		
Lab Sample ID:	T11913-3	Date Sampled:	11/17/05
Matrix:	AQ - Ground Water	Date Received:	11/18/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK09909.D	5	11/18/05	JH	n/a	n/a	GKK697
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	26.3	5.0	1.9	ug/l	
108-88-3	Toluene	4.0	5.0	1.8	ug/l	J
100-41-4	Ethylbenzene	175	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	1070	10	3.6	ug/l	
95-47-6	o-Xylene	130	5.0	2.1	ug/l	
	m,p-Xylene	937	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	76%		56-136%
98-08-8	aaa-Trifluorotoluene	61%		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-26		
Lab Sample ID:	T11913-4	Date Sampled:	11/17/05
Matrix:	AQ - Ground Water	Date Received:	11/18/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK09910.D	5	11/18/05	JH	n/a	n/a	GKK697
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	14.2	5.0	1.9	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
100-41-4	Ethylbenzene	17.0	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	34.8	10	3.6	ug/l	
95-47-6	o-Xylene	ND	5.0	2.1	ug/l	
	m,p-Xylene	32.7	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	95%		56-136%
98-08-8	aaa-Trifluorotoluene	66%		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:	T11913-5	Date Sampled:	11/17/05
Matrix:	AQ - Ground Water	Date Received:	11/18/05
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK09911.D	20	11/18/05	JH	n/a	n/a	GKK697
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	3730	20	7.6	ug/l	
108-88-3	Toluene	ND	20	7.2	ug/l	
100-41-4	Ethylbenzene	340	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	101%		56-136%
98-08-8	aaa-Trifluorotoluene	76%		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

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: T11913
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK697-MB	KK09899.D	1	11/18/05	JH	n/a	n/a	GKK697

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

T11913-1, T11913-2, T11913-3, T11913-4, T11913-5

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	102%	56-136%
98-08-8	aaa-Trifluorotoluene	91%	50-144%

Blank Spike Summary

Job Number: T11913
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK697-BS	KK09900.D	1	11/18/05	JH	n/a	n/a	GKK697

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

T11913-1, T11913-2, T11913-3, T11913-4, T11913-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.9	105	72-125
100-41-4	Ethylbenzene	20	20.5	103	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	20.6	103	78-124
	m,p-Xylene	40	41.1	103	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	99%	56-136%
98-08-8	aaa-Trifluorotoluene	105%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T11913
Account: MWHSLCUT Montgomery Watson
Project: Blanco North

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T11886-6MS	KK09903.D	50	11/18/05	JH	n/a	n/a	GKK697
T11886-6MSD	KK09904.D	50	11/18/05	JH	n/a	n/a	GKK697
T11886-6	KK09901.D	1	11/18/05	JH	n/a	n/a	GKK697
T11886-6	KK09902.D	50	11/18/05	JH	n/a	n/a	GKK697

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

T11913-1, T11913-2, T11913-3, T11913-4, T11913-5

CAS No.	Compound	T11886-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	458 [a]		1000	1470	101	1430	97	3	45-137/21
100-41-4	Ethylbenzene	364 [a]		1000	1380	102	1340	98	3	68-126/15
108-88-3	Toluene	1.7		1000	1030	103	1010	101	2	63-130/22
1330-20-7	Xylenes (total)	8.8		3000	3190	106	3080	102	4	72-125/19
95-47-6	o-Xylene	1.6		1000	1080	108	1030	103	5	70-128/20
	m,p-Xylene	7.2		2000	2110	105	2050	102	3	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T11886-6	T11886-6	Limits
460-00-4	4-Bromofluorobenzene	96%	94%	98%	101%	56-136%
98-08-8	aaa-Trifluorotoluene	84%	81%	72%	86%	50-144%

(a) Result is from Run #2.

DATA VERIFICATION WORKSHEET

(Page 1 of 2)

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	11/17/05
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (Blanco No.)
Batch Identification:	T11913	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None
Verification	*Brian Buttars – 11/21/05* (Date/Signature)		

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	Trip Blank	171105TB01	T11913-01	N		
None	Blanco No.	MW-23	T11913-02	Y		
None	Blanco No.	MW-27	T11913-03	Y		
None	Blanco No.	MW-26	T11913-04	Y		
None	Blanco No.	MW-19	T11913-05	Y		

DATA VERIFICATION WORKSHEET
(Page 2 of 2)

Analytical Method:	SW-846 8021B (BTEX)	**MWH Job Number:**	EPC-SJRB (Blanco No.)
Laboratory:	Accutest	**Batch Identification:**	T11913

Verification Criteria								
Sample ID	171105TB 01	Blanco No. MW-23	Blanco No. MW-27	Blanco No. MW-26	Blanco No. MW-19			
Lab ID	T11913-01	T11913-02	T11913-03	T11913-04	T11913-05			
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	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:

Groundwater Analytical Report – February 2006

Gulf Coast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

03/01/06

Technical Report for

Montgomery Watson

Blanco North Flare Pit

D-ALAB-BLANCOPLTN-003

Accutest Job Number: T12713

Sampling Date: 02/21/06

Report to:

MWH Americas, Inc.
1801 California St. Suite 2900
Denver, CO 80202
jennifer.a.hurley@mwhglobal.com

ATTN: Ms. Jennifer Hurley

Total number of pages in report: 17

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

1956 - 2006
50
YEARS OF EXCELLENCE
Accutest Laboratories

Sections: 1 2 3 4

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Accutest Laboratories

Sample Summary

Montgomery Watson

Job No: T12713

Blanco North Flare Pit
Project No: D-ALAB-BLANCOPLTN-003

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T12713-1	02/21/06	07:00	MN	02/22/06	AQ	Water	210206TB01
T12713-2	02/21/06	09:40	MN	02/22/06	AQ	Water	MW-23
T12713-3	02/21/06	10:32	MN	02/22/06	AQ	Water	MW-27
T12713-4	02/21/06	11:30	MN	02/22/06	AQ	Water	MW-26
T12713-5	02/21/06	11:56	MN	02/22/06	AQ	Water	MW-19

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	210206TB01		
Lab Sample ID:	T12713-1	Date Sampled:	02/21/06
Matrix:	AQ - Water	Date Received:	02/22/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK11501.D	1	02/28/06	JH	n/a	n/a	GKK753
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	90%		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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-23		
Lab Sample ID:	T12713-2	Date Sampled:	02/21/06
Matrix:	AQ - Water	Date Received:	02/22/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK11493.D	5	02/28/06	JH	n/a	n/a	GKK753
Run #2 [a]	KK11494.D	100	02/28/06	JH	n/a	n/a	GKK753

	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	4900 [b]	100	38	ug/l	
108-88-3	Toluene	4.9	5.0	1.8	ug/l	J
100-41-4	Ethylbenzene	56.7	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	710	10	3.6	ug/l	
95-47-6	o-Xylene	73.2	5.0	2.1	ug/l	
	m,p-Xylene	636	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	118%	97%	56-136%
98-08-8	aaa-Trifluorotoluene	85%	111%	50-144%

(a) Sample was not preserved to a pH < 2; reported results are considered minimum values.
(b) Result is from Run# 2

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:	T12713-3	Date Sampled:	02/21/06
Matrix:	AQ - Water	Date Received:	02/22/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK11495.D	5	02/28/06	JH	n/a	n/a	GKK753
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	41.3	5.0	1.9	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
100-41-4	Ethylbenzene	ND	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	264	10	3.6	ug/l	
95-47-6	o-Xylene	18.7	5.0	2.1	ug/l	
	m,p-Xylene	245	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%		56-136%
98-08-8	aaa-Trifluorotoluene	75%		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-26		
Lab Sample ID:	T12713-4	Date Sampled:	02/21/06
Matrix:	AQ - Water	Date Received:	02/22/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK11496.D	2	02/28/06	JH	n/a	n/a	GKK753
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	13.6	2.0	0.76	ug/l	
108-88-3	Toluene	ND	2.0	0.72	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.70	ug/l	
1330-20-7	Xylenes (total)	2.9	4.0	1.4	ug/l	J
95-47-6	o-Xylene	2.2	2.0	0.84	ug/l	
	m,p-Xylene	ND	4.0	1.4	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		56-136%
98-08-8	aaa-Trifluorotoluene	62%		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:	T12713-5	Date Sampled:	02/21/06
Matrix:	AQ - Water	Date Received:	02/22/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 [a]	KK11497.D	5	02/28/06	JH	n/a	n/a	GKK753
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	20.1	5.0	1.9	ug/l	
108-88-3	Toluene	ND	5.0	1.8	ug/l	
100-41-4	Ethylbenzene	9.4	5.0	1.8	ug/l	
1330-20-7	Xylenes (total)	4.4	10	3.6	ug/l	J
95-47-6	o-Xylene	4.4	5.0	2.1	ug/l	J
	m,p-Xylene	ND	10	3.6	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	89%		56-136%
98-08-8	aaa-Trifluorotoluene	58%		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 210206MN01

ACCUTEST Laboratories

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

FED-EX Tracking # 8542 6347 3329 | Bottle Order Control #
Accutest Quote # | Accutest Job # T12713

Client / Reporting Information

Company Name: El Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Scott Royce E-mail:
Phone #: 719 520 4433 Fax #: 719 520 4716
Sampler's Name: MN

Project Information

Project Name: BLANCO North Flare Pit
Street:
City: State:
Project #:
Client Purchase Order #:

Requested Analysis

BTEX 8021

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	Collection Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: HCl	MeOH	DI Water	H2SO4	NaOH	Zn Acetate	NaOH+ZN	NaHSO4	BTEX 8021	LAB USE ONLY
1	210206TBQ1		22106	0700	MN	WG	2	2									
2	MW-23		22106	0940	MN	WG	2					2				2	
3	MW-27		22106	1032	MN	WG	2					2				2	
4	MW-26		22106	1130	MN	WG	2					2				2	
5	MW-19		22106	1156	MN	WG	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

4 unpreserved samples

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 22106	1600	1	2		2
Relinquished by:	Date Time:	Received by:	Relinquished by:	Date Time:	Received by:
3		3	4		4
Relinquished by:	Date Time/ 0830	Received by:	Custody Seal #	Preserved where applicable ☐	On Ice ☐	Cooler Temp
5	022206	5				2.0

3.1 C

T12713: Chain of Custody
Page 1 of 3

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T12713

DATE/TIME RECEIVED: 2-22-06 10:00 ADF

CLIENT: El Paso

INITIALS: ADF

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	1-2	2-21-06	AQ	40ml	vref	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

mf ADF

allie 2/22/06

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: FedEx

Tracking#: 854263473329

COOLER TEMP: 2.0°C 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

3 3.1

T12713: Chain of Custody

Page 2 of 3

...ms This portion can be removed for Recipient's records.

...te 22106 FedEx Tracking Number 854263473329

...nder's ...ame Phone 505 334 2771

Company

Address

...y Flora Vista State NM ZIP 87415

...ur Internal Billing Reference

ACCUTEST LABORATORIES
CUSTODY SEAL CUSTODY SEAL

ACCUTEST LABORATORIES
CUSTODY SEAL CUSTODY SEAL

DATE / TIME SEALED: 22106 1600 INITIALS: MN

T12713: Chain of Custody
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4

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: T12713
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK753-MB	KK11489.D	1	02/28/06	JH	n/a	n/a	GKK753

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

T12713-1, T12713-2, T12713-3, T12713-4, T12713-5

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	82%	56-136%
98-08-8	aaa-Trifluorotoluene	77%	50-144%

Blank Spike Summary

Job Number: T12713
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK753-BS	KK11490.D	1	02/28/06	JH	n/a	n/a	GKK753

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

T12713-1, T12713-2, T12713-3, T12713-4, T12713-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.6	103	72-125
100-41-4	Ethylbenzene	20	20.3	102	76-125
108-88-3	Toluene	20	20.1	101	74-125
1330-20-7	Xylenes (total)	60	60.6	101	78-124
95-47-6	o-Xylene	20	20.1	101	78-124
	m,p-Xylene	40	40.5	101	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	96%	56-136%
98-08-8	aaa-Trifluorotoluene	99%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T12713
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T12716-1MS	KK11508.D	1	02/28/06	JH	n/a	n/a	GKK753
T12716-1MSD	KK11509.D	1	02/28/06	JH	n/a	n/a	GKK753
T12716-1	KK11507.D	1	02/28/06	JH	n/a	n/a	GKK753

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

T12713-1, T12713-2, T12713-3, T12713-4, T12713-5

CAS No.	Compound	T12716-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	47.0		20	70.4	117	70.5	118	0	45-137/21
100-41-4	Ethylbenzene	6.3		20	29.3	115	29.4	116	0	68-126/15
108-88-3	Toluene	0.48	J	20	22.4	110	22.9	112	2	63-130/22
1330-20-7	Xylenes (total)	1.4	J	60	66.9	109	68.1	111	2	72-125/19
95-47-6	o-Xylene	0.58	J	20	22.0	107	22.4	109	2	70-128/20
	m,p-Xylene	0.84	J	40	44.9	110	45.7	112	2	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T12716-1	Limits
460-00-4	4-Bromofluorobenzene	95%	98%	87%	56-136%
98-08-8	aaa-Trifluorotoluene	113%	111%	99%	50-144%

DATA VERIFICATION WORKSHEET

(Page 1 of 2)

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	02/21/06
Laboratory:	Accutest	**MWH Job Number:**	EPC-SJRB (BNFP)
Batch Identification:	T12713	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None
Verification	*Brian Buttars – 05/25/06* (Date/Signature)		

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	BNFP	210206TB01	T12713-01	N		
None	BNFP	MW-23	T12713-02	Y		
None	BNFP	MW-27	T12713-03	Y		
None	BNFP	MW-26	T12713-04	Y		
None	BNFP	MW-19	T12713-05	Y		

DATA VERIFICATION WORKSHEET
(Page 2 of 2)

Analytical Method:	SW-846 8021B (BTEX)	**MWH Job Number:**	EPC-SJRB (BNFP)
Laboratory:	Accutest	**Batch Identification:**	T12713

Verification Criteria								
Sample ID	210206 TB01	MW-23	MW-27	MW-26	MW-19			
Lab ID	T12713-01	T12713-02	T12713-03	T12713-04	T12713-05			
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)	A	A	A	A	A			
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:

Groundwater Analytical Report – June 2006

Gulf Coast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

06/19/06

Technical Report for

Montgomery Watson

Blanco North Flare Pit

D-ALAB-BLANCOPLTN-003

Accutest Job Number: T13776

Sampling Date: 06/08/06

Report to:

MWH Americas, Inc.
1801 California St. Suite 2900
Denver, CO 80202
jennifer.a.hurley@mwhglobal.com

ATTN: Ms. Jennifer Hurley

Total number of pages in report: 21

ACCUTEST LABORATORIES 50 YEARS 1956-2006

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: T13776

Blanco North Flare Pit
Project No: D-ALAB-BLANCOPLTN-003

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
T13776-1	06/08/06	12:35	MN	06/09/06	AQ	Ground Water	MW-23
T13776-2	06/08/06	12:58	MN	06/09/06	AQ	Ground Water	MW-19
T13776-3	06/08/06	13:17	MN	06/09/06	AQ	Ground Water	MW-26
T13776-4	06/08/06	13:32	MN	06/09/06	AQ	Ground Water	MW-27
T13776-5	06/08/06	13:45	MN	06/09/06	AQ	Ground Water	MW-33
T13776-6	06/08/06	07:00	MN	06/09/06	AQ	Trip Blank Water	080606TB02

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T13776
Site:	Blanco North Flare Pit	**Report Date**	6/19/2006 2:52:44 PM

5 Samples and 1 Trip Blank were collected on 06/08/2006 and were received at Accutest on 06/09/2006 properly preserved, at 3 Deg. C and intact. These Samples received an Accutest job number of T13776. 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:** GKK829

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T13780-6MS, T13780-6MSD were used as the QC samples indicated.

Matrix AQ **Batch ID:** GKK830

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

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

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-23		
Lab Sample ID:	T13776-1	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK13608.D	1	06/15/06	JH	n/a	n/a	GKK829
Run #2	KK13619.D	50	06/15/06	JH	n/a	n/a	GKK829

	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	3470 [a]	50	19	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)	373	2.0	0.72	ug/l	
95-47-6	o-Xylene	16.8	1.0	0.42	ug/l	
	m,p-Xylene	357	2.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	99%	95%	56-136%
98-08-8	aaa-Trifluorotoluene	80%	95%	50-144%

(a) Result is from Run# 2

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:	T13776-2	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK13612.D	1	06/15/06	JH	n/a	n/a	GKK829
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	18.6	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)	2.9	2.0	0.72	ug/l	
95-47-6	o-Xylene	2.9	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	98%		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

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-26		
Lab Sample ID:	T13776-3	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK13614.D	1	06/15/06	JH	n/a	n/a	GKK829
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	2.4	1.0	0.38	ug/l	
108-88-3	Toluene	ND	1.0	0.36	ug/l	
100-41-4	Ethylbenzene	1.8	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	3.6	2.0	0.72	ug/l	
95-47-6	o-Xylene	0.93	1.0	0.42	ug/l	J
	m,p-Xylene	2.7	2.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	97%		56-136%
98-08-8	aaa-Trifluorotoluene	100%		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-27		
Lab Sample ID:	T13776-4	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK13616.D	1	06/15/06	JH	n/a	n/a	GKK829
Run #2	KK13662.D	10	06/16/06	JH	n/a	n/a	GKK830

	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	2.0	1.0	0.38	ug/l	
108-88-3	Toluene	ND	1.0	0.36	ug/l	
100-41-4	Ethylbenzene	3.2	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	156	2.0	0.72	ug/l	
95-47-6	o-Xylene	11.1	1.0	0.42	ug/l	
	m,p-Xylene	144	2.0	0.72	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		56-136%
460-00-4	4-Bromofluorobenzene		90%	56-136%
98-08-8	aaa-Trifluorotoluene	75%		50-144%
98-08-8	aaa-Trifluorotoluene		102%	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-33		
Lab Sample ID:	T13776-5	**Date Sampled:**	06/08/06
Matrix:	AQ - Ground Water	**Date Received:**	06/09/06
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK13607.D	1	06/15/06	JH	n/a	n/a	GKK829
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	1.1	1.0	0.38	ug/l	
108-88-3	Toluene	4.2	1.0	0.36	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.35	ug/l	
1330-20-7	Xylenes (total)	4.5	2.0	0.72	ug/l	
95-47-6	o-Xylene	1.2	1.0	0.42	ug/l	
	m,p-Xylene	3.4	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	95%		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:	080606TB02		
Lab Sample ID:	T13776-6	**Date Sampled:**	06/08/06
Matrix:	AQ - Trip Blank Water	**Date Received:**	06/09/06
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK13606.D	1	06/15/06	JH	n/a	n/a	GKK829
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	83%		56-136%
98-08-8	aaa-Trifluorotoluene	94%		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

4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY 080606MNQ2

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

FED-EX Tracking # 856809112353 | Bottle Order Control #
Accutest Quote # | Accutest Job # T13776

Client / Reporting Information

Company Name: EL Paso
Address: 2 North Nevada
City: Colorado Springs State: CO Zip: 80903
Project Contact: Brad Wilkins E-mail:
Phone #: 719 520 4554
Sampler's Name: MN Nee

Project Information

Project Name: Blanco NFD
Street:
City: State:
Project #:
Fax #:
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	Time	Sampled By	Matrix	# of bottles	Number of preserved Bottles: NO	HCl	H2SO4	NaOH	NaOH/ZnAc	MEOH	ENCORE	BTEX
1	MW-23		6806	1235	MN	WG	3				3				X
2	MW-19		0606	1258	MN	WG	3				3				X
3	MW-26		0606	1317	MN	WG	3	3							X
4	MW-27		0606	1332	MN	WG	3				3				X
5	MW-30		0606	1345	MN	WG	3	3							X
6	080606TB02		0606	0200	MN	WG	1	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

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	6806 1630	1 Brad Nagy	2		2
3		3	4		4
5		5	Custody Seal #	Preserved where applicable ☐	On Ice: X Cooler Temp: 3.0C

4.1 4

T13776: Chain of Custody
Page 1 of 2

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T13776
DATE/TIME RECEIVED: 6/9/06 945
CLIENT: El Paso
INITIALS: BN

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
1-5	1-3	6/8/06	GW	40ml	VREF	1,[✓ 2],3,4,5,6	[✓ U] <2, >12, NA
6	1	–	T.B	⅃	⅃	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
			6/9/06			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

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

Comments:

Delivery method: Courier:
Tracking#:

COOLER TEMP: 3.1°C
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

GC Volatiles

5

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: T13776
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK829-MB	KK13599.D	1	06/15/06	JH	n/a	n/a	GKK829

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

T13776-1, T13776-2, T13776-3, T13776-4, T13776-5, T13776-6

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	85%	56-136%
98-08-8	aaa-Trifluorotoluene	91%	50-144%

Method Blank Summary

Job Number: T13776
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK830-MB	KK13633.D	1	06/15/06	JH	n/a	n/a	GKK830

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

T13776-4

CAS No.	Compound	Result	RL	MDL	Units	Q

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	93%	56-136%
98-08-8	aaa-Trifluorotoluene	99%	50-144%

Blank Spike Summary

Job Number: T13776
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK829-BS	KK13600.D	1	06/15/06	JH	n/a	n/a	GKK829

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

T13776-1, T13776-2, T13776-3, T13776-4, T13776-5, T13776-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	20.2	101	72-125
100-41-4	Ethylbenzene	20	19.8	99	76-125
108-88-3	Toluene	20	19.4	97	74-125
1330-20-7	Xylenes (total)	60	57.9	97	78-124
95-47-6	o-Xylene	20	19.1	96	78-124
	m,p-Xylene	40	38.8	97	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	84%	56-136%
98-08-8	aaa-Trifluorotoluene	93%	50-144%

Blank Spike Summary

Job Number: T13776
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK830-BS	KK13634.D	1	06/15/06	JH	n/a	n/a	GKK830

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

T13776-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	92%	56-136%
98-08-8	aaa-Trifluorotoluene	102%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T13776
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T13780-6MS	KK13629.D	1	06/15/06	JH	n/a	n/a	GKK829
T13780-6MSD	KK13630.D	1	06/15/06	JH	n/a	n/a	GKK829
T13780-6	KK13628.D	1	06/15/06	JH	n/a	n/a	GKK829

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

T13776-1, T13776-2, T13776-3, T13776-4, T13776-5, T13776-6

CAS No.	Compound	T13780-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		20	21.1	106	21.1	106	0	45-137/21
100-41-4	Ethylbenzene	ND		20	20.6	103	20.9	105	1	68-126/15
108-88-3	Toluene	ND		20	20.9	105	21.1	106	1	63-130/22
1330-20-7	Xylenes (total)	ND		60	62.7	105	63.9	107	2	72-125/19
95-47-6	o-Xylene	ND		20	20.8	104	21.4	107	3	70-128/20
	m,p-Xylene	ND		40	41.9	105	42.6	107	2	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T13780-6	Limits
460-00-4	4-Bromofluorobenzene	93%	93%	93%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	99%	98%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T13776
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T13783-13MS	KK13657.D	50	06/16/06	JH	n/a	n/a	GKK830
T13783-13MSD	KK13658.D	50	06/16/06	JH	n/a	n/a	GKK830
T13783-13	KK13656.D	50	06/16/06	JH	n/a	n/a	GKK830

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

T13776-4

CAS No.	Compound	T13783-13 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD

CAS No.	Surrogate Recoveries	MS	MSD	T13783-13	Limits
460-00-4	4-Bromofluorobenzene	90%	92%	94%	56-136%
98-08-8	aaa-Trifluorotoluene	100%	102%	103%	50-144%

DATA VERIFICATION WORKSHEET

(Page 1 of 2)

Analytical Method/Analytes:	SW-846 8021B (BTEX)	**Sample Collection Date(s):**	06/08/06
Laboratory:	Accutest	**MWH Job Number:**	EPC-BNFP (BNFP)
Batch Identification:	T13776	**Matrix:**	Water
MS/MSD Parent(s)[a]:	None	**Field Replicate Parent(s):**	None

Verification Complete: Craig L Moore - 09/28/06

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
None	BNFP	MW-23	T13776-1	Y	None	
None	BNFP	MW-19	T13776-2	Y	None	
None	BNFP	MW-26	T13776-3	Y	None	
None	BNFP	MW-27	T13776-4	Y	None	
None	BNFP	MW-33	T13776-5	Y	None	
None	BNFP	080606TB02	T13776-6	N	None	

DATA VERIFICATION WORKSHEET

Analytical Method:	SW-846 8021B (BTEX)	**MWH Job Number:**	EPC-SJRB (BNRP)
Laboratory:	Accutest	**Batch Identification:**	T13776

Verification Criteria								
Sample ID	MW-23	MW-19	MW-26	MW-27	MW-33	060606TB 02		
Lab ID	T13776-1	T13776-2	T13776-3	T13776-4	T13776-5	T13776-6		
Holding Time	A	A	A	A	A	A		
Analyte List	A	A	A	A	A	A		
Reporting Limits	A	A	A	A	A	A		
Surrogate Spike Recovery	A	A	A	A	A	A		
Trip Blank	A	A	A	A	A	N/A		
Equipment Rinseate Blanks	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		
Initial Calibration	N	N	N	N	N	N		
Initial Calibration Verification (ICV)	N	N	N	N	N	N		
Continuing Calibration Verification (CCV)	N	N	N	N	N	N		
Method Blank	A	A	A	A	A	A		
Laboratory Control Sample (LCS)	A	A	A	A	A	A		
Laboratory Control Sample Duplicate (LCSD)	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		
Retention Time Window	N	N	N	N	N	N		
Injection Time(s)	N	N	N	N	N	N		
Hardcopy vs. Chain-of-Custody	A	A	A	A	A	A		
EDD vs. Hardcopy	N	N	N	N	N	N		
EDD vs. Chain of Custody	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:

Groundwater Analytical Report – August 2006

Gulf Coast ACCUTEST Laboratories

IT'S ALL IN THE CHEMISTRY

08/22/06

Technical Report for

Montgomery Watson

Blanco North Flare Pit

D-ALAB-BLANCOPLTN-004

Accutest Job Number: T14400

Sampling Date: 08/15/06

Report to:

MWH Americas, Inc.
1801 California St. Suite 2900
Denver, CO 80202
jennifer.a.hurley@mwhglobal.com

ATTN: Ms. Jennifer Hurley

Total number of pages in report: 17

ACCUTEST LABORATORIES 50 YEARS 1956-2006

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: T14400

Blanco North Flare Pit
Project No: D-ALAB-BLANCOPLTN-004

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
T14400-1	08/15/06	07:39	MN	08/16/06	AQ	Ground Water	MW-23
T14400-2	08/15/06	08:43	MN	08/16/06	AQ	Ground Water	MW-26
T14400-3	08/15/06	09:11	MN	08/16/06	AQ	Ground Water	MW-27
T14400-4	08/15/06	10:10	MN	08/16/06	AQ	Ground Water	MW-33
T14400-5	08/15/06	07:00	MN	08/16/06	AQ	Trip Blank Water	150806TB01

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	**Job No**	T14400
Site:	Blanco North Flare Pit	**Report Date**	8/22/2006 4:54:56 PM

4 Samples and 1 Trip Blank were collected on 08/15/2006 and were received at Accutest on 08/16/2006 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of T14400. 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:** GKK882

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T14400-1MS, T14400-1MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Benzene are outside control limits. Probable cause due to the ratio of spike to sample concentration < 4.
- T14400-2 for aaa-Trifluorotoluene: Outside control limits due to matrix interference.
- T14400-2 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.
- T14400-1 for aaa-Trifluorotoluene: Outside control limits due to matrix interference.
- T14400-1 for aaa-Trifluorotoluene: Outside control limits due to matrix interference.
- T14400-1 for 4-Bromofluorobenzene: Outside control limits due to matrix interference.

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

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW-23		
Lab Sample ID:	T14400-1	Date Sampled:	08/15/06
Matrix:	AQ - Ground Water	Date Received:	08/16/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK14842.D	1	08/17/06	FO	n/a	n/a	GKK882
Run #2	KK14843.D	50	08/17/06	FO	n/a	n/a	GKK882

	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	6490 [a]	50	18	ug/l	
108-88-3	Toluene	26.6	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	165	1.0	0.33	ug/l	
1330-20-7	Xylenes (total)	1270 [a]	100	18	ug/l	
95-47-6	o-Xylene	91.8	1.0	0.14	ug/l	
	m,p-Xylene	1270 [a]	50	18	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	297% [b]	118%	56-136%
98-08-8	aaa-Trifluorotoluene	333% [b]	184% [b]	50-144%

(a) Result is from Run# 2
(b) Outside control limits due to matrix interference.

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-26		
Lab Sample ID:	T14400-2	Date Sampled:	08/15/06
Matrix:	AQ - Ground Water	Date Received:	08/16/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK14846.D	1	08/17/06	FO	n/a	n/a	GKK882
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	2.7	1.0	0.35	ug/l	
108-88-3	Toluene	21.0	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	11.1	1.0	0.33	ug/l	
1330-20-7	Xylenes (total)	41.0	2.0	0.36	ug/l	
95-47-6	o-Xylene	7.3	1.0	0.14	ug/l	
	m,p-Xylene	33.8	1.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	170% [a]		56-136%
98-08-8	aaa-Trifluorotoluene	1487% [a]		50-144%

(a) Outside control limits due to matrix interference.

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

3.3

Client Sample ID:	MW-27		
Lab Sample ID:	T14400-3	Date Sampled:	08/15/06
Matrix:	AQ - Ground Water	Date Received:	08/16/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK14847.D	1	08/17/06	FO	n/a	n/a	GKK882
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	7.0	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.33	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.36	ug/l	
95-47-6	o-Xylene	ND	1.0	0.14	ug/l	
	m,p-Xylene	ND	1.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	115%		56-136%
98-08-8	aaa-Trifluorotoluene	137%		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-33		
Lab Sample ID:	T14400-4	Date Sampled:	08/15/06
Matrix:	AQ - Ground Water	Date Received:	08/16/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK14838.D	50	08/17/06	FO	n/a	n/a	GKK882
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	30.1	50	18	ug/l	J
108-88-3	Toluene	37.7	50	10	ug/l	J
100-41-4	Ethylbenzene	ND	50	17	ug/l	
1330-20-7	Xylenes (total)	24.6	100	18	ug/l	J
95-47-6	o-Xylene	ND	50	7.0	ug/l	
	m,p-Xylene	24.6	50	18	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	114%		56-136%
98-08-8	aaa-Trifluorotoluene	125%		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:	150806TB01		
Lab Sample ID:	T14400-5	Date Sampled:	08/15/06
Matrix:	AQ - Trip Blank Water	Date Received:	08/16/06
Method:	SW846 8021B	Percent Solids:	n/a
Project:	Blanco North Flare Pit		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	KK14833.D	1	08/17/06	FO	n/a	n/a	GKK882
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	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.33	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.36	ug/l	
95-47-6	o-Xylene	ND	1.0	0.14	ug/l	
	m,p-Xylene	ND	1.0	0.36	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	119%		56-136%
98-08-8	aaa-Trifluorotoluene	134%		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

150806MN01

Page 1 of 1

10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

FED-EX Tracking # 8568 1292 644 | Bottle Order Control # | Accutest Quote # | Accutest Job # T14400

Client / Reporting Information

Company Name: El Paso
Project Contact: Bart Wilking | E-Mail:
Address: 2 North Nevada Street
City: Colorado Springs, C | State: | Zip: 80903
Phone No.: 719-520-4554 | Fax No.:
Samplers's Name: Martin Nee

Project Information

Project Name / No.: Blanco North Flare Pit/D-ALAB-BlancoPITN-004
Bill to: | Invoice Attn.:
Address:
City: | State: | Zip:
Phone No.: | Fax No.:
Client Purchase Order #:

Requested Analyses

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Wastewater
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
SOL - Other Solid

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH	ZnAc+NaOH	H2SO4	HNO3	MeOH	None	BTEX (8021)											LAB USE ONLY
~~—~~	~~MW-10~~			~~W~~	~~3~~	~~X~~							~~X~~	~~M~~										
1	MW-23	81506	0739	W	3	X						X	X											
~~—~~	~~MW-24~~			~~W~~	~~3~~	~~X~~							~~X~~	~~M~~										
2	MW-26	81506	0843	W	3	X						X	X											
3	MW-27	81506	0911	W	3	X						X	X											
4	MW-33	81506	1010	W	3	X							X											
5	150806TBD1	81506	0700	WQ	2	X							X											

Turnaround Time (Business days)

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

Real time analytical data available via Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] Reduced Tier 1
- [ ] Full Data Package
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only
Commercial "B" = Results & Standard QC

Comments / Remarks

Unpreserved samples

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		81506 1500	1	2		2
3			3	4		4
5		8/16/2015 9:50	A. Rocha	Custody Seal #	Preserved where applicable: [ ]	On Ice: X Cooler Temp: 3.0

T14400: Chain of Custody
Page 1 of 2

ACCUTEST.

SAMPLE RECEIPT LOG

JOB #: T14400

DATE/TIME RECEIVED: 8/16/06/ 9:50

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 Samples Headspace acceptable
9. [✓ Y] N NA Custody seal received intact and tamper not evident on cooler.
10. 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	1-2	8/15	AQ	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
						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 8-16-06

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

COOLER TEMP: 2.0

COOLER TEMP:

COOLER TEMP:

COOLER TEMP:

Form: SM012, Rev.07/28/06, QAO

GC Volatiles

5

QC Data Summaries

Includes the following where applicable:

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

Method Blank Summary

Job Number: T14400
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK882-MB	KK14831.D	1	08/17/06	FO	n/a	n/a	GKK882

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

T14400-1, T14400-2, T14400-3, T14400-4, T14400-5

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.35	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.33	ug/l	
108-88-3	Toluene	ND	1.0	0.20	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	0.36	ug/l	
95-47-6	o-Xylene	ND	1.0	0.14	ug/l	
	m,p-Xylene	ND	1.0	0.36	ug/l	

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	113%	56-136%
98-08-8	aaa-Trifluorotoluene	131%	50-144%

Blank Spike Summary

Job Number: T14400
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GKK882-BS	KK14830.D	1	08/17/06	FO	n/a	n/a	GKK882

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

T14400-1, T14400-2, T14400-3, T14400-4, T14400-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	24.7	124	72-125
100-41-4	Ethylbenzene	20	23.9	120	76-125
108-88-3	Toluene	20	23.6	118	74-125
1330-20-7	Xylenes (total)	60	71.8	120	78-124
95-47-6	o-Xylene	20	23.9	120	78-124
	m,p-Xylene	40	47.9	120	78-125

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	114%	56-136%
98-08-8	aaa-Trifluorotoluene	128%	50-144%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T14400
Account: MWHSLCUT Montgomery Watson
Project: Blanco North Flare Pit

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T14400-1MS	KK14844.D	50	08/17/06	FO	n/a	n/a	GKK882
T14400-1MSD	KK14845.D	50	08/17/06	FO	n/a	n/a	GKK882
T14400-1	KK14842.D	1	08/17/06	FO	n/a	n/a	GKK882
T14400-1	KK14843.D	50	08/17/06	FO	n/a	n/a	GKK882

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

T14400-1, T14400-2, T14400-3, T14400-4, T14400-5

CAS No.	Compound	T14400-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	6490 [a]		1000	7330	681*	7320	680*	0	45-137/21
100-41-4	Ethylbenzene	165		1000	1360	120	1380	122	1	68-126/15
108-88-3	Toluene	26.6		1000	1100	107	1110	108	1	63-130/22
1330-20-7	Xylenes (total)	1270 [a]		3000	4430	108	4520	111	2	72-125/19
95-47-6	o-Xylene	91.8		1000	1130	104	1170	108	3	70-128/20
	m,p-Xylene	1270 [a]		2000	3290	109	3350	112	2	63-136/19

CAS No.	Surrogate Recoveries	MS	MSD	T14400-1	T14400-1	Limits
460-00-4	4-Bromofluorobenzene	114%	115%	297%* [b]	118%	56-136%
98-08-8	aaa-Trifluorotoluene	167%*	150%*	333%* [b]	184%* [b]	50-144%

(a) Result is from Run #2.
(b) Outside control limits due to matrix interference.

DATA VERIFICATION WORKSHEET

(Page 1 of 2)

Analytical Method/Analytes:	**SW-846 8021B (BTEX)**	**Sample Collection Date(s):**	**08/15/06**
Laboratory:	**Accutest**	**MWH Job Number:**	**EPC-BNFP (BNFP)**
Batch Identification:	**T14400**	**Matrix:**	**Water**
MS/MSD Parent(s)[a]:	**None**	**Field Replicate Parent(s):**	**None**

Verification Complete: Craig L Moore - 09/28/06

(Date/Signature)

Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Comments
1,3	BNFP	MW-23	T14400-1	Y	J J J J J J	Benzene @ 6400 µg/l Toluene @ 26.6 µg/l Ethylbenzene @ 165 µg/l Xylenes (total) @ 1270 µg/l o-Xylene @ 91.8 µg/l m,p-Xylene @ 1270 µg/l
2	BNFP	MW-26	T14400-2	Y	J J J J J J	Benzene @ 2.7 µg/l Toluene @ 21.0 µg/l Ethylbenzene @ 11.1 µg/l Xylenes (total) @ 41.0 µg/l o-Xylene @ 7.3 µg/l m,p-Xylene @ 33.8 µg/l
None	BNFP	MW-27	T14400-3	Y	None	
None	BNFP	MW-33	T14400-4	Y	None	
None	BNFP	080606TB02	T14400-5	N	None	

DATA VERIFICATION WORKSHEET
(Page 2 of 2)

Analytical Method:	SW-846 8021B (BTEX)	**MWH Job Number:**	EPC-BNRP (BNRP)
Laboratory:	Accutest	**Batch Identification:**	T14400

Verification Criteria								
Sample ID	MW-23	MW-26	MW-27	MW-33	060606TB 02			
Lab ID	T14400-1	T14400-2	T14400-3	T14400-4	T14400-5			
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[1]	A[2]	A	A	A			
Trip Blank	A	A	A	A	N/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)	A[3]	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) Surrogate recovery high for 4-bromofluorobenzene (297% [56-136%]) and aaa-trifluorotoluene (333%/184% [50-144%]). Qualify all detects with a "J" flag indicating that the data are estimated, potentially biased high.
2) Surrogate recovery high for 4-bromofluorobenzene (170% [56-136%]) and aaa-trifluorotoluene (1487%[50-144%]). Qualify all detects with a "J" flag indicating that the data are estimated, potentially biased high.
3) MS/MSD recoveries high for benzene (681%/380% [45-137%]). Sample concentration is greater than four times spike concentration. No qualifcation.

APPENDIX D
Soil Boring Logs and Monitoring Well Installation Diagrams

MONITORING WELL INSTALLATION RECORD

Borehole # 1
Well # MW-31
Page 1 of 1

Lodestar Services, Inc
PO Box 3861
Farmington, New Mexico 87499
(505) 334-2791

Project Name: Blanco North Flare Pit
Project Number: _____ Cost Code: _____
Project Location: Bloomfield, NM

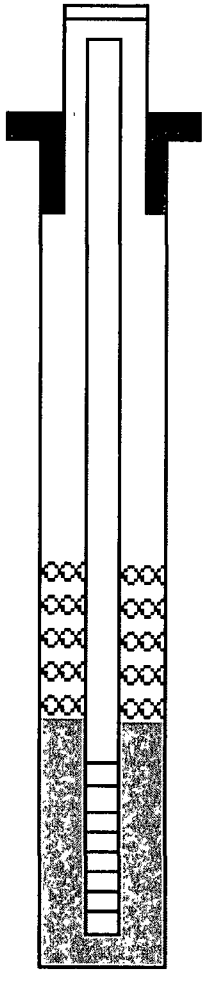
Elevation: _____
Well Location: down gradient of pond
GWL Depth: na
Installed By: Envirotech, Inc.

On-Site Geologist: M. Nee
Personnel On-Site: D. Padilla, S. Smith, F. Chee
Contractors On-Site: Envirotech
Client Personnel On-Site: _____

Date/Time Started: 5/18/06 0759 hrs
Date/Time Completed: 5/19/06 1638 hrs

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing	8" square steel	2.75
Bottom of Protective Casing		-1.75
Top of Concrete	Quickcrete	0.0
Bottom of Concrete	Quickcrete	-..5
Top of Bentonite	3/8" bentonite chips	-0.5
Bottom of Bentonite	3/8" bentonite chips	-4.08
Top of Grout	Portland grout w/≈13% bentonite powder	-4.08
Bottom of Grout	Portland grout w/≈13% bentonite powder	-33.6
Top of Well Riser	4" schd. 40 PVC	2.25
Bottom of Well Riser	4" schd. 40 PVC	-40.54
Top of Well Screen	0.010 " slotted PVC, schd. 40	-40.54
Bottom of Well Screen	0.010 " slotted PVC, schd. 40	-70.83
Top of Peltonite Seal	3/8" bentonite chips	-33.6
Bottom of Peltonite Seal	3/8" bentonite chips	-37.3
Top of Gravel Pack	10-20 grade Colorado Silica Sand	-37.3
Bottom of Gravel Pack	10-20 grade Colorado Silica Sand	-71.5
Top of Natural Cave-In		na
Bottom of Natural Cave-In		na
Top of Groundwater	Not available due to slow recovery	na
Total Depth of Borehole		71.5



Top of Protective Casing 2.75
Top of Riser 2.25
Ground Surface 0.0
Top of Seal -33.6
Top of Gravel Pack -37.3
Top of Screen -40.54
Bottom of Screen -70.83
Bottom of Borehole -71.5

Comments: 18-#50 sand, 3-#50 3/8 bent Chips, 6-#94 portland, 1.5-#50 aqua gel.

Geologist Signature Martin Nee

RECORD OF SUBSURFACE EXPLORATION

Lodestar Services, Inc.

PO Box 3861
Farmington, New Mexico 87499
(505) 334-1464

Project Name: Blanco North Flare Pit
Project Number: Phase
Project Location: Bloomfield, NM

Elevation:
Borehole Location: MW-31
GWL Depth: 56' btoc at MW-23
Logged By: Lodestar Services
Drilled By: Envirotech
Date/Time Started: 05/18/06 0759 hrs
Date/Time Completed: 5/19/06 1737 hrs

Well Logged By: M. Nee
Personnel On-Site:
Contractors On-Site: D. Padilla F. Chee, S. Smith
Client Personnel On-Site:

Drilling Method: HSA to 62.5' then rotary to 71.50'
Air Monitoring Method: PhotoVac 2020 PID

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0			0-8' **Sandy Clay** grading to very fine sand at 8', pale yellowish brown, unconsolidated, moderately well sorted,	cl					
5	5-6.5'	17"-				0		0	17 blow counts
			8-28' **Sand**, pale yellowish brown, very	sp					
10	10-11.5'	18"	fine to medium grained, moderately sorted, subangular, very fine to fine pebble gravel 3" thick at 20-20.25', gravel is angular, then to well sorted medium sand.			0		5.6	12 blow counts
15	15-16.5	18"				0		10.2	18 blow counts
20	20-21.5	18"				0		11.6	20 blow counts
25	25-26.5	18"				0		10.9	20 blow counts
			28-62' **Sandy Clay,** Pale Yellowish	cl					
30	30-31	18"	brown, mottled with alkali, moderately consolidated, poorly sorted, cuttings are balling up.			0		9.6	25 blow counts
35	35-36	16"				0		11.3	37 blow counts
									hard drilling, added 5 g water to outside auger to help get cuttings up.
40	40-40.5	14"				0		0	45 blow counts

Comments: 18" split spoon sample collected every 5' beneath ground surface. Rig down 1122 hrs 5/18/06 mobed off site for remainder of day to repair leaking transmission seal. Resumed drilling 0700 hrs 5/19/06, stuck in hole at 53.5' bgs, broke sub, traveled to office for parts, returned 0906, free augers 0937, 1515 hrs drillers mobe to shop for more grout.

Geologist Signature

RECORD OF SUBSURFACE EXPLORATION

Lodestar Services, Inc.

PO Box 3861
Farmington, New Mexico 87499
(505) 334-1464

Project Name Blanco North Flare Pit MW-31
Project Number _____ Phase _____
Project Location Bloomfield, NM

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
40			unconsolidated sand in sampler from 40.75-41.25 then to stiff clay,noted alkali along bedding?surfaces @41.5"					13.1	45 blow counts very difficult drilling
45	45-46.5	12"	Alkali stringers @45-46.5', well consolidated			0		12.7	45 blow counts very difficult drilling added 10 gal. water to outside of augers no more sampling
50						0			very difficult drilling
55						0			stuck in hole, broke sub added 20 gal. water very difficult drilling
60						0			drilling appears easier at 57'
65	62.5-62.8'	4"	62-71.5 **Sandstone**, light grey, well indurated, cemented, clay to med sand size grains,			0		0	refusal, 50 blow counts sampled started rotary drilling @62.5
70						0			
75									1150 5/19/06 TD hole 71.5' bgs
80									
85									
90									

Comments: 4" PVC well completed with 30' of .010 screen , borehole dry on 6/22/06 0645 hrs, well dry 6/31/06 0920 hrs

10.25" OD augers to 62" bgs then 6" diameter rotary bit to 71.5'bgs

Geologist Signature

MONITORING WELL INSTALLATION RECORD

Borehole # 1
Well # MW-32
Page 1 of 1

Lodestar Services, Inc
PO Box 3861
Farmington, New Mexico 87499
(505) 334-2791

Project Name Blanco North Flare Pit
Project Number _____ Cost Code _____
Project Location Bloomfield, NM

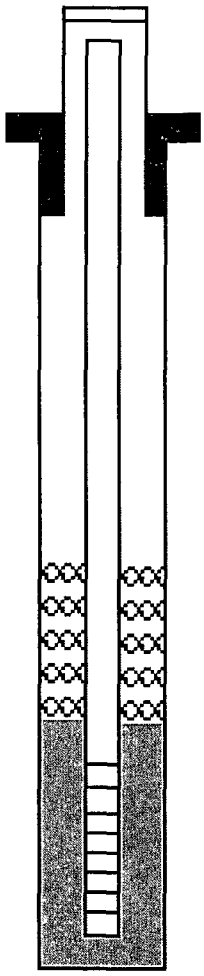
Elevation
Well Location Center of Former North Flare Pit
GWL Depth
Installed By Envirotech, Inc.

On-Site Geologist M. Nee
Personnel On-Site D. Padilla, H. Rickerhoff, F. Chee
Contractors On-Site Envirotech
Client Personnel On-Site B. Breeding

Date/Time Started 5/15/06 1040 hrs
Date/Time Completed 5/17/06 1638 hrs

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing	8" square steel	3.17'
Bottom of Protective Casing		-1.33
Top of Concrete	Quickcrete	0.0
Bottom of Concrete	Quickcrete	-.25'
Top of Bentonite	3/8" bentonite chips	-.25'
Bottom of Bentonite	3/8" bentonite chips	-2.92'
Top of Grout	Portland grout w/≈6% bentonite powder	-2.92'
Bottom of Grout	Portland grout w/≈6% bentonite powder	-23.25
Top of Well Riser	4" schd. 40 PVC	2.48
Bottom of Well Riser	4" schd. 40 PVC	-40.43
Top of Well Screen	0.010 " slotted PVC, schd. 40	-40.43
Bottom of Well Screen	0.010 " slotted PVC, schd. 40	-80.6
Top of Peltonite Seal	3/8" bentonite chips	-23..25
Bottom of Peltonite Seal	3/8" bentonite chips	-26.3
Top of Gravel Pack	10-20 grade Colorado Silica Sand	-27.9
Bottom of Gravel Pack	10-20 grade Colorado Silica Sand	-81.4
Top of Natural Cave-In	silty clay	-26.3
Bottom of Natural Cave-In	silty clay	-27.9
Top of Groundwater	Not available due to slow recovery	
Total Depth of Borehole		-81.4



Top of Protective Casing 3.17
Top of Riser 2.48
Ground Surface 0.0
Top of Seal -23.25
Top of Gravel Pack -27.9
Top of Screen -40.43
Bottom of Screen -80.6
Bottom of Borehole -81.4

Comments: 21-#50 sand, 3-#50 3/8 bent Chips, 6-#94 portland, 2/3-#50 aqua gel.

Geologist Signature Martin Nee

RECORD OF SUBSURFACE EXPLORATION

Lodestar Services, Inc.

PO Box 3861
Farmington, New Mexico 87499
(505) 334-1464

Project Name: Blanco North Flare Pit
Project Number: _____ Phase: _____
Project Location: Bloomfield, NM

Elevation: _____
Borehole Location: **MW-32**
GWL Depth: _____
Logged By: Lodestar Services
Drilled By: Envirotech
Date/Time Started: 05/15/06 1048 hrs
Date/Time Completed: 5/17/06 1641 hrs

Well Logged By: M. Nee
Personnel On-Site: _____
Contractors On-Site: D. Padilla H. Rickerhoff
Client Personnel On-Site: B. Breeding (MWH)

Drilling Method: HAS to 45' then rotary to 80'
Air Monitoring Method: PhotoVac 2020 PID

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0									
			0-25' grey **clay**, unconsolidated, minor pebble gravel, backfill material	cl					
5						0			
10						0			
15						0			
20						0			
25	25-26.5	16"				0		0	12 blow counts
			25-28 **clayey sand**, dark yellowish brown, clay to fine pebble gravel, unconsolidated, poorly sorted.	sc					
			28-81.4' **shale**, light olive grey,						tough drilling @ 28'
30	30-31	12"	consolidated , parting surfaces visible			0		279	50 blow counts
									Refusal
35	35-36	12"				0		758	50 blow counts
									Refusal
40	40-40.5	6"				0		0	50 blow counts

Comments: Started rotary drilling at 1431on 5/15/06 refusal at 56 'bgs, no more sampling, 0720 5/16/06 drill to 80' bgs with 3.25 " rotary bit, 0940-1430 drill down after breaking 2 subs, return with rotary bit large enough to install 4" well, will have to ream out smaller hole. 5/17/06 0815-1100 drillers leave to p/u grout with 30% solids, 1200-1438 hrs pump plugged with mud, drillers leave to clean pump.

Geologist Signature _____

RECORD OF SUBSURFACE EXPLORATION

Lodestar Services, Inc.

PO Box 3861
Farmington, New Mexico 87499
(505) 334-1464

Project Name: Blanco North Flare Pit **MW-32**
Project Number: _____ Phase: _____
Project Location: Bloomfield, NM

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
40									
45	45-46.1	0				0			50 blow counts
50	50-51.5	0				0			50 blow counts
									no more sampling
55						0			
									started rotary drilling @ 56' bgs
60									
65						0			
70						0			1437 moist shale blowing out of hole at 68' bgs
75									
80									1453 hrs on 05/16/06 at 80' bgs with 6" rotary TD 81.4' bgs
85									
90									

Comments: 4" PVC well completed with 40' of .010 screen , borehole dry on 6/18/06 0645 hrs

10.25" OD augers to 56" bgs then 6" diameter rotary bit to 81.4'bgs

Geologist Signature

MONITORING WELL INSTALLATION RECORD

Borehole # 1
Well # MW-33
Page 1 of 1

Lodestar Services, Inc
PO Box 3861
Farmington, New Mexico 87499
(505) 334-2791

Project Name Blanco North Flare Pit
Project Number _____ Cost Code _____
Project Location Bloomfield, NM

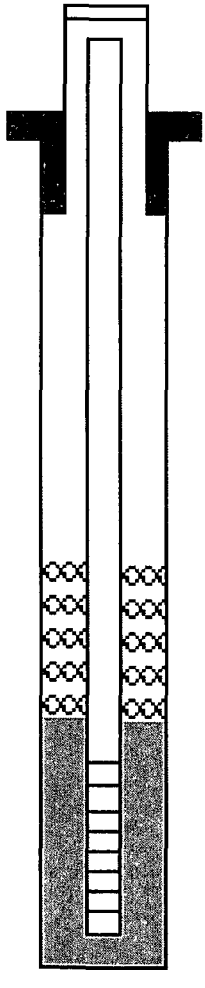
Elevation _____
Well Location down gradient of MW-24
GWL Depth 79.61 btoc
Installed By Envirotech, Inc.

On-Site Geologist M. Nee
Personnel On-Site D. Padilla, S. Smith, F. Chee
Contractors On-Site Envirotech
Client Personnel On-Site _____

Date/Time Started 5/22/06 0759 hrs
Date/Time Completed 5/22/06 1638 hrs

Depths in Reference to Ground Surface

Item	Material	Depth (feet)
Top of Protective Casing	8" square steel	2.46
Bottom of Protective Casing		2.04
Top of Concrete	Quickcrete	0.0
Bottom of Concrete	Quickcrete	-.5
Top of Bentonite	3/8" bentonite chips	-.5
Bottom of Bentonite	3/8" bentonite chips	-44.1
Top of Grout	Portland grout w/≈8% bentonite powder	-2.5
Bottom of Grout	Portland grout w/≈8% bentonite powder	-44.1
Top of Well Riser	2" schd. 40 PVC	2.17
Bottom of Well Riser	2" schd. 40 PVC	-52.08
Top of Well Screen	0.010 " slotted PVC, schd. 40	-52.08
Bottom of Well Screen	0.010 " slotted PVC, schd. 40	-80.08
Top of Peltonite Seal	3/8" bentonite chips	-44.1
Bottom of Peltonite Seal	3/8" bentonite chips	-46.5
Top of Gravel Pack	10-20 grade Colorado Silica Sand	-46.5
Bottom of Gravel Pack	10-20 grade Colorado Silica Sand	-80.75
Top of Natural Cave-In		na
Bottom of Natural Cave-In		na
Top of Groundwater	5/31/06	-77.44
Total Depth of Borehole		-80.75



Top of Protective Casing 2.46
Top of Riser 2.17
Ground Surface 0.0
Top of Seal -44.1
Top of Gravel Pack -46.5
Top of Screen -52.08
Bottom of Screen -80.08
Bottom of Borehole -80.75

Comments: 3-#50 sand, 3-#50 3/8 bent Chips, 8-#94 portland, 1.2-#50 aqua gel.

Geologist Signature Martin Nee

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RECORD OF SUBSURFACE EXPLORATION

Lodestar Services, Inc.

PO Box 3861
Farmington, New Mexico 87499
(505) 334-1464

Project Name: Blanco North Flare Pit
Project Number: Phase
Project Location: Bloomfield, NM

Elevation:
Borehole Location: **MW-33**
GWL Depth: 56' btoc at MW-23
Logged By: Lodestar Services
Drilled By: Envirotech
Date/Time Started: 05/22/06 0730 hrs
Date/Time Completed: 5/22/06 1632 hrs

Well Logged By: M. Nee
Personnel On-Site:
Contractors On-Site: D. Padilla F. Chee, S. Smith
Client Personnel On-Site:

Drilling Method: HSA to 53' then rotary to 80.9'
Air Monitoring Method: PhotoVac 2020 PID

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
0			0-10' **Sand**, pale yellowish brown, silt to coarse grained sand, subrounded, poorly sorted, unconsolidated,	sw					
5						0			
10			10-27' **Sandy clay**, pale yellowish brown, unconsolidated, moderately well sorted, sand is subrounded.	sc		0			
15						0			
20						0			
25						0			
30			27-34', **Sand**, pale yellowish brown, silt to fine pebble gravel, unconsolidated poorly sorted.	sp		0			
35			34-36', **Gravel**, medium pebble gravel in cuttings.	gp		0			
			36-38', **Clayey Sand**, pale yellowish brown, moderately consolidated, poorly sorted silt to fine pebble gravel.	sc					
40	40-41.5	18"	38-53 **Sandy silty clay**, light olive grey, moderately well sorted,	cl		0		4.1	22 blow counts

Comments: 18" split spoon sample collected every 5' beneath ground surface starting at 40' bgs. Rig down 0810 hrs out of fuel, resume drilling 0900 hrs. Drillers to shop for grout and quickgel 1357 hrs, return 1506 hrs

Geologist Signature

RECORD OF SUBSURFACE EXPLORATION

Lodestar Services, Inc.

PO Box 3861
Farmington, New Mexico 87499
(505) 334-1464

Project Name Blanco North Flare Pit **MW-33**
Project Number _____ Phase _____
Project Location Bloomfield, NM

Depth (Feet)	Sample Interval	Sample Type & Recovery (inches)	Sample Description Classification System: USCS	USCS Symbol	Depth Lithology Change (feet)	Air Monitoring Units: NDU BZ	BH	S	Drilling Conditions & Blow Counts
40								4.1	22 blow counts
			moderately consolidated, alkali stringers throughout, <5% very fine sand.						
45	45-46.5	16"				0		5.2	31 blow counts
			Alkali stringers @45-46.5', well consolidated						difficult drilling
50	50-51.5		olive grey @ 50' bgs, no alkali, minor black organic root?material in sampler @ 51.5' no more sand			0		4.6	44 blow counts
			53-80.9' **Sandstone,** light grey, well indurated, cemented, clay to med sand size grains						Auger refusal @ 53' bgs switch to rotary drilling
55						0			
60						0			
65						0			
70						0			air cuttings appear moist @ 70 feet
75									
80									TD 80.75' bgs
85									
90									

Comments: 2" PVC well completed with 30' of .010 screen , borehole dry on 6/22/06 0645 hrs, depth to water on 6/31/06 0920 hrs 79.61' btoc. 7.25" OD augers to 53' bgs then 3.25" diameter rotary bit to 80.75' bgs

Geologist Signature