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#### EL PASO NATURAL GAS COMPANY



614 Reilly Avenue Farmington, New Mexico 87401

RECEIVED JUL 26 2004 Oil Conservation Division Environmental Rureau Environmental Bureau

#### 2004 GROUNDWATER REPORT FOR THE **BLANCO PLANT SOUTH FLARE PIT AND D PLANT AREAS**

San Juan County, New Mexico

July 2004

Prepared by:

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#### LIST OF ACRONYMS

DCADichloroethaneDCBDichlorobenzeneDCEDichloroetheneEPNGEl Paso Natural Gas CompanyMWHMWH Americas, Inc.NMOCDNew Mexico Oil Conservation DivisionNMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	CHC	Chlorinated Hydrocarbons
DCBDichlorobenzeneDCEDichloroetheneEPNGEl Paso Natural Gas CompanyMWHMWH Americas, Inc.NMOCDNew Mexico Oil Conservation DivisionNMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	DCA	Dichloroethane
DCEDichloroetheneEPNGEl Paso Natural Gas CompanyMWHMWH Americas, Inc.NMOCDNew Mexico Oil Conservation DivisionNMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	DCB	Dichlorobenzene
EPNGEl Paso Natural Gas CompanyMWHMWH Americas, Inc.NMOCDNew Mexico Oil Conservation DivisionNMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	DCE	Dichloroethene
MWHMWH Americas, Inc.NMOCDNew Mexico Oil Conservation DivisionNMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	EPNG	El Paso Natural Gas Company
NMOCDNew Mexico Oil Conservation DivisionNMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	MWH	MWH Americas, Inc.
NMWQCCNew Mexico Water Quality Control CommissionPCETetrachloroetheneTCETrichloroethene	NMOCD	New Mexico Oil Conservation Division
PCETetrachloroetheneTCETrichloroethene	NMWQCC	New Mexico Water Quality Control Commission
TCE Trichloroethene	PCE	Tetrachloroethene
	TCE	Trichloroethene

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#### **1.0 INTRODUCTION**

This 2004 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 2004 annual groundwater sampling event at the Blanco Plant site. In addition, results of the chlorinated hydrocarbon sampling in the D Plant area from 2002 through 2004 are also presented. This work has been performed according to the proposed actions outlined in the Groundwater Nitrate Report for the Blanco Plant South Flare Pit and D Plant Areas, April 2003 (Nitrate Report) (MWH, 2003a) and the 2003 Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas, August 2003 (MWH, 2003b), which are as follows:

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

This work was initiated, pursuant to a New Mexico Oil Conservation Division (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 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 historical information related to groundwater nitrate 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 investigation in 2004, 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 and groundwater resources 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. 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 source for potential nitrate contamination.

Historic and recent groundwater nitrate data from several rounds of groundwater sampling (1991 - 2004) at the site (including North Flare Pit wells) are presented in Table 2.1, *Groundwater Nitrate Analytical Data* (1991 - 2004).

#### 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 and groundwater resources 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 and then trends southward through the southern portion of the site. The average hydraulic conductivity was estimated to be  $2.1 \times 10^{-4}$  centimeters per second. Depth to groundwater ranged from 50 feet (at MW-2) to nine feet (at MW-10) below ground surface (5564 to 5552 feet above sea level) (EPNG, 1989). These results were generally consistent with the findings of K.W. Brown (1990).

A potentiometric surface map for the site has been prepared based on water level measurements collected in May 2004, and is presented in Figure 2.1, *Groundwater Potentiometric Surface Map – May 2004*. Based on these data, groundwater is flowing to the southeast with a hydraulic gradient of 0.027 ft/ft in the Blanco Plant site area and 0.067 ft/ft in the North Flare Pit area. At the southern boundary of the site the

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

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#### 3.0 2004 ANNUAL GROUNDWATER SAMPLING

#### 3.1 GROUNDWATER NITRATE DATA

Groundwater samples were collected on May 17, 2004 from wells MW-8, MW-12, MW-13, MW-14, MW-15, MW-19, MW-23, MW-26, MW-27, MW-28, MW-29 and MW-30 using standard purging and sampling techniques and analyzed for nitrite+nitrate concentrations. Groundwater sampling was attempted at wells MW-2, MW-5, MW-6, MW-7 and MW-24 at this time; however, these wells were either dry (MW-2, MW-5, MW-6 and MW-7) or purged dry (MW-24). 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 concentrations were consistent with historic data for these wells. These data indicate that nitrate 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 concentrations at that location).

Monitoring well MW-20 was damaged in 2000 and abandoned in 2002. In accordance with the approval letter from NMOCD, EPC plugged and abandoned monitoring wells MW-10, MW-16, MW-17 and MW-18 in December 2003.

Groundwater nitrate concentrations from the May 2004 sampling event are presented on Figure 3.1, *Groundwater Nitrate Data – May 2004*. The 10 mg/L isoconcentration contour is also presented on this figure to indicate areas in exceedance of the NMWQCC standard. Nitrate concentrations in all of the wells in the North Flare Pit area are consistently low and well below the standard. As shown in this figure, there is no obvious source or apparent trend in the nitrate data. Instead, there appear to be two confined areas or "hot spots" of high nitrate concentrations that are adjacent to wells with nitrate concentrations that high nitrate groundwater is migrating off-site.

#### 3.2 GROUNDWATER CHLORINATED HYDROCARBON DATA

Four wells in the D Plant area were also sampled and analyzed for a suite of selected chlorinated hydrocarbons (CHCs), in accordance with the site monitoring requirements The CHCs include tetrachloroethene (PCE), trichloroethene (TCE), 1,1-dichloroethane (DCA), 1,2-dichlorobenzene (DCB), 1,1-dichloroethene (DCE), trans 1,2-DCE and cis 1,2-DCE. These compounds were targeted because they had been detected previously at the site. Analytical data from May 2002, June 2003 and May 2004 are presented in Table 3.1, *Groundwater Chlorinated Hydrocarbon Analytical Data (2002 - 2004)*. As shown in this table, analytical data are generally consistent between the two years, with the exception that concentrations of several CHCs in MW-12 decreased in 2003 and 2004. In 2004, PCE, the most highly-chlorinated solvent of the analyte group, occurred only in well MW-12, and TCE was present in wells MW-12, MW-13 and MW-14. Daughter products of these two compounds (DCE and/or DCA) are detected in each of the wells, indicating that degradation of these compounds is naturally occurring in the groundwater.

MW/H \* 1475 Pine Grove Road, Ste. 109 \* Steamboat Springs, CO 80477 \* (970) 879-1054

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The only CHC detected in well MW-15 is a relatively low concentration of 1,1-DCA (6.3  $\mu$ g/L in May 2004), indicating that the groundwater at this location is likely approaching non-detectable levels of CHCs.

#### 4.0 CONCLUSIONS

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

#### <u>Nitrates</u>

- Nitrate concentrations in the North Flare Pit area wells (MW-19, MW-23, MW24, MW26 and MW-27) have consistently been below NMWQCC standards.
- Nitrate concentrations in the Blanco Plant area are not increasing or decreasing. Concentrations have remained stable in the two hot spots near the D Plant and the former flare pit.
- Groundwater with elevated nitrate concentrations does not appear to be migrating, based on the 2004 sample data.

#### **Chlorinated Hydrocarbons**

- In 2004, only the MW-13 groundwater sample exceeded Federal or NMWQCC standards for CHCs in the D Plant area.
- All CHCs appear to be degrading naturally and are expected to fall below NMWQCC standards over time.

#### 5.0 **RECOMMENDATIONS**

In order to continue to monitor groundwater nitrate and CHC concentrations at the site, the following actions will continue to be conducted by EPNG:

- All groundwater monitoring wells in the Blanco Plant area, including MW-2, will be sampled annually and analyzed for nitrate+nitrite concentrations, as shown in Table 4.1, *Groundwater Sampling Schedule*.
- Five groundwater wells in the North Flare Pit area (MW-19, MW-23, MW24, MW26 and MW-27), which have consistently contained low nitrate concentrations below NMWQCC standards, will be removed from the sampling list.
- Groundwater samples from monitoring wells in the D Plant Area (MW-12, MW-13, MW-14 and MW-15) will continue to be analyzed for chlorinated hydrocarbon compounds, as listed in Table 4.1.
- The results of the nitrate and chlorinated hydrocarbon 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.

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#### 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, 2003a. Groundwater Nitrate Report for the Blanco Plant South Flare Pit and D Plant Areas. April 2003.
- MWH, 2003b. 2003 Groundwater Report for the Blanco Plant South Flare Pit and D Plant Areas. August 2003.

# TABLES

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#### TABLE 2.1 GROUNDWATER NITRATE ANALYTICAL DATA (1991 - 2004) BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

-

	NMOCD	Standard: 10 mg/L
	2/25/93	19.2
MW-14	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 -15
	5/17/04	16
	6/10/01	to state
	0/19/91	A COMPANY OF A COMPANY OF
MW-15	2/24/95	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
	6/19/91	0.07
MW-16	2/25/93	3.7
	6/8/93	<1.0
	6/3/03	NS
	12/1/03	abandoned
	2/25/93	15.1
MW-17	9/24/02	dry
(1111-17)	6/2/02	NS
	12/1/02	abandonad
	12/1/03	aoandoned
	2/25/93	8.19
MW-18	6/8/93	<1.0
	9/28/93	<1.0
	9/24/02	3.1
	6/3/03	NS
	12/1/03	abandoned
	6/19/91	10
MW-19	2/25/93	18.6
	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
	9/26/92	NA
MW-20	2/74/93	<10
	6/10/03	210
	9/70/03	<10
	1/27/94	<10 <10
	5/12/04	NA NA
	3/13/94	
	8/22/94	NA
	11/13/00	damaged
	6/3/03	abandoned
	9/26/92	0.62
MW-23	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
	(	0.20
	1 5/1//04	1 0.29

Monitoring Well	Sample Date	Nitrate (mg/l)
	NMOCD S	tandard: 10 mg/L
	9/26/92	1.42
MW-24	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
	2/25/93	23 A. C. M.
MW-26	6/10/93	8.2
	3/26/01	0.24
	5/30/02	0.26
	6/3/03	NS
	2/1//04	0.53
MW	2/26/93	<1.0
IV1 V¥ - Z7	0/10/93	<1.0
	9/30/93	<1.0
	5/14/94	<1.0 NA
	11/13/00	0.78
	3/76/01	0.61
	5/30/07	0.21
	6/3/03	<0.10
	5/17/04	0.56
	10/7/93	2.1
MW-28	2/2/94	2.8
	8/20/94	2.7
	12/20/94	0.33
	2/16/95	1.6
	8/10/00	25 6
	11/10/00	53
	3/23/01	34
	8/28/01	- + 63 ( × 9)
	5/28/02	83
	6/3/03	87
	5/17/04	82 Sec. 1
	10/7/93	8.3
MW-29	2/2/94	* 19.6
	8/20/94	28.8
	12/20/94	41
	2/16/95	28.1
	11/10/00	100
	1/76/01	
	8/78/01	10 10 10
	5/78/07	50
	6/3/03	20
	5/17/04	88
	10/7/93	28.1
MW-30	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 2
	8/28/01	
	5/28/02	- 66
	6/3/03	58
	5/17/04	52 ····

t (MDL). Value shown is the MDL. te+Nitrite (as N) standard of 10 mg/L.

Monitoring Well	Sample Date	Nitrate (mg/l)
	NMOCD S	tandard: 10 mg/L
	6/18/91	180
MW-2	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	drv
	6/18/91	0.08
MW-5	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
	6/19/91	110
MW-6	2/19/93	63.5
	6/7/93	76.4
	9/28/93	85.9
ł	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
	6/18/91	0.28
MW-7	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
	6/18/91	<0.06
MW-8	2/19/93	2,0
	6/1/93	<1.0
	9/2//93	<1.0
	11/10/00	<01
	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
	6/18/91	0.74
MW-10	2/19/93	1.2
	6/1/93	2.2
	1/27/04	4.1
	5/28/02	2.U
	9/24/07	dru
	6/3/03	
	12/1/03	abandoned
	6/19/91	7.8
MW-12	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
	6/19/91	6.3
MW-13	2/24/93	10.9
	0/8/93	8,1
	1/28/93	4,1
	8/9/00	5.4
	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

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# GROUNDWATER CHLORINATED HYDROCARBON ANALYTICAL DATA (2002 - 2004) **BLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO TABLE 3.1**

					Chlorinated I	<u> Iydrocarbons by EP/</u>	A M 8260 (ug/L)		
Monitoring Well	Sample Date	Static Water Level (ft btoc)	1,1-DCA	1,2-DCB	1,1-DCE	trans 1,2-DCE	cis 1,2-DCE	TCE	PCE
IMN	WQCC Water	Quality Standard:	25	NS-	5.0	NS	NS	100	20
		US EPA MCL.	NS	NS NS	7.0	100	70	5.0	5.0
May 2002 Sampl	ling Event								
MW-12	5/28/02	20.95	21	5.2	<1.0	1.7	20	8.0	3.0
MW-13	5/28/02	16.76	61	79	1.3	8.2	45	39	1.6
MW-14	5/29/02	21.57	8.7	<1.0	<1.0	<1.0	2.9	1.9	<1.0
MW-15	5/28/02	20.33	5.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
June 2003 Samp	ling Event								
MW-12	6/3/03	16.99	8.2	3.4	<2.0	<2.0	8.2	4.5	3.2
MW-13	6/3/03	14.44	53.8	50.5	1.4	8.2	33	35.1	1.4
MW-14	6/3/03	19.85	9.5	<2.0	<2.0	<2.0	3.3	2.4	<2.0
MW-15	6/3/03	18.85	6.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
May 2004 Samp	ling Event								
MW-12	5/17/04	16.39	4.6	3.4	< 2.0	< 2.0	5.1	4.0	2.3
MW-13	5/17/04	14.12	41.2	29.2	< 2.0	4.0	21.2	22.5	< 2.0
MW-14	5/17/04	19.78	5.7	< 2.0	< 2.0	< 2.0	2.1	1.6	< 2.0
MW-15	5/17/04	18.475	6.3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0

Chlorinated Hydrocarbons by EPA Method 8260

PCE: Tetrachloroethene TCE: Trichloroethene

DCE: Dichloroethene

DCB: Dichlorobenzene

DCA: Dichloroethane

< Indicates analyte not detected at the method detection limit (MDL). Value shown is the MDL.

NMWQCC: New Mexico Water Quality Control Commission US EPA MCL: United States Environmental Protection Agency Maximum Contaminant Level

NS: No Standard

# TABLE 4.1GROUNDWATER SAMPLING SCHEDULEBLANCO PLANT - SAN JUAN COUNTY, NEW MEXICO

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

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

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

PCE: Tetrachloroethene TCE: Trichloroethene

DCE: Dichloroethene

**DCB:** Dichlorobenzene

**DCA:** Dichloroethane

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#### **FIGURES**

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AutoCAD FILE: GW-Location Map 7-03 PROJECT NUMBER: 5030073.011804





# APPENDIX A

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### FIELD SAMPLING FORMS

# WELL DEVELOPMENT AND SAMPLING LOG

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Project No.:	<u>30001.(</u>	)		Project	t Name:	Blan	co SFP	Client:_	MWH/EL	Paso	)
Location:_B	lanco S	<u>FP</u>	We	ll No: <u>M\</u>	N-8				Developm	nent	Sampling
Project Man	ager	MJN			Date	5/1	7/04	Start T	ime <u>1341</u>		Weather <u>sunny 80s</u>
Depth to Wa	ater	<u>34.73</u>	Dep	oth to Produ	ict <u>na</u>	f	Product T	hickness_	<u>na</u> N	leas	uring Point <u>TOC</u>
Water Colur	nn Heig	ht <u>1.</u>	<u>87</u> We	ll Dia			· .				
Sampling M	ethod:	Subme	rsible Pur	np 🗖	Centrifu	gal I	Pump 🗋	Perista	Itic Pump		Other
		Bottom	Valve Ba	iler <b>x</b>	Double	Che	ck Valve	Bailer 🗌	Stainless	Stee	el Kemmerer
Criteria: 3	to 5 Ca	sing Vo	lumes of	Water Rem	oval X s	tabil	lization of	Indicator	Parameters	5 X	Other or bail dry
		. <u></u>			Water Ve	olum	ne in Well				]
Gal/ft >	<u>c ft of w</u>	ater	ļ	Gallons				Ounces		(	Gal/oz to be removed
1.8	37 x .65			1.22 x 3	. ·			155.6 x 3			466.75
<u> </u>			_I					<u></u>	I		
Time	pН		SC	Temp	ORP		D.O.	Turbidit	y Vol Ev	ac.	Comments/
(military)	· (su)	(um	hos/cm)	(°F)	(millivo	ts)	(mg/L)	(NTU)	(ounc	es)	Flow rate
1346	6.75		4820	70.9					18		Clear
<u>1350</u>	6.92		4690	65.4					48		Clear
	6.71		4600	65.0					62		
	6.79		4610	64.5					106	5	Clear
<u>1407</u>	6.83		4750	64.0					112	2	Well had bailed dry
		1									
			<u> </u>								
<u></u>											
	L			1	l		I		l		1
Final:								Ferrous			
Time pl		SC	Temp	Eh-ORP	D.O.	Tu	rbidity	Iron	Vol Evac	<u> </u>	Comments/Flow Rate
. <u>1407</u>   t	5.83	4750	64.0						112	N	vell has bailed dry, will
1월 19일(1984) 1일 (1992) 								ene 1973 e (2000) (			
COMMENTS	S: Well	bailed d	lry, return	ed to samp	le 5/18/04	4			·····		
		NI			<u></u>						
INSTRUME	MATIC	IN:		A nitor					nperature	viete	er <b>x</b>
								Oth	ier		
		Conduc	Control Met						0040 540		
water Dispo	salł		Sample I	D_Blanco S	SER WM-	<u>R</u> -	Sam	Die Time	0818 5/18	/04	
BTEX VOC	_s Alk	alinity 7	TDS Cati	ons Anion	is Nitrat	e ľ	Nitrite Ar	nmonia TI	KN NMW(	SCC	Metals Total Phosphorus
											·
MS/MSD			BD_		· · · · ·	BD I	Name/Tin	ne			_ TB
						··		<u> </u>			

Project No.	20001			Projec	t Namo: Pla		nt	Client: MM	/H/EL Paso		
Project No.:	<u>30001.</u> Janco E	) Plant (		_ Project Name: <u>Blanco D Plant</u> Client: <u>MWH/EL Paso</u> Well No: <u>MW-12</u> Development <u>Sampling</u> Date 5/17/04 Start Time 1657 Weather sunny 80s							
Project Mar	anco L	M IN	<u>Mea</u> we								
Depth to Wa	ater	16.59	Der	 oth to Produ	uct na	Product `	Thickness	na Me	asuring Point TOC		
Water Colu	nn Heid	10.00	 59 We	ll Dia.	2"	Troduct		<u></u>			
Sampling M	ethod:	Submei Bottom	rsible Pur Valve Ba	np 🗋 iler 🗴	Centrifuga Double Ch	I Pump [ eck Valve	Peristalt	c Pump □ Stainless-S	] Other [] Iteel Kemmerer []		
Criteria: 3	to 5 Ca	sing Vo	lumes of	Water Rem	oval X stal	bilization o	of Indicator P	arameters	X Other <u>or bail dry</u>		
Gal/ft	r ft of w	ater	<u> </u>	Gallons	water volu	me in we	Ounces		Gal/oz to be removed		
9.	59 x .16			1.53 x 3		<u> </u>	196 x 3		4.61		
	<u></u>		<u> </u>	· · · · · · · · · · · · · · · · · · ·		=					
Time	DH		SC	Temp	OBP		Turbidity	Vol Eva	c Comments/		
(military)	(su)	(um	hos/cm)	(°F)	(millivolts)	(mg/L)	(NTU)	(gallons	5) Flow rate		
1701	7.12		5640	66.9				0.25	Clear		
	7.16		5560	65.4				0.5			
	7.07	_		65.0				0.75	Clear		
	1.07	`		00.3				0.75			
	6.8	(	5380	65.3				4			
	6.81	(	5440	65.2			1	4.25			
1712	6.83		5330	65.2	<u> </u>			4.75	Clear		
<u> </u>				 	ļ						
				L							
					The second state of the second states		1	-	• •		
Final:		<u>م</u>	Tomp				Ferrous	Val Evas	<b>O</b> anaanaa <b>1</b> 5 Jan 15 ata		
<b>1712</b>	5.83	6330	65.2			uibiuity	II UII	4.75			
		··									
COMMENT	S:						<u>-</u> ,	····	·		
INSTRUME	VIAIIC	)N: [		X nitor			_ Tem	perature M	eter X		
		Conduc	DU NU Motivity Mot	fillor for <b>Y</b>	<u></u>		Oune	er			
Water Disno	sal	, Conduc Kutz	Sample I	D Blanco I	) plant MW-	12 Sam	- Inle Time 1	715			
RTEX VO	Cs All	alinity 5	TDS Cati	ons Anion	s Nitrate	<u>12</u> Oun Nitrite A	mmonia TK		C Metals Total Phosphor		
CHCs	<b>U</b> J 111	canney .			13 <u>1410 atc</u>	<u>1 (11110</u> 1)			CC metals Total Thosphor		

Project No.:	30001.0		Projec	rt Name: <u>Bla</u>	nco D Pla	ntC	lient: <u>MW</u>	H/EL Paso
Location:_B	lanco D I	Plant Area V	/ell No:M	W-13		. D	evelopme	nt <u>Sampling</u>
Project Man	ager			Date <u>5/</u>	<u>17/04</u>	Start Time	e <u>1633</u>	Weathersunny 8
Depth to Wa	ater <u>1</u>	<u>4.12</u> D	epth to Prod	uct <u>na</u>	Product I	nicknessn	a Mea	asuring Point <u>10C</u>
water Colui	пппеіўп	( <u>_0.95</u> _ V						
Sampling M	ethod: S	ubmersible P	ump 🔲	Centrifugal	Pump [	] Peristaltic	Pump	Other
		-thoma Vialue I	Deilen w	Dauble Ch			tainlass Of	
	В	ottom valve t	saller x	Double Ch	eck valve	Baller L S	tainiess-Si	
Criteria: 3	to 5 Casi	ng Volumes o	of Water Ren	noval X stab	ilization of	f Indicator Pa	rameters	X Other or bail dry
r		<u> </u>	······································	Water Volu	no in Well			
Gal/ft >	ft of wat	er	Gallons	water volu		Ounces		Gal/oz to be removed
8.9	3 x .16		1.43 x 3	3		183 x 3		4.29
L		<u> </u>	·	L				
Time	pН	SC	Temp	ORP	D.O. '	Turbidity	Vol Evac	c. Comments/
(military)	(su)	(umhos/cm	) (°F)	(millivolts)	(mg/L)	(NTU)	(gallons	) Flow rate
1637	6.57	4540	68.3				.25	Clear
	6.36	6790	67.0	1			.5	· ·
· · · · · · · · ·	6.33	7260	66.8	+			.75	
	6.40	9000	66.9	<u> </u>			4.0	
	6.39	8930	66.9				4.25	
1649	6.39	8830	66.9				4.5	
			-		1		f	
								····
			·	ļ			ļ	
				İ				
					· · · · · · · · · · · · · · · · · · ·			
Final:		7 Tomo				Ferrous	al <b>F</b> ues	
1649 6	.39 8	830 66.9					4.5	Comments/Flow Hate
COMMENTO		anual dua ta	vn of hol w/					
	. unpres			<u>yw</u>		·····	<u> </u>	
NSTRUMEN	ITATION	: pH Mete	er X			Tempe	erature Me	ter x
		DO M	onitor			Other		
	C	onductivity M	eter X					
Water Dispos	sal <u>Ku</u>	<u>tz</u> Sample	ID_Blanco [	D plant MW-1	<u>3</u> Samp	ole Time <u>16</u>	50	
BTEX VOC	ls Alkali	nity TDS Ca	tions Anion	s <u>Nitrate</u>	Nitrite Ar	nmonia TKN	NMWQC	C Metals Total Phosph
CHCs								

WELL DEVELOPMENT AND SAMPLING LOG

Project No ::	30001 0			Project	t Name:	Blan	co D Pla	nt	Cli	ent: MV	/H/FI	Paso
ocation: B	lanco D I	Plant A	rea We	II No: M\	N-14	Dian	00 0 1 10		De	velopme	ent S	
Project Man	ader	MJN	<u></u>		Date	5/1	7/04	- Start T	ime	1742	vin <u>c</u>	Veather sunnv 8
Depth to Wa	ater1	9.78_	Dep	oth to Produ	uct <u>na</u>		Product 7	hickness_	na	Me	_ easurin	g Point TOC
Vater Colur	nn Heigh	nt <u>7.6</u>	<u>645</u>	Well D	ia	2"				_		
												· · · · · · · · · · · · · · · · · · ·
Sampling M	ethod: S B to 5 Casi	iubmer iottom ing Vol	sible Pur Valve Ba Jumes of	np □ iler x Water Rem	Centrifu Double oval <b>X</b> s	gal I Che tabil	Pump E ck Valve lization o	] Perista Bailer 🗋 f Indicator	Itic F Sta Para	Pump [ ainless-{ ameters	] C Steel K X C	Other 🔲 emmerer 🖾 Other or bail dry
	<u> </u>		<b></b>		Mater V	- 1						
Gal/ft s	(ft of wai	ter	<u> </u>	Gallons	water V	Jun	ie in wel	Ounces			Gal	loz to be removed
7.6	4 x .16		<b> </b>	1.22 x 3				156 x 3			Gal	4.67
Time	pН	1	SC	Temp	ORP	•	D.O.	Turbidit	y	Vol Eva	IC.	Comments/
(military)	(su)	(uml	nos/cm)	(°F)	(millivo	lts)	(mg/L)	(NTU)		(gallon	s)	Flow rate
747	6.26	7	/520	70.4						0.25	C	lear
	6.28	6	6430	67.4	<u> </u>					0.5	C	lear
	6.19	ε	880	66.9						0.75	cl	ear
759	6.19	7	710	66.9				-		1.5	W	ell has bailed dr
											_	
			· · · · · · · · · · · · · · · · · · ·									
		1						1				
				 				+				
		<u> </u>				<u> </u>						
Inal					<u>永远</u> 。"王章			Ferrous	Maria	a da ser da sera Trada da sera	(Jan 4)	
ime pl	<u>                                     </u>	<u>c</u>	Temp	Eh-ORP	D.O.	Tu	rbidity	Iron	Vo	I Evac.	Com	ments/Flow Rate
759 6	6.19	7710	66.9							1.5	Well	has bailed dry
											1	na mangan kalendar ng Kabupatén n Kabupatén ng Kabupatén ng Kabupaté Kabupatén ng Kabupatén ng Kabupaté
OMMENTS	S:											
			·									<u> </u>
NSTRUMEN	INTATION	1: p	H Meter	X				Ter	npe	rature M	eter x	
			DO Mo	nitor				Oth	ner	<u></u>		
	. C	Conduc	tivity Met	er X			<u></u>	-				
Vater Dispo	sal <u>K</u>	utz_	Sample I	D <u>Blanco</u>	) plant M	<u>N-14</u>	4 Sam	ple Time_	180	0		
STEX VO	Cs Alkal	linity I	DS Cati	ons Anion	s <u>Nitrat</u>	<u>e 1</u>	<u>Nitrite</u> A	mmonia Tl	KN I	NMWQ	CC Me	tals Total Phosph
<u>HCs</u>												
			-				—					

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# WELL DEVELOPMENT AND SAMPLING LOG

Sampling M	ethod: S	ubmersible Pu		Centrifugal I	oump	Peristalti	c Pump	Other
Criteria: 3	Bo to 5 Casi	ottom Valve Ba	ailer <b>x</b> Water Rem	Double Che	ck Valve ization of	Bailer 🗆 🤇	Stainless-St	eel Kemmerer
	·····			Water Volum	e in Well			
Gal/ft 8.0	<u>k ft of wat</u> )1 x .16	er	Gallons 1.28 x 3			Ounces 164 x 3		Gal/oz to be removed 3.84
Time (military)	pH (su)	SC (umhos/cm)	Temp (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac (gallons)	. Comments/ Flow rate
1609	4.43	11020	72.6				.25	Yellow
	4.30	10870	69.0				.5	
	4.03	10740	68.8				.75	
	3.70	10450	68.6				3.25	
	3.04	10530	68.1				3.5	
· ·	3.02	10570	67.8				3.75	Yellow
<u>1622</u>	3.62	10530	68.1				4.0	
Final:						Ferrous		
Time pl 1622	-  S 3.62 1	C Temp 0530 68.1	Eh-ORP	D.O. Tu	rbidity	Iron	Vol Evac. 4.0	Comments/Flow Rate
COMMENT	6:	· · · · · · · · · · · · · · · · · · ·						
INSTRUME		l: pH Meter DO Mo	r X onitor			Temp Othe	perature Me r	ter x

- .i. 8 9

5. No.

Project No.::	30001.0			Project	Name: E	Blanco NFP		Client:_MV	/H/EL Paso
Location:_Bl	anco NF	P	Wel	No:MV	V-19		_	Developme	ent Sampling
Project Man	ager	MJN			Date	<u>5-17-04</u>	Start Tir	ne <u>1133</u>	Weather sunny 80
Depth to Wa	ter <u>6</u>	5.31	Dep	oth to Produ	ct <u>na</u>	Product	Thickness	<u>na</u> Me	asuring Point <u>TOC</u>
Water Colun	nn Heigh	t <u>2.02</u>	We	ll Dia	_2"				· ·
Sampling Me	ethod: Si Bi	ubmersit ottom Va	ble Pun alve Bai	np 🗌 iler 🗙	Centrifuç Double (	gal Pump [ Check Valve	] Peristalt Bailer □	ic Pump	] Other 📋
Criteria: 31	to 5 Casi	ng Volun	nes of	Water Rem	oval X st	abilization o	of Indicator P	arameters	X Other or bail dry
0-1/4				Callana	Water Vo	lume in We			Caller to be removed
2.0	2 x .16			$0.32 \times 3$			40.96 x 3		122.88 oz
				· · · · · · · · · · · · · · · · · · ·	<u></u>			l	
Time	pН	S	0	Temp	ORP	D.O.	Turbidity	Vol Eva	c. Comments/
(military)	(su) 6.12	(umno 156	s/cm) 40	(°F) 72.4	(millivoli	(mg/L)		(ounces	Grev/ HC Odor
	6.20	147	60	70.5				34	Grey/ HC Odor
· · · · · · · · · · · · · · · · · · ·	6.22	144	80	69.7		<u> </u>	+	40	Well is bailing down
·····	6.32	140	50	69.8				46	
<u>1148</u>	6.38	138	30	69.1		· ·		50	Well has bailed dry
	······		·						
		<u> </u>							
· · · · · · · · · · · · · · · · · · ·		L			L				<b>_</b>
Final:		<b>~</b>   <del>-</del>					Ferrous		
1 ime pr 1148 6	1 SC 38 1:	3830	emp 69 1	En-ORP	<u> </u>		Iron	Vol Evac.	Comments/Flow Rate
COMMENTS	: Well ba	ailed dry,	return	ed to samp	le later				
			Motor	v	· · · · ·		Tom		
INSTRUMEN	TATION	ι. μπ Γ		A		. <u></u>	Tem Othe	perature M	eter x
	C	unductiv	itv Met	er X		<u> </u>			
	sal Ku	ıtz Sa	imple II	D Blanco N	IFP MW-1	9 Sam	– nole Time (	0728 5/18/0	)4
Water Dispos									
Water Dispose BTEX VOC	Cs Alkali	inity TD	S Cati	ons Anion	s Nitrate	e Nitrite A	mmonia TK	N NMWQ	CC Metals Total Phosphor

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Project No.:	<u>30001.0</u>	·		Project	Name: <u>Blan</u>	co NFP	C	lient: <u>MWH</u>	HEL Paso
Location:_B	Ianco NF		Wei	NO: <u>MV</u>	<u>V-23</u>	7/04	U Start Tim	evelopmen	Moother oursey 800
Project Man	ager			th to Brodu	Dale <u>5/1</u>	<u>7/04</u> Product T	Stan Tim bioknoos n	e <u>1105</u> n Mon	suring Point TOC
Water Colur	nn Hoigh	<u>7.14</u>	05 Wel	I Dia	/"				
	ini neigi	n <u> </u>	<u> </u>	1 Dia					·
Sampling M	ethod: S	ubmer	sible Pun	ם קר	Centrifugal	Pump 🗋	] Peristaltic	Pump 🗖	Other
	В	ottom '	Valve Bai	iler <b>x</b>	Double Che	ck Valve	Bailer 🛛 🛛 S	tainless-St	eel Kemmerer
Criteria: 3	to 5 Cas	ing Vol	umes of V	Water Rem	oval X stabi	lization of	Indicator Pa	rameters )	Cother or bail dry
					Water Volum	ne in Well			
Gal/ft 2	x ft of wa	ter	······				Ounces		Gal/oz to be removed
9.7				0.31 X 3			607.456		10.924 yai
Time	рH		SC	Temp	ORP	D.O.	Turbidity	Vol Evac	. Comments/
(military)	(su)	(uml	nos/cm)	(°F)	(millivolts)	(mg/L)	(NTU)	(gallons)	Flow rate
106	6.12	1	5740	69.2				1	Grey sheen
	6.11	1	7040	65.9				2	Grey sheen/ odorou
	6.12	1	7780	66.5				3	Grey sheen/ odorou
	6.14	1	8070	65.9				4	
	6.19	1	8860	66.2				9	
128	6.20	1	8710	66.7				9.25	Well has bailed dry
•				· ·	•				
							· .		
<u></u>							-		· · ·
🛋 seta te Is	i Name a di Ca		i telepezzational	land and a start of the				and a second second second second	and the second
F <b>inal:</b>	н с	°C	Temn	Eh-OBP	ד ה	rbidity		/ol Evec	Comments/Flow Bate
1128	6.20 1	8710	66.7		0.0.			9.25	Well has bailed dry.
									sample later
COMMENT	S:								······································
NSTRUME	ΝΤΑΤΙΟΙ	 V· r	H Meter	x			Temr	erature Me	ter x
		•••••••••••••••••••••••••••••••••••••••	DO Mo	nitor			_ Other		
	(	Conduc	tivity Met	er X			_		
Water Dispo	osalK	<u>utz_</u>	Sample I	D <u>Blanco N</u>	NFP MW-23	Sam	ple Time <u>0</u>	716 5/18/04	1
BTEX VO	Cs Alka	linity 🗇	rDS Cati	ons Anior	s Nitrate	Nitrite A	mmonia TKN	NMWQC	C Metals Total Phosphor
MS/MSD			BD_		BD	Name/Tii	me		TB <u>170504tb01_</u>

# WELL DEVELOPMENT AND SAMPLING LOG

Depth to W Water Colu	ater <u>(</u> mn Heigł	<u>65.54</u> [ nt <u>2.33</u> V	Depth to Produ	uct <u>na</u> 1 _4"	Product T	hickness	<u>na</u> Mea	asuring Point <u>TOC</u>
Sampling M Criteria: 3	to 5 Cas	Submersible F Bottom Valve ing Volumes	Pump ☐ Bailer x of Water Rem	Centrifugal Double Che Ioval X stabi	Pump ⊂k Valve lization of	] Peristal Bailer 🗆 Indicator F	tic Pump □ Stainless-St Parameters	Other 🔲 eel Kemmerer 🔲 K Other <u>or bail dry</u>
[				Water Volum	ne in Well			<u> </u>
Gal/ft	x ft of wa	ter	Gallons			Ounces		Gal/oz to be removed
2.	33 x .65		1.515 x 3	3	• 	193.92 x 3		581.76 oz
Time (military)	pH (su)	SC (umhos/cm	Temp ı) (°F)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac	c. Comments/ Flow rate
1156	6.80	8960	71.6				40	Grey opaque/ HC Od
	6.64	8740	67.4				92	
	6.71	8810	67.3				142	
	6.79	8610	66.5				158	Well is bailing down
	6.91	8520	65.9			·	166	Well is bailing down
<u>1210</u>	7.03	8450	66.2				170	Well has bailed dry
· · · · · · · · · · · · · · · · · · ·								
Final:						Ferrous		
Time p <u>1210</u>	H <u>S</u> 7.03	C Temp 8450 66.2	) Eh-ORP	D.O. Tu	rbidity	Iron	<u>Vol Evac.</u> 170	Comments/Flow Rate Well has bailed dry, return later to sample
COMMENT	S: Well b	ailed dry. Co	llected sampl	e 5/18/04	·····			
INSTRUME	NTATION	N: pH Met DO N	er X Nonitor		· · · · · · · · · · · · · · · · · · ·	Tem Othe	perature Me er	ter x
Water Dispo BTEX VO	osal <u>K</u> Cs Alka	<u>utz</u> Sample linity TDS C	e ID <u>Blanco N</u> ations Anion	NFP MW-26 Nitrate N	Samı Nitrite Ar	ple Time nmonia TK	0743 5/18/04 N NMWOC	4 C Metals Total Phosphoru

1. S. C.

Project No.:	30001.0			Project	Name: <u> </u>	lanco NFP		Client: <u>MW</u>	H/EL Paso
Location:_B	anco NF	Р" N.Л. INI	wei		Data	F/17/04	 Start Ti	imo 1214	Weather suppy 80s
Depth to W/	ayer	<u> </u>	Don	th to Produ	ct na	Product <sup>*</sup>	Thickness	na Me	vvealuersuring ous
Water Colu	nn Heigh	t 3.54	Well	In to Frouu Dia	2"		rnokness_		
Water Colu			1101	<u> </u>					
Sampling M	ethod: S	ubmersil	ble Pum		Centrifuç	jal Pump [	] Perista		Other
Criteria: 3	to 5 Casi	ng Volur	nes of V	Vater Remo	oval X st	abilization o	of Indicator I	Parameters	X Other <u>or bail dry</u>
					Water Vo	lume in We	11		
Gal/ft	k ft of wat	er	······································	Gallons			Ounces		Gal/oz to be removed
3.5	54 x .16			0.5664 x 3	3		72.50 x 3		217.50
					0.00			1	
l'ime (militarv)	pH (su)	S( S) (umbo	U s/cm)	lemp (°F)	ORP (millivolt	s) (ma/L)	(NTU)	y   Vol Evac	Comments/
1224	6.23	70	00	70.6		-, (		22	Clear
	6.35	70	50	68.8				46	· [
<u></u>	6.21	71:	30	68.2				78	Grey/ HC Odor
	6.27	704	40	68.0				95	Well is bailing down
	6.26	690	00	6.74	i	·		111	
	6.38	687	70	67.1	· · · · · · · · · · · · · · · · · · ·			121	
1235	6.52	682	20	67.0				127	Well has bailed dry
· · · · · · · · · · · · · · · · · · ·									
Final:							Ferrous		
1235   1	1   S		67 0	En-ORP	<u>D.O.</u>	TURDICITY	Iron	127	Comments/Flow Hate
<u></u>									later to sample
COMMENT	S: Well ba	ailed dry	. returne	ed to sampl	e 5/18/04			·····	
INSTRUME	NTATION	l: pH	Meter DO Mor	X hitor	<u> </u>		_ Ten _ Oth	nperature Me ner	eter x
	C No los		vity Mete	er X		7 0	- nlo T:	0750 5400	
BTEX VO	isai <u>Kl</u> Cs Alkal	<u>nz</u> Sa inity TD	ampie IL DS Catic	ons Anions	s Nitrate	e Nitrite A	ipie i ime .mmonia Tk	<u>0/52 5/18/0</u>	<u>4</u> C Metals Total Phosphore
						· _ · · · · · · · · · · · · · · · · · ·			

Image: Instruction of the care of t	Project No ···	0001 0	<u></u>		Project	Name: Blar		Client		s0
Project Manager MN  Date  _5/17/04  Start Time 1433  Weathersummy 80    Depth to Water O.0_  Depth to Product Product Thickness_ma Measuring Point	-roject No <u>-</u> _ocation: Bl	anco SFI		 Well	No: MV	Name. <u>Diar</u> V-28			Developme	nt Sampling
Depth to Water  30.40  Depth to Product  na  Product Thickness_na  Measuring Point  TOC    Water Column Height  3.323  Well Dia.  _4*	Project Mana	ager	MJN			Date5/1	7/04_	Start Tir	me14438	Weather sunny 80s
Water Column Height  3.323  Well Dia. 4*    Sampling Method:  Submersible Pump  Centrifugal Pump  Peristattic Pump  Other    Bottom Valve Bailer x  Double Check Valve Bailer  Stainless-Steel Kemmerer	Depth to Wa	ter <u>30</u>	).40	_ Dep	th to Produ	ct <u>na</u>	Product T	hickness	na Mea	asuring Point
Sampling Method:  Submersible Pump  Centrifugal Pump  Peristaltic Pump  Other    Bottom Valve Bailer  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/tt x ft of water  Gallons  Ounces  Gal/oz to be removed    3.223 x.65  2.16 x 3  276.47 x 3  6.68    Time  pH  SC  Temp  ORP  D.O.  Turbidity  Vol Evac.  Comments/ (gallons)  Flow rate    6.03  4320  70.2  1  0.5  Clear  6.68    6.04  4330  66.6  1.75  Brown, silty  6.25  1    6.04  4330  66.5  5.75  1  1  1  1    6.06  4310  66.5  5.75  1  5.75  1 <td< th=""><th>Water Colum</th><th>nn Height</th><th>3.3</th><th>23</th><th>Well Di</th><th>a. <u>4"</u></th><th></th><th></th><th></th><th></th></td<>	Water Colum	nn Height	3.3	23	Well Di	a. <u>4"</u>				
Bottom Valve Bailer x    Double Check Valve Bailer I    Stainless-Steel Kemmerer    Image: Content of the stainless ructure theter stainless of the stainless of the stainless of t	Sampling Me	ethod: Su	ubmer	sible Pum	р 🗋	Centrifugal	Pump [	] Peristal	tic Pump	Other
Criteria:    3 to 5 Casing volumes of water Hemoval X    stabilization of indicator Parameters X    Other_or pail dry_      Gal/fit x ft of water    Gallons    Ounces    Gal/or to be removed    6.68      Time    PH    SC    Temp    ORP    D.O.    Turbidity    Vol Evac.    Comments/ Flow rate      1441    6.14    4430    70.7    0.5    Clear    6.68      6.03    4320    70.2    1    0.5    Clear    Flow rate      6.04    4330    66.6    1.75    Brown, silty    6.25    1      6.06    4310    66.5    5.75    6.25    1    1      6.07    4310    66.5    6.25    1    1    1      1455    6.05    4330    66.9    7.0    1    1    1      1455    6.05    4330    66.9    7.0    1    1    1      1455    6.05    4330    66.9    7.0    1    1    1      1455		Bo	ottom '	Valve Bai	ler x	Double Che	eck Valve	Bailer 🗋	Stainless-St	eel Kemmerer
Gal/tt x ft of water    Gallons    Ounces    Gal/oz to be removed      3.323 x.65    2.16 x 3    276.47 x 3    6.68      Time    pH    SC    Temp    ORP    (mIllov)ts)    (mUV)    (gallons)    Flow rate      1441    6.14    4430    70.7    0.5    Clear    6.68      1441    6.14    4430    70.7    0.5    Clear    6.07      6.03    4320    70.2    1    0.5    Clear    6.08      6.04    4330    66.6    1.75    Brown, silty    6.02    4320    67.0    3.0      6.05    4310    66.5    5.75    6.25    5.75    6.07    4310    66.9    7.0      1455    6.05    4330    66.9    7.0    7.0    7.0    7.0      1455    6.05    4330    66.9    7.0    7.0    7.0    7.0    7.0    7.0    7.0    7.0    7.0    7.0    7.0    7.0    7.0	Criteria: 31				vater Rem	Water Volur			arameters .	Ciner <u>or bail dry</u>
3.323 x .65    2.16 x 3    276.47 x 3    6.68      Time (military)    (su) (umhos/cm)    Temp (°F) (millivolts)    D.O. (NTU)    Vol Evac. (gallons)    Comments/ Flow rate      1441    6.14    4430    70.7    0.5    Clear      6.03    4320    70.2    1    0.5    Clear      6.04    4330    66.6    1.75    Brown, silty      6.02    4320    67.0    3.0    0.5    Clear      6.06    4310    66.5    5.75    0.0    1    0.5      6.07    4310    66.5    5.75    0.0	Gal/ft x	ft of wate	er	1	Gallons	vvaler volur		Ounces		Gal/oz to be removed
Time (military)    PH (su)    SC (umhos/cm)    Temp ("F)    ORP (militvolts)    D.O. (mg/L)    Turbidity (NTU)    Vol Evac. (gallons)    Comments/ Flow rate      1441    6.14    4430    70.7    0.5    Clear      6.03    4320    70.2    1    0.5    Clear      6.04    4330    66.6    1.75    Brown, silty      6.02    4320    67.0    3.0    5.75      6.06    4310    66.5    5.75    5.75      6.07    4310    66.5    6.25    5.75      1455    6.05    4330    66.9    7.0    5.70      1455    6.05    4330    66.9    7.0    5.70    5.70      1455    6.05    4330    66.9    7.0    5.70    5.70    5.70      1455    6.05    4330    66.9    D.0.    Turbidity    Yot Evac.    Comments/Flow Rate      Time    pH    SC    Temp    Eh-ORP    D.0.    Turbidity    Yot	3.32	23 x .65			2.16 x 3			276.47 x 3		6.68
(military)    (su)    (umhos/cm)    (*F)    (militor)(s)    (mg/L)    (NTU)    (gallons)    Flow rate      1441    6.14    4430    70.7    0.5    Clear    0.5    Clear      6.03    4320    70.2    1    1    1    1      6.04    4330    66.6    1.75    Brown, silty    3.0    5.75      6.06    4310    66.5    5.75    5.75    5.75    5.75      1455    6.05    4330    66.9    7.0    1    1    1      Final:	Time	pН		SC	Temp	ORP	D.O.	Turbidity	Vol Evad	c. Comments/
1441  6.14  4430  70.7  0.5  Clear    6.03  4320  70.2  1  1    6.04  4330  66.6  1.75  Brown, silty    6.02  4320  67.0  3.0  3.0    6.06  4310  66.5  5.75  5.75    6.07  4310  66.5  6.25  5.75    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0 gal    COMMENTS:  Temp Eh-ORP  D.0.  Turbidity  Ferrous  Comments/Flow Rate    1455  6.05  4330  66.9  0.0  Turbidity  Forn  Vol Evac.  Comments/Flow Rate    1455  6.05  4330  66.9  D.0  Turbidity  Forn  Vol Evac.  Comme	(military)	(su)	(umł	nos/cm)	(°F)	(millivolts)	(mg/L)	(NTU)	(gallons	) Flow rate
6.03  4320  70.2  1    6.04  4330  66.6  1.75  Brown, silty    6.02  4320  67.0  3.0  3.0    6.06  4310  66.5  5.75  5.75    6.07  4310  66.5  6.25  5.75    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  7.0    1455  6.05  4330  66.9  1.0  1.0    1455  6.05  4330  66.9  2.0  1.0  1.0    1455  6.05  4330  66.9  1.0  1.0  1.0    1455  6.05  4330  66.9  1.0  1.0  1.0    1455  1455  1450  10.0  1.0  1.0  1.0 <td>1441</td> <td>6.14</td> <td>4</td> <td>430</td> <td>70.7</td> <td></td> <td></td> <td></td> <td>0.5</td> <td>Clear</td>	1441	6.14	4	430	70.7				0.5	Clear
6.04    4330    66.6    1.75    Brown, silty      6.02    4320    67.0    3.0    3.0    3.0      6.06    4310    66.5    5.75    5.75      6.07    4310    66.5    6.25    5.75      1455    6.05    4330    66.9    7.0      1455    6.05    4330    66.9    7.0      1455    6.05    4330    66.9    7.0		6.03	4	320	70.2				1	
6.02    4320    67.0    3.0      6.06    4310    66.5    5.75      6.07    4310    66.5    6.25      1455    6.05    4330    66.9    7.0      1455    6.05    4330    66.9    7.0      1455    6.05    4330    66.9    7.0      1455    6.05    4330    66.9    7.0      1455    6.05    4330    66.9    10.0    Turbidity    Ferrous fron    Vol Evac. Vol Evac.    Comments/Flow Rate      1455    6.05    4330    66.9    D.O.    Turbidity    Fornus fron    Vol Evac. Vol Evac.    Comments/Flow Rate      1455    6.05    4330    66.9    D.O.    Turbidity    Fornus fron    Vol Evac. Vol Evac.    Comments/Flow Rate      COMMENTS:    INSTRUMENTATION:    pH Meter    X	· · · · · · · · · · · · · · · · · · ·	6.04	4	330	66.6				1.75	Brown, silty
6.06    4310    66.5    5.75      6.07    4310    66.5    6.25      1455    6.05    4330    66.9    7.0      Final:		6.02	4	320	67.0				3.0	
6.07    4310    66.5    6.25      1455    6.05    4330    66.9    7.0      Idstation    Idstation    Idstation    Idstation    Idstation      Final:    Image:		6.06	4	310	66.5				5.75	
1455  6.05  4330  66.9  7.0    Final:  Time  pH  SC  Temp  Eh-ORP  D.O.  Turbidity  Ferrous  Vol Evac.  Comments/Flow Rate    1455  6.05  4330  66.9  D.O.  Turbidity  Iron  Vol Evac.  Comments/Flow Rate    1455  6.05  4330  66.9  D.O.  Turbidity  Ferrous  Iron  Vol Evac.  Comments/Flow Rate    COMMENTS:  O  D.O.  Turbidity  Iron  Vol Evac.  Comments/Flow Rate    INSTRUMENTATION:  pH Meter  X   Temperature Meter  x    DO Monitor   Other   Other     Water Disposal  Kutz_  Sample ID_Blanco SFP MW-28  Sample Time_1518     BTEX  VOCs  Alkalinity  TDS  Cations  Nitrate  Nitrite  Ammonia  TKN NMWQCC Metals  Total Phospho		6.07	4	310	66.5				6.25	
Final:  Temp  Eh-ORP  D.O.  Turbidity  Ferrous  Vol Evac.  Comments/Flow Rate    1455  6.05  4330  66.9  D.O.  Turbidity  Iron  Vol Evac.  Comments/Flow Rate    COMMENTS:	1455	6.05	4	1330	66.9				7.0	
Final:  Temp  Eh-ORP  D.O.  Turbidity  Ferrous  Comments/Flow Rate    1455  6.05  4330  66.9  0  1  1  1  7.0 gal  0    COMMENTS:					· ·					
Final:  Temp  Eh-ORP  D.O.  Turbidity  Ferrous  Vol Evac.  Comments/Flow Rate    1455  6.05  4330  66.9  D.O.  Turbidity  Iron  Vol Evac.  Comments/Flow Rate    COMMENTS:				<u> </u>						
Final:  PH  SC  Temp  Eh-ORP  D.O.  Turbidity  Iron  Vol Evac.  Comments/Flow Rate    1455  6.05  4330  66.9  0  0  0  7.0 gal  0 </td <td></td> <td></td> <td>L</td> <td></td> <td></td> <td>No. 11 10 11 11 11 11 11 11 11 11 11 11 11</td> <td></td> <td>1 10 10 10 10 10 10</td> <td></td> <td></td>			L			No. 11 10 11 11 11 11 11 11 11 11 11 11 11		1 10 10 10 10 10 10		
1455  6.05  4330  66.9  7.0 gal    COMMENTS:	Final:	+ s	с	Temp	Eh-ORP	DO T	urbidity	rerrous Iron	Vol Evac	Comments/Flow Bate
COMMENTS: INSTRUMENTATION: pH Meter X Temperature Meter x DO Monitor Other Conductivity Meter X Water DisposalKutz_ Sample ID_Blanco SFP MW-28 Sample Time_1518 BTEX VOCs Alkalinity TDS Cations Anions <u>Nitrate Nitrite</u> Ammonia TKN NMWQCC Metals Total Phospho	<u>1455</u>	6.05 4	1330	66.9					7.0 gal	
COMMENTS:    INSTRUMENTATION:  pH Meter  X    DO Monitor  Other    Conductivity Meter X  Other    Water Disposal  Kutz  Sample ID_Blanco SFP MW-28    Sample Time  1518    BTEX VOCs  Alkalinity TDS Cations  Nitrate				1		2 - 51978394 - 3 A (1.1. 4				
INSTRUMENTATION: pH Meter X Temperature Meter x DO Monitor Other Conductivity Meter X Water Disposal_Kutz_Sample ID_Blanco SFP MW-28 Sample Time_1518 BTEX VOCs Alkalinity TDS Cations Anions <u>Nitrate Nitrite</u> Ammonia TKN NMWQCC Metals Total Phospho	COMMENT	5:		·····						
Conductivity Meter X Other Water Disposal_Kutz_Sample ID_Blanco SFP MW-28 Sample Time_1518 BTEX VOCs Alkalinity TDS Cations Anions <u>Nitrate Nitrite</u> Ammonia TKN NMWQCC Metals Total Phospho	INSTRUME	NTATION	1: j	oH Meter	X		<u></u>	_ Tem	nperature Me	eter x
Water Disposal_ <u>Kutz</u> Sample ID_ <u>Blanco SFP MW-28</u> Sample Time_ <u>1518</u> BTEX VOCs Alkalinity TDS Cations Anions <u>Nitrate Nitrite</u> Ammonia TKN NMWQCC Metals Total Phospho		ſ	Conduc	tivitv Met	er X	<u>,</u>		_ Un	ษเ	
BTEX VOCs Alkalinity TDS Cations Anions <u>Nitrate Nitrite</u> Ammonia TKN NMWQCC Metals Total Phospho	Water Dispo	sal <u>K</u>	utz_	Sample I	D_Blanco S	SFP MW-28	Sam	- ple Time	1518	
	BTEX VO	Cs Alka	linity 7	TDS Cati	ons Anior	ns <u>Nitrate</u>	<u>Nitrite</u> A	mmonia TK	N NMWQC	CC Metals Total Phosphore
MS/MSD BD BD Name/Time TB	MS/MSD			BD_		BD	Name/Ti	me		TB

# WELL DEVELOPMENT AND SAMPLING LOG

Project Mar Depth to Wa Water Colu	ager _ ater nn Hei	<u>MJN</u> 32.58_ ght4.	Dep 54 We	 oth to Produ Il Dia	Date Ict <u>na</u>	<u>5/17/04</u> Product	Start T Thickness_	ime <u>1459</u> <u>na</u> Me	Weather_ <u>sunny 80s</u> asuring Point <u>TOC</u>
Sampling M Criteria: 3	ethod: to 5 Ca	Submer Bottom asing Vo	rsible Pur Valve Ba lumes of	np 🗋 iler 🗴 Water Rem	Centrifu Double ( oval X s	gal Pump Check Valv tabilization	Perista e Bailer [] of Indicator	Itic Pump	] Other [] Steel Kemmerer □ X Other <u>or bail dry</u>
Gal/ft 4.	x ft of v 54 x .65	vater 5		Gallons 2.95 x 3	Water Vo	olume in W	ell Ounces 377.73 x 3		Gal/oz to be removed 8.85
Time (military)	pH (su	) (um	SC hos/cm)	Temp (°F)	ORP (millivol	D.O. ts) (mg/L	.) (NTU)	y Vol Eva (gallons	c. Comments/
1501	6.29	<del>)</del>	4720	71.5				.5	Clear
	6.20	) 4	4650	69.7				1	Clear
	6.11		4600	69.4				1.5	Clear, well is bail down
1516	6.23	3 4	1640 1620	69.3				3	Clear
Final:							Ferrous		
Time p <u>1516</u>	H 6.57	<u>SC</u> 4620	Temp 68.7	Eh-ORP	<u>D.O.</u>	Turbidity	Iron	Vol Evac. 3.5	Comments/Flow Rate Well has bailed dry
COMMENT	S: Wel	l bailed c	lry						······
INSTRUME	NTATI	ON:	pH Meter DO Mo ctivity Met	X nitor ter X			Ter Otł	mperature M	eter x
Water Dispo BTEX VO	osal Cs Al	<u>Kutz</u> kalinity 1	Sample I TDS Cati	D <u>Blanco S</u> Ions Anion	<u>SFP MW-2</u> Is <u>Nitrat</u>	<u>29</u> Sa <u>e Nitrite</u>	mpie Time_ Ammonia TI	KN NMWQ	CC Metals Total Phosphor
-									

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Declarate				Ducio	+ Noma:	Diana		Client	N.N.N.1		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Project N	o.: <u>30001.0</u>		<u> </u>	Projec	t Name:	Blanc	OSEP	Client:_		<u>/EL Pa</u>	<u>so</u>
Location:	Blanco Sl	<u>-P</u>	we	II NO:M	<u>N-30</u>				Deve	lopmer	nt <u>Sampling</u>
Project M	anager	<u>MJN</u>			Date	<u> </u>	<u>/04_</u>	Start I	ime	1521	Weathersunny 80s
Depth to	/vater	<u>32.48</u>	Dep	Din to Proal	ict <u>na</u>	P	roauct	nickness_	_na		isuring Point
water Co	iumn Heig	nt <u>4.</u>	423	vveii D	ia	<u> </u>					
Sampling	Method: S	Subme	rsible Pun	np 🗌	Centrifu	igal P	ump 🗋	] Perista	ltic Pu	mp 🗌	Other
	E	Bottom	Valve Ba	iler <b>x</b>	Double	Chèc	k Valve	Bailer 🛛	Stain	less-St	eel Kemmerer
Criteria:	3 to 5 Cas	sing Vo	lumes of	Water Rem	oval X s	stabiliz	zation of	f Indicator I	Param	eters 2	Cother or bail dry
Coll				Callana	Water V	olume	e in Well	00000			Callez to be removed
Gal/	123 x 65	lier		2 875 x 3				368 x 3			8 62
		<u> </u>	<u> </u>				. <u> </u>				0.0L
Time	рН		SC	Temp	ORF	5	D.O.	Turbidit	y V	ol Evac	c. Comments/
(military)	(su)	(um	hos/cm)	(°F)	(millivo	lts)	(mg/L)	(NTU)	(	gallons)	Flow rate
1529	0.12		+350	71.0 <u>60.4</u>				ļ		.5	
· · · · · · · · · · · · · · · · · · ·	6.13		+240	66.2				· 		1.0	Clear well is beili
	0.11	<b>'</b>	+190	00.2						1.5	down
	6.18		1210	67.8						3.25	Clear sheen
<u>1543</u>	6.29		4250	68.0						4.5	bailed dry
					ļ						
				· ·							
				· · · · · · · · · · · · · · · · · · ·				· · · · · · · · · · · · · · · · · · ·			
Final:		(1997) 1997)						Ferrous			
Time	pH 🛛 🗄	SC	Temp	Eh-ORP	D.O.	Tur	bidity	Iron	Vol E	Evac.	Comments/Flow Rate
<u>1543</u>	6.29	4250	68.0						4	.5	Well has bailed dry
an ann ann an Airte an Airte an Airte	<u> </u>		••••••••••••••••••••••••••••••••••••••	<u> </u>	1 - 1 - 12 <u>1- 125-6</u> 1						<u>na na presidente e contra de la cont</u>
COMMEN	ITS: Well t	bailed d	lry								
INSTRUM	IENTATIO	N:	oH Meter	x	·			Ter	npera	ture Me	ter x
			DO Mo	nitor	<u></u>		<u></u>	_ Oth	ner		
Motor Di-		Conduc	Somela !!	er <b>x</b> D. Blonco f		20		- nio Timo	1645		
BTEX V	OCs Alka	alinity 7	TDS Cati	ons Anion	is <u>Nitra</u>	<u>50</u> te N	itrite A	mmonia TH	(N N	MWQC	C Metals Total Phosphore
											-
MS/MSD			80			BUN	lame/ i i	ne			18

### **APPENDIX B**

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## LABORATORY ANALYTICAL REPORTS

		······	DATA V	EKIFICATIC (Page 1 c	DIN WORI of 2)	SHEET			
Analy	tical Method/An	alytes:	SW-8	346 8021B (BT	<u>EX)</u> Sar	nple Colle	ction Date(s):	05/18/04	
	Labor	ratory:		Accutest		MWH	Job Number:	EPC-SJRB (Blanco North	
	Batch Identifie	cation:	<u> </u>	T7500			Matrix:	Water	
	MS/MSD Pare	nt(s) <sup>(a)</sup> :		ate Parent(s): _	None				
Verifi	cation Comp	olete:	Li	(Date/Signature)					
Foot				Γ	Hits				
Notes	Site ID	Sam	nnle ID	Lab. ID	(Y/N)	Quals.	Corr	ments	
None	Blanco North	MW-2	3	T7500-01	Y	Quant			
None	Blanco North	MW-1	9	T7500-02	Ŷ				
None	Blanco North	MW-2	26	T7500-03	Ŷ				
None	Blanco North	MW-2	27	T7500-04	Ŷ				
None	Trip Blank	Trin B	lank 1	T7500-05	N			<u>.                                    </u>	
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#### **DATA VERIFICATION WORKSHEET**

(Page 2 of 2)

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Analytical Method: <u>SW-846 8021B (BTEX)</u> MWH Job Number: <u>EPC-SJRB (Blanco North)</u>

Laboratory: Accutest

Batch Identification:

**T7500** 

Verification Criteria							
Sample ID	MW-23	MW-19	MW-26	MW-27	Trip Blank 1		
Lab ID	T7500-01	T7500-02	T7500-03	T7500-04	T7500-05		
Holding Time	A	A	A	Α	A		
Analyte List	A	А	A	Α	А		
Reporting Limits	A	A	A	Α	A		
Surrogate Spike Recovery	A	А	A	А	A		
Trip Blank	A	А	A	Α	A	×	
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A	1	
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	Α	А	A	A		
Laboratory Control Sample (LCS)	А	Α	А	A	А		
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	А	Α	Α	Α	Α		
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

 $\boldsymbol{X}$  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:
Labor atch Identific (S/MSD Paren tion Comp Site ID anco North anco North anco North anco North	ratory: cation: nt(s) <sup>(a)</sup> : olete: Sample ID MW-23 MW-19 MW-26 MW-27	Accutest T7500 T7500-01 Lab. ID T7500-01 T7500-02 T7500-03 T7500-04	Fie L L Hits (Y/N) Y Y Y Y Y Y	MWH , eld Replica ab Replica <u>5-27</u> ate/Signature	Job Number: _ Matrix: _ ate Parent(s): _ ate Parent(s): _ 7-04	EPC-SJRB (Blanco Nort Water None T7500-01
tion Comp Site ID anco North anco North anco North	cation:	T7500 T7500-01 T7500-01 Lab. ID T7500-01 T7500-02 T7500-03 T7500-04	Fie L L H tars (Da Hits (Y/N) Y Y Y Y Y Y	eld Replica ab Replica <u>5-27</u> ate/Signature	Matrix:	(Blanco Nort Water None T7500-01
tion Comp Site ID anco North anco North anco North	cation:	T7500 T7500-01	Fie L L Hits (Y/N) Y Y Y Y Y	eld Replica ab Replica <u>5-27</u> ate/Signature	Matrix: _	Water None T7500-01
tion Comp site ID anco North anco North anco North anco North	nt(s) <sup>(a)</sup> :	T7500-01 Lab. ID T7500-01 T7500-02 T7500-03 T7500-04	Fie L L Hits (Y/N) Y Y Y Y Y	eld Replica ab Replica <u>5-27</u> ate/Signature	ate Parent(s): _ ate Parent(s): _ 2-04 ) Con	None T7500-01
tion Comp Site ID anco North anco North anco North anco North	Sample ID MW-23 MW-19 MW-26 MW-27	Lab. ID T7500-01 T7500-02 T7500-03 T7500-04	L Hits (Y/N) Y Y Y Y	ab Replica	ate Parent(s): _ 7- <u>04</u> ) Con	T7500-01
tion Comp Site ID anco North anco North anco North anco North	Sample ID MW-23 MW-19 MW-26 MW-27	Lab. ID T7500-01 T7500-02 T7500-03 T7500-04	Hits (Y/N) Y Y Y Y Y	<u>5-27</u> ate/Signature	7-04 ) Con	nments
Site ID anco North anco North anco North anco North	Sample ID           MW-23           MW-19           MW-26           MW-27	Lab. ID T7500-01 T7500-02 T7500-03 T7500-04	Hits (Y/N) Y Y Y Y	Quals.	Con	nments
anco North anco North anco North anco North	MW-23 MW-19 MW-26 MW-27	T7500-01 T7500-02 T7500-03 T7500-04	Y Y Y Y Y			
anco North anco North anco North	MW-19 MW-26 MW-27	T7500-02 T7500-03 T7500-04	Y Y Y			
anco North anco North	MW-26 MW-27	T7500-03 T7500-04	Y Y			
anco North	MW-27	T7500-04	Y			
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#### **DATA VERIFICATION WORKSHEET** Page 2 of 2

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Analytical Method: EPA 353.2 (NO3/NO2) MWH Job Number: EPC-SJRB (Blanco North)

Laboratory:

Accutest

Batch Identification:

**T7500** 

Validation Criteria								
Sample ID	MW-23	MW-19	MW-26	MW-27				
Lab ID	T7500-01	T7500-02	T7500-03	T7500-04				
Holding Time	Α	A	A	A				
Analyte List	A	A	А	A				
Reporting Limits	Α	А	A	A				
Method Blank (all methods)	Α	A	A	A				
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A				
Field Duplicate/Replicate	N/A	N/A	N/A	N/A				
Laboratory Control Sample (LCS)	A	А	A	A				
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N				
Matrix Duplicate	Α	N/A	N/A	N/A				
Matrix Spike/Matrix Spike Dup. (MS/MSD)	Α	N/A	N/A	N/A				
Initial Calibration	N	. N	N	N			1	
Initial Check Verification (ICV)	N	N	N	N				
Continuing Calibration Verification (CCV)	N	N	N	· N	· ·			
Analysis Time(s)	N	N	N	N				
Hardcopy vs. Chain-of-Custody	A	A	A	A				
EDD vs. Hardcopy	N	N	N	N				
EDD vs. Chain of Custody	N	N	N	N		1		

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation 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 N/R indicates data not available for review

## NOTES:

05/28/04

# Gulf Coast

# Technical Report for

Montgomery Watson

Blanco North

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

Accutest Job Number: T7500

Sampling Dates: 05/17/04 - 05/18/04

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

**ATTN: Brian Buttars** 

Total number of pages in report: 24



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

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Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com



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# Sample Summary

### Montgomery Watson

Job No: T7500

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

Sample Number	Collected Date	Time By	Received	Matu Code	rix e Type	Client Sample ID
T7500-1	05/18/04	07:16 MJN	05/19/04	AQ	Ground Water	BLANCO MW-23
T7500-2	05/18/04	07:28 MJN	05/19/04	AQ	Ground Water	BLANCO MW-19
T7500-3	05/18/04	07:43 MJN	05/19/04	AQ	Ground Water	BLANCO MW-26
<b>T7500-4</b>	05/18/04	07:52 MJN	05/19/04	AQ	Ground Water	BLANCO MW-27
T7500-5	05/17/04	07:30 MJN	05/19/04	AQ	Trip Blank Water	TRIP BLANK



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**Report of Analysis** 

Client Sam Lab Sampl Matrix: Method: Project:	Sample ID: BLANCO MW-2 ample ID: T7500-1 k: AQ - Ground Wa d: SW846 8021B ht: Blanco North			r		Date S Date I Percer	Sampled: Received nt Solids	: 05/18/04 : 05/19/04 : n/a	
Run #1 Run #2	File ID KK0071 KK0071	44.D 49.D	DF 25 100	Analyzed 05/20/04 05/20/04	By NS NS	Prep D n/a n/a	ate	Prep Batch n/a n/a	Analytical Batch GKK374 GKK374
Run #1 Run #2	Purge V 5.0 ml 5.0 ml	'olume				· · · · · · · · · · · · · · · · · · ·			
Purgeable	Aromatic	S							
CAS No.	Compo	und		Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzen Toluene Ethylbe Xylenes o-Xyler m,p-Xy	e exnzene s (total) ne rlene		8020 <sup>a</sup> ND 208 1490 ND 1490	100 25 25 75 25 50	50 13 13 25 13 25	ug/l ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrog	ate Reco	overies	Run# 1	Run# 2	Lim	its		
460-00-4 98-08-8	4-Brom aaa-Trij	ofluorob fluorotol	enzene uene	101% 94%	94% 89%	71-1 66-1	27% 36%		

(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



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			*						
Client Sample ID: Lab Sample ID: Matrix:	BLANCO T7500-1 AQ - Gro	D MW-23 ound Water			Date Sampled: 05/18/04 Date Received: 05/19/04 Percent Solids: n/a				
Project:	Blanco N	lorth							
General Chemistry	,	<u></u>							
Analyte		Result	RL	Units	DF	Analyzed	By	Method	
Nitrogen, Nitrate +	Nitrite	0.29	0.10	mg/l	2	05/25/04 13:15	LN	EPA 353.2	

Report of Analysis

Page 1 of 1

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	Report of Analysis										
Client Sam Lab Samp Matrix: Method: Project:	nple ID: BI le ID: T7 A( SV Bla	LANC 7500-2 Q - Gr V846 8 anco N	O MW-19 ound Water 8021B North	Date Sampled: 05/18/04 Date Received: 05/19/04 Percent Solids: n/a							
Run #1 Run #2	File ID KK007145 KK007150	.D .D	DF 25 100	Analyzed 05/20/04 05/20/04	By NS NS	Prep D n/a n/a	Date	Prep Batch n/a n/a	Analytical Batch GKK374 GKK374		
Run #1 Run #2	Purge Volu 5.0 ml 5.0 ml	ume							······································		
Purgeable	Aromatics										
CAS No.	Compoun	ıd		Result	RL	MDL	Units	Q			
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenz Xylenes (t o-Xylene m,p-Xyler	ene total) ne		7410 <sup>a</sup> ND 1160 44.8 ND 44.8	100 25 25 75 25 50	50 13 13 25 13 25	ug/l ug/l ug/l ug/l ug/l ug/l	1 1			
CAS No.	Surrogate	e Reco	veries	Run# 1	Run# 2	Lim	its				
460-00-4 98-08-8	4-Bromofl aaa-Triflu	luorob orotoli	enzene 1ene	102% 95%	96% 91%	71-1 66-1	27% 36%				

(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



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Client Sample ID: Lab Sample ID: Matrix:	BLANC T7500-2 AQ - Gr	O MW-19 ound Water			Date Sampled: 05/18/04 Date Received: 05/19/04 Percent Solids: n/a				
Project:	Blanco I	North							
General Chemistry	;					· · · · · · · · · · · · · · · · · · ·			
Analyte		Result	RL	Units	DF	Analyzed	By	Method	
Nitrogen, Nitrate +	Nitrite	0.19	0.10	mg/l	2	05/25/04 13:15	LN	EPA 353.2	

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**Report of Analysis** 

Page 1 of 1



2.2

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100-41-4

1330-20-7

95-47-6

CAS No.

460-00-4

98-08-8

Ethylbenzene

Xylenes (total)

Surrogate Recoveries

4-Bromofluorobenzene

aaa-Trifluorotoluene

o-Xylene

m,p-Xylene

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Report	of	Ana	lysis
			~

Client San Lab Samp Matrix: Method: Project:	nple ID: le ID:	BLANG T7500- AQ - G SW846 Blanco	CO MW-26 3 round Wate 8021B North	er		Date S Date I Percer	Sampled: Received nt Solids	05/18/04 : 05/19/04 : n/a	
Run #1 Run #2	File ID KK0071	46.D	DF 25	Analyzed 05/20/04	By NS	Prep D n/a	ate	Prep Batch n/a	Analytical Batch GKK374
Run #1 Run #2	Purge V 5.0 ml	/olume						• .	
Purgeable	Aromati	CS							
CAS No.	Comp	ound		Result	RL	MDL	Units	Q	
71-43-2 108-88-3	Benzer Toluer	ne Ne		109 14.3	25 25	13 13	ug/l ug/l	J	

25

75

25

50

Run# 2

13

25

13

25

ug/l

ug/l

ug/l

ug/l

Limits

71-127%

66-136%

87.1

280

52.5

227

Run#1

105%

100%

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

Page 1 of 1



**Report of Analysis** 

Client Sample ID: BLANCO MW-26 Lab Sample ID: T7500-3 Date Sampled: 05/18/04 Date Received: 05/19/04 Matrix: AQ - Ground Water Percent Solids: n/a Project: Blanco North **General Chemistry** Analyte RL Units DF Result Analyzed By Method Nitrogen, Nitrate + Nitrite 0.53 0.10 mg/l 2 05/25/04 13:15 LN EPA 353.2



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Page 1 of 1

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Client Sam Lab Samp Matrix: Method: Project:	nple ID: BLANCO le ID: T7500-4 AQ - Grou SW846 802 Blanco Nor	MW-27 nd Water 21B rth		Date S Date J Perce	Sampled: Received: nt Solids:	05/18/04 : 05/19/04 : n/a	
Run #1 Run #2	File ID D KK007143.D 23	0F Analyzed 5 05/20/04	By NS	Prep D n/a	ate	Prep Batch n/a	Analytical Batch GKK374
Run #1 Run #2	Purge Volume 5.0 ml						
Purgeable	Aromatics						
CAS No.	Compound	Result	RL	MDL	Units	Q	
71-43-2	Benzene	95.9	25	13	ug/l		
108-88-3	Toluene	27.6	25	13	ug/l		
100-41-4	Ethylbenzene	317	25	13	ug/l		
1330-20-7	Xylenes (total)	1600	75	25	ug/I		
yj-47-d	o-Aylene m,p-Xylene	323 1270	25 50	13 25	ug/1 ug/l		
CAS No.	Surrogate Recover	ries Run# 1	Run# 2	Lim	its		
460-00-4	4-Bromofluorobenz	zene 104%		71-1	27%		
98-08-8	aaa-Trifluorotoluen	ne 102%		66-1	36%		

**Report of Analysis** 

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



Page 1 of 1



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**Report of Analysis** 

Client Sample ID: BLANCO MW-27 Lab Sample ID: Date Sampled: 05/18/04 T7500-4 Date Received: 05/19/04 Matrix: AQ - Ground Water Percent Solids: n/a Project: Blanco North **General Chemistry** RL Units DF Analyzed Method Analyte Result By 0.56 0.10 mg/l 2 05/25/04 13:15 LN Nitrogen, Nitrate + Nitrite EPA 353.2





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460-00-4

98-08-8

**Report of Analysis** 

Client Sam Lab Sampl Matrix: Method: Project:	ple ID: TRIP F e ID: T7500- AQ - T SW846 Blanco	BLANK 5 rip Blank V 8021B North	Water		Date S Date J Perce	Sampled: Received nt Solids		
Run #1 Run #2	File ID KK007142.D	DF 1	Analyzed 05/20/04	By NS	Prep D n/a	late	Prep Batch n/a	Analytical Batch GKK374
Run #1 Run #2	Purge Volume 5.0 ml							
Purgeable	Aromatics							
CAS No.	Compound		Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7 95-47-6	Benzene Toluene Ethylbenzene Xylenes (total) o-Xylene m,p-Xylene		ND ND ND ND ND	1.0 1.0 3.0 1.0 2.0	0.50 0.50 0.50 1.0 0.50 1.0	ug/l ug/l ug/l ug/l ug/l ug/l	·	
CAS No.	Surrogate Rec	coveries	Run# 1	Run# 2	Lim	iits		

93%

93%

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

4-Bromofluorobenzene

aaa-Trifluorotoluene

J = Indicates an estimated value

71-127%

66-136%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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# Misc. Forms

**Custody Documents and Other Forms** 

Includes the following where applicable:

• Chain of Custody



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Crick / reporting michinator	Pro	iect Name BLA	ΝΟ	0/	Yan	urh	, P	lar.	c1	Ø, 7		R.						dysq			DW - Drinking Wate GW - Ground Wete
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hone # 505 599 2124	Fax	#	50	05	59	9	21	19				P	•								OI - Dil LIQ - Other Liquid
emplor's Name MJNEE	Clie	nt Purchase On	der#									R									AIR - Air SOL - Other Solid
Accutest Field ID / Point of Collection Sample #	SUMMA#	Collection	Serrcied		# of	H	Numbe	ar of pre	w	Bottles	TK I	7									WP - Wpe
BLANCO MW-23	MEOH Viel # Data 578	Time	BY	Matrix AL	bottles	9	<u>x i</u>	┢		Ĭ		त्री	+		+	┼──	-				LAB USE ONLY
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3 BLANCO MW-26	\$118/	40743	MTH	WA	1	Π		X			П	X		1							
4 BLANCO MW-27	/ <i>18</i> ,N	40752	MON	wor	1	┝┼	+	<b>X</b>	$\left  \right $	+	╀┦	X	-+-	+-		-					
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1 Day EMERGENCY		D TRRP13	9																	·····	
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T7500: Chain of Custody Page 1 of 3 3.1

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mpler's Nami	MTAJEE			Cilent	Purchase O	rder #		- 1						18								AIR - Air
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T7500: Chain of Custody Page 2 of 3



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TEST.	PHSO	rcle *Y" for yes an eived in undamagi eived with proper I ame sufficient for a stody matches sa al received intact a al received intact a	BOTTLE #	[-2	ъ							÷						· \		VR: Votatile Refrig. e 2: HCL 3: HN03	Iding volatiles	1. <u>Edex</u> 1. <u>8921579</u>	posal: (circle one)	
	JOB #: 7750	Copdition/ariance (C) 1. CN Sample reco 3. CN Sample reco 5. CN Sample volt 7 CN Chain of Cu 8. CN Custody see 9 CN Custody see	SAMPLE or FIELD ID	1-4	1-4	2				-									$\int$	LOGATION: WI: Walk-In PRESERVATIVES: 1: Non	pH of waters checked exclu	Delivery method: Courte Tracking#	Method of sample dis	

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T7500: Chain of Custody Page 3 of 3



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# QC Data Summaries

### Includes the following where applicable:

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



# Method Blank Summary

Job Number: Account: Project:	T7500 MWHSLCUT Montg Blanco North	gomery Watson				-
Sample GKK374-MB	File ID DF KK007140.D 1	Analyzed 05/20/04	By NS	Prep Date n/a	Prep Batch n/a	Analytical Batch GKK374
						· · · · · · · · · · · · · · · · · · ·

The QC reported here applies to the following samples:

Method: SW846 8021B

T7500-1, T7500-2, T7500-3, T7500-4, T7500-5

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	ND ND ND ND ND	1.0 1.0 3.0 1.0 2.0	0.50 0.50 0.50 1.0 0.50 1.0	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	96% 93%	71-12 66-13	27% 66%	



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Page 1 of 1

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# Blank Spike Summary

Job Number: Account: Project:	T7500 MWHSLCUT Mont Blanco North	gomery Watson				
Sample GKK374-BS	File ID DF KK007141.D 1	Analyzed 05/20/04	By NS	Prep Date n/a	Prep Batch n/a	Analytical Batch GKK374
The QC report	ted here applies to the	e following sam	ples:		Method: SW	/846 8021B

T7500-1, T7500-2, T7500-3, T7500-4, T7500-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	19.0	95 95	76-128
100-41-4 108-88-3	Toluene	20 20	18.9 18.9	95 95	79-129 77-126
1330-20-7 95-47-6	Xylenes (total) o-Xylene	60 20	59.4 19.4	99 97	79-126 78-125
00 11 0	m,p-Xylene	40	40.0	100	79-127
CAS No.	Surrogate Recoveries	BSP	Lim	its	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	101% 92%	71-1 66-1	27% 36%	



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# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: Account: Project:	MWHSLC Blanco Nor	UT Montg th	gomery Watson				
Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T7500-4MS	KK007147.	D 25	05/20/04	NS	n/a	n/a	GKK374
T7500-4MSD	KK007148.	D 25	05/20/04	NS	n/a	n/a	GKK374
T7500-4	KK007143.	D 25	05/20/04	NS	n/a	n/a	GKK374

The QC reported here applies to the following samples:

Method: SW846 8021B

T7500-1, T7500-2, T7500-3, T7500-4, T7500-5

CAS No.	Compound	T7500-4 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7 95-47-6	Benzene Ethylbenzene Toluene Xylenes (total) o-Xylene m,p-Xylene	95.9 317 27.6 1600 323 1270	500 500 500 1500 500 1000	570 776 485 2820 795 2020	95 92 91 81 94 75	553 758 471 2760 774 1990	91 88 89 77 90 72	3 2 3 2 3 1	70-134/21 73-132/15 66-137/22 69-130/19 66-131/20 68-132/19
CAS No. 460-00-4	Surrogate Recoveries 4-Bromofluorobenzene	MS 101%	MSD 97%	T75 104	600-4 %	Limits 71-127%	6		·
98-08-8	aaa-Trifluorotoluene	88%	86%	102	%	66-136%	6		



Page 1 of 1

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QC Data Summaries

General Chemistry

Includes the following where applicable:

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



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# METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

# Login Number: T7500 Account: MWHSLCUT - Montgomery Watson Project: Blanco North

Analyte	Batch ID	RL	MB Result	Units	BSP %Recov	QC Limits	
Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite	GN6427 GN6427	0.050	<0.050	mg/l	104.0 107.0	80~114% 80-114%	 
Associated Samples: Batch GN6427: T7500-1, T7500-	2, T7500-3, T75	00-4					ণ্য

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# DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

# Login Number: T7500 Account: MWHSLCUT - Montgomery Watson Project: Blanco North

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits	
Nitrogen, Nitrate + Nitrite	GN6427	T7455-1	mg/t	0.52	0.52	0.0	0-5%	,
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mg∕l	0.29	0.29	0,0	0-5%	
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mg∕l	7.6	7.7	1.3	0-5%	

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Associated Samples: Batch GN6427: T7500-1, T7500-2, T7500-3, T7500-4



#### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: T7500 Account: MWHSLCUT - Montgomery Watson Project: Blanco North

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Nitrogen, Nitrate + Nitrite	GN6427	T7455-1	mq/l	0.52	0.200	0.72	100.0	90-115%
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mq/l	0.29	0.200	0.49	100.0	90-115%
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mg/l	0.29	0.200	0.50	103.0	90-115%
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mq∕l	7.6	2.00	9.7	105.0	90-115%
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mg/I	7.6	2.00	9.7	105.0	90-115%

Associated Samples: Batch GN6427: T7500-1, T7500-2, T7500-3, T7500-4

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		DATA V	ERIFICATIO/ Page 1 o	ON WORK of 2	KSHEET			
Analy	tical Method/An	alytes: EPA	353.2 (NO3/N	<u>O2)</u> San	nple Colle	05/17-18/04 EPC-SJRB		
	Labo	ratory:	Accutest		MWH			
						-	(Blanco South) Water None T7501-01	
	Batch Identifi	cation:	T7501			Matrix:		
	MS/MSD Pare	ent(s) <sup>(a)</sup> :	T7501-01	Fie	eld Replic	ate Parent(s): _		
				L	ab Replic	ate Parent(s): _		
Verifi	ication Com	plete:	Zan Tu	tars	5-,	27-04		
	······			(D)	ate/Signature	)		
Foot Notes	Site ID	Sample ID	Lab. ID	Hits (Y/N)	Quals.	Con	nments	
None	Blanco South	MW-28	T7501-01	Y				
None	Blanco South	MW-29	T7501-02	Y				
None	Blanco South	MW-30	T7501-03	Y				
None	Blanco South	MW-8	T7501-04	Y				
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#### **DATA VERIFICATION WORKSHEET** Page 2 of 2

Analytical Method: EPA 353.2 (NO3/NO2)

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MWH Job Number: EPC-SJRB (Blanco South)

Laboratory: Accutest

Batch Identification:

T7501

Validation Criteria					 	 
Sample ID	MW-28	MW-29	MW-30	MW-8		
Lab ID	T7501-01	T7501-02	T7501-03	T7501-04		
Holding Time	A	A	A	Α		
Analyte List	A	A	A	Α		
Reporting Limits	Α	А	А	Α		
Method Blank (all methods)	А	А	А	Α		
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A		·
Field Duplicate/Replicate	N/A	N/A	N/A	N/A		
Laboratory Control Sample (LCS)	A	Α	A	A		
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N		
Matrix Duplicate	N/A	N/A	N/A	N/A		
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A		
Initial Calibration	N	N	N	N		
Initial Check Verification (ICV)	N	N	N	N		
Continuing Calibration Verification (CCV)	N	N	N	N		
Analysis Time(s)	N	N	N	N		
Hardcopy vs. Chain-of-Custody	A	A	A	Α		
EDD vs. Hardcopy	N	N	N	N		
EDD vs. Chain of Custody	N	N	N	N	1	

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation 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

N/R indicates data not available for review

#### **NOTES:**

05/26/04

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## Technical Report for

**Montgomery Watson** 

Blanco South

D-MWH-05-08-03-MSG-02

Accutest Job Number: T7501

Sampling Dates: 05/17/04 - 05/18/04

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

**ATTN: Brian Buttars** 

Total number of pages in report: 14



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.

1 of 14

ACCUTEST.

Ron Martino Laboratory Manager

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2.3: T7501-3: BLANCO MW-30	6
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### Sample Summary

#### Montgomery Watson

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T7501 Job No: **Blanco South** Project No: D-MWH-05-08-03-MSG-02 Collected Matrix Client Sample **Received Code Type** Sample ID Number Date Time By T7501-1 05/17/04 14:57 MJN 05/19/04 AQ Ground Water BLANCO MW-28 BLANCO MW-29 T7501-2 05/17/04 15:18 MJN 05/19/04 AQ Ground Water T7501-3 05/17/04 15:45 MJN 05/19/04 AQ Ground Water BLANCO MW-30 T7501-4 05/18/04 08:18 MJN 05/19/04 AQ Ground Water BLANCO MW-8





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	Report of Analysis								age 1 of 1
Client Sample ID: Lab Sample ID: Matrix:	BLANC T7501-1 AQ - G1	O MW-28 round Water		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Date S Date J Perce	Sampled: 05/17/0 Received: 05/19/0 nt Solids: n/a			
Project:	Blanco S	South							
General Chemistry	,								
Analyte		Result	RL	Units	DF	Analyzed	By	Method	
Nitrogen, Nitrate +	Nitrite	82.0	5.0	mg/l	100	05/25/04 13:15	LN	EPA 353.2	}

RL = Reporting Limit



**Report of Analysis** 

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**Report of Analysis** 

Page 1 of 1

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Client Sample ID: Lab Sample ID: Matrix: Project:	BLANCO T7501-2 AQ - Gro Blanco So	) MW-29 und Water outh			Date Sampled: 05/17/04 Date Received: 05/19/04 Percent Solids: n/a					
General Chemistry	,		<u> </u>							
Analyte		Result	RL	Units	DF	Analyzed	By	Method		
Nitrogen, Nitrate +	Nitrite	88.0	5.0	mg/l	100	05/25/04 13:15	LN	EPA 353.2		

RL = Reporting Limit



		Page 1 of	f 1					
Client Sample ID: Lab Sample ID: Matrix:	BLANCO MW-30 T7501-3 AQ - Ground Water							
Project:	Blanco South							
General Chemistry	,							_
Analyte	Result	RL	Units	DF	Analyzed	Ву	Method	

mg/l

100

05/25/04 13:15 LN

EPA 353.2

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**Report of Analysis** 

RL = Reporting Limit

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	Report of Analysis								Page 1 of 1
Client Sample ID: Lab Sample ID: Matrix:	BLANCO T7501-4 AQ - Gro	O MW-8 Dund Water			Date S Date J Perce	Sampled: 05/18/0 Received: 05/19/0 nt Solids: n/a			
Project:	outh								
General Chemistry									
Analyte		Result	RL	Units	DF	Analyzed	By	Method	
Nitrogen, Nitrate +	Nitrite	0.43	0.050	mg/l	1	05/25/04 13:15	LN	EPA 353.	2

**Report of Analysis** 

RL = Reporting Limit



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# Misc. Forms

**Custody Documents and Other Forms** 

Includes the following where applicable:

• Chain of Custody


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<u></u>	Labor	atories					TEL.	713-27 W	1-470 WW.8	cute	st.com	13-27 N	1-47	/0	Accu	est Quole #		200	v	Accute	51.100.4	75	0	
	Cie	nt / Reporting Information			and the second		P	roject In	formatio										Requ	ested An	alvsis			Matrix Code
Company Na	3 Pres			Projec	t Name	A D		1-	5		-12	TI		- P.	J.				T					Dw - Drinking W
<u> </u>	2 PASO			-a	ANO	0 12	<u>41</u>	<u> </u>	-50	07	777	-10	7/	41	4.									GW - Ground V
614	1 Reilly	AVE		Street											15									WW - Wata
117		State And B-11	Zip	City				Sta	le						7 1									SW - Surface V
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Sample #			MEOH Vial #	Date	Time	Sampled By	Matrix	# of bottles	g I	1	10HO	ž.	Č.		13			1						LAB USE ON
	BLANKO	MW-28	1	\$/17/0	1457	MTH	WG	1	Π	T	X				TX		$\top$	1	1				1	
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and the second		10	ne les	Sample :	Custody mus	t be docu	mented b	elow ea	ch time	sample	es chan	ige pos	sessio	n, incluc	ding cou	ier delivery.	1	Tree	11201	Decement		é di g k		
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T7501: Chain of Custody Page 1 of 2



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ion/Variance (Circle "Y" for yes and Sample received in undamage Sample received with proper p Sample volume sufficient for a Chain of Custody matches sar	DATE/TIME RECE	E RECEIPT I IVED: 5/1	.0G <u>9/04</u> / INITALS:	. OEL		
Custody seal received intact a Custody seal received intact a	i "N" for no. if "N" d condition. 2. H. 4. Halysis. 6. nple IDs on conta nd tamper eviden rd tamper eviden	" is circled, se N Sample N Sample N Sample in on cooler.	e variance fr e received w e received w	r explanation rexplanation fifthin temp. ra proper contai th chain of cu	): nge. stody.	
SFFLD ID BOTTLE#	DATE SAMPLED	MATRIX	VOLUME	LOCATION	PRESERV.	Hd
-3	SITION	44	SOUND	17	1,2,3(4)5,6	U, C, >12, NA
	5/28/04		->	F	1,2,3(d)b.6	U, 🖉 >12, NA
					1,2,34,5,5	U, <2. >12, NA
					1,2,3,4,5,6	U, <2, >12, NA
			Ň		1,2,3,4,5,6	U, <2, >12, NA
					1,2,3,4,5,6	U, <2, >12, NA
	Q	×			1,2,3,4,5,6	U, <2, >12, NA
	a loll	æ			1,2,3,4,5,6	U, <2, >12, NA
· ·	to be to allow				1,2,3,4,5,6	U, <2, >12, NA
	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~				1,2,3,4,5,6	U, <2, >12, NA
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					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
WI: WalkIn VR: Volatile Refrig. IVES: 1: None 2: HCL 3: HNO3	SUB: Subcontrac 4: H2SO4 5: NAO	ct EF: Encore H 6: Other Comments:	Freezer			
checked excluding volatiles /A						
thod: Courier:	ł		COOLER TEMI	30	COOLER TEI	HP:
sample disposal: (circle one)	Accutect dieno	- Hold	Doturn to I		COOLER TEI	ij

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T7501: Chain of Custody Page 2 of 2

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# General Chemistry QC Data Summaries Includes the following where applicable: • Method Blank and Blank Spike Summaries Duplicate Summaries Matrix Spike Summaries





#### METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: T7501 Account: MWHSLCUT - Montgomery Watson Project: Blanco South

Analyte	Batch ID	RL.	MB Result Units	BSP %Recov	QC Limits	
Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite	GN6427 GN6427	0.050	<0.050 mg/1	104.0 107.0	80-114% 80-114%	4

Associated Samples: Batch GN6427: T7501-1, T7501-2, T7501-3, T7501-4

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# DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

# Login Number: 17501 Account: MWHSLCUT - Montgomery Watson Project: Blanco South

Anoluto	Potch ID	QC Sama La		Original	DUP		QC	4.2
Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite	GN6427 GN6427 GN6427 GN6427	T7455-1 T7500-1 T7502-3	mg/1 mg/1 mg/1	0.52 0.29 7.6	0.52 0.29 7.7	0.0 0.0 1.3	0-5% 0-5% 0-5%	4

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Associated Samples: Batch GN6427: T7501-1, T7501-2, T7501-3, T7501-4



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#### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: T7501 Account: MWHSLCUT - Montgomery Watson Project: Blanco South

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits	j. J.
Nitrogen, Nitrate + Nitrite	GN6427	T7455-1	mg/l	0.52	0.200	0.72	100.0	90-115%	E
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mg/1	0.29	0.200	0.49	100.0	90-115%	1990
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mg/l	0.29	0.200	0.50	103.0	90-115%	
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mg/i	7.6	2.00	9.7	105.0	90-115%	
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mg∕(	7.6	2.00	9.7	105.0	90-115%	

Associated Samples: Batch GN6427: T7501-1, T7501-2, T7501-3, T7501-4

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			DATA V	ERIFICATIO (Page 1 o	9N W( f 2)	ORK	SHEET		
and the second	Analy	/tical Method/An	alytes: SW	-846 8260B (VO	DC)	San	ple Colle	ction Date(s):	05/18/04
4 B. C.		Labo	ratory:	Accutest			MWH	Job Number: _	EPC-SJRB (Blanco South)
Aren eta u		Batch Identifi	cation:	T7502				Matrix: _	Water
1	4	MS/MSD Pare	nt(s) <sup>(a)</sup> :	T7502-02		Fie	eld Replic	ate Parent(s): _	None
A. Long	Verif	ication Com	olete:	an By	tta	(Da	<u> </u>	<u>27-04</u>	
R	F			· ·					
1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Foot Notes	Site ID	Sample ID	Lab. ID	Hi (Y/	ts N)	Quals.	Com	ments
	None	Blanco South	MW-15	T7502-01	Y				
1. th	None	Blanco South	MW-13	T7502-02	Y				
<b>6</b> 7	None	Blanco South	MW-12	T7502-03		r			
	None	Blanco South	MW-14 Trip Blank 2	T7502-04		[			
				17502-05					
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# DATA VERIFICATION WORKSHEET

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Analytical Method: SW-846 8260B (VOC) MWH Job Number: EPC-SJRB (Blanco South)

Laboratory: Accutest

Batch Identification:

T7502

Verification Criteria							
Sample ID	MW-15	MW-13	MW-12	MW-14	Trip Blank 2		<u> </u>
Lab ID	T7502-01	T7502-02	T7502-03	T7502-04	T7502-05		
Holding Time	Α	A	А	Α	Α		
Analyte List	A	A	A	A	А		
Reporting Limits	А	A	А	A	A		
Surrogate Spike Recovery	A	A	А	A	А		
Trip Blank	A	A	А	A	А		
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	. <b>N</b>		
Initial Calibration Verification (ICV)	N	N	N	N	N		· · ·
Continuing Calibration Verification (CCV)	N	N	N	N	N		
Method Blank	Α	А	А	. A	A		
Laboratory Control Sample (LCS)	Α	A	A	A	А		
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N		
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	А	N/A	N/A	N/A		
Retention Time Window	N	N	N	N	N		<u></u>
Injection Time(s)	N	N	N	N	N		
Hardcopy vs. Chain-of-Custody	A	A	A	А	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	A VE	RIFICATIO Page 1 o	N W of 2	ORE	KSHEET		
Analy	tical Method/An	alytes: El	PA 3	53.2 (NO3/N	02)	San	nple Colle	ction Date(s): _	05/17/04
	Labor	ratory:	A	Accutest			MWH	Job Number: _ _	EPC-SJRB (Blanco South)
	Batch Identifi	cation:		T7502				Matrix: _	Water
	MS/MSD Pare	nt(s) <sup>(a)</sup> :	1	7502-03		Fie	eld Replic	ate Parent(s): _	None
						L	ab Replic	ate Parent(s): _	T7502-03
Verifi	cation Com	olete:	Jar	~ 3	Ha	19 (D)	<u> </u>	7-04	
Foot Notes	Site ID	Sample ID	•	Lab. ID	H (Y	its /N)	Quals.	Com	ments
None	Blanco South	MW-15		T7502-01		Ý			
None	Blanco South	MW-13		T7502-02		Y			
None	Blanco South	MW-12		T7502-03		Y			
None	Blanco South	MW-14		T7502-04		Y			······································
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									· · · · · · · · · · · · · · · · · · ·

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#### **DATA VERIFICATION WORKSHEET** Page 2 of 2

Analytical Method: EPA 353.2 (NO3/NO2)

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MWH Job Number: EPC-SJRB (Blanco South)

Laboratory: Accutest

Batch Identification: \_\_\_\_\_

T7502

Validation Criteria							
Sample ID	MW-15	MW-13	MW-12	MW-14			
Lab ID	T7502-01	T7502-02	T7502-03	T7502-04			
Holding Time	A	Α	A	A			
Analyte List	A	A	A	A			
Reporting Limits	A	A	A	A			
Method Blank (all methods)	A	А	A	A			
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A			
Field Duplicate/Replicate	N/A	N/A	N/A	N/A			
Laboratory Control Sample (LCS)	A	A	A	A			
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N			
Matrix Duplicate	N/A	N/A	A	N/A			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	A	N/A			
Initial Calibration	N	N	N	N	· · ·		
Initial Check Verification (ICV)	N	N	N	N			
Continuing Calibration Verification (CCV)	N	N	N	N			
Analysis Time(s)	N	N	N	N			
Hardcopy vs. Chain-of-Custody	Α	A	Α	Α			
EDD vs. Hardcopy	N	N	N	N			
EDD vs. Chain of Custody	N	N	N	N			

(a) List QC batch identification if different than Batch ID

A indicates validation criteria were met

A/L indicates validation criteria met based upon Laboratory's QC Summary Form

X indicates validation 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

N/R indicates data not available for review

#### NOTES:



# Gulf Coast

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## Technical Report for

Montgomery Watson

Blanco South

D-MWH-05-08-03-MSG-02

Accutest Job Number: T7502

Sampling Date: 05/17/04

Report to:

Montgomery Watson

brian.buttars@us.mwhglobal.com

**ATTN: Brian Buttars** 

Total number of pages in report: 25



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

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com



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## Sample Summary

#### Montgomery Watson

Job No: T7502

Blanco South Project No: D-MWH-05-08-03-MSG-02

Sample Number	Collected Date	Time By	Received	Matr Code	ix Type	Client Sample ID
T7502-1	05/17/04	16:25 MN	05/19/04	AQ	Water	BLANCO MW-15
T7502-2	05/17/04	16:50 MN	05/19/04	AQ	Water	BLANCO MW-13
T7502-3	05/17/04	17:15 MN	05/19/04	AQ	Water	BLANCO MW-12
T7502-4	05/17/04	18:00 MN	05/19/04	AQ	Water	BLANCO MW-14
T7502-5	05/17/04	00:00 MN	05/19/04	AQ	Trip Blank Water	BLANCO TRIP BLANK 2



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## **Report of Analysis**

Client Sam Lab Sampl Matrix: Method: Project:	ple ID: BLANCO MW-15 e ID: T7502-1 AQ - Water SW846 8260B Blanco South			Date : Date : Perce	Sampled Received nt Solids	: 05/17/04 : 05/19/04 : n/a	
	File ID DF	Analyzed	Ву	Prep D	Date	Prep Batch	Analytical Batch
Run #1 Run #2	F0061277.D 1	05/20/04	LJ	n/a	-	n/a	VF1246
Run #1 Run #2	Purge Volume 5.0 ml						
Volatile spe	ecial list.						
CAS No.	Compound	Result	RL	MDL	Units	Q	
75-34-3	1,1-Dichloroethane	6.3	2.0	1.0	ug/l		
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l		
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	1.0	ug/l		
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l		
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	1.0	ug/l		
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l		
79-01-6	Trichloroethylene	ND	2.0	1.0	ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	nits		
1868-53-7	Dibromofluoromethane	94%		72-1	135%		
17060-07-0	1,2-Dichloroethane-D4	93%		<b>65</b> -1	136%		
2037-26-5	Toluene-D8	97%		77-1	142%		
460-00-4	4-Bromofluorobenzene	114%		87-1	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



Page 1 of 1

Nitrogen, Nitrate + Nitrite

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		Repo	ort of Ar	nalysis			Page
Client Sample ID: Lab Sample ID: Matrix:	BLANCO MW-15 T7502-1 AQ - Water			Date S Date S Perce	Sampled: 05/17 Received: 05/19 nt Solids: n/a	7/04 9/04	
Project:	Blanco South						
General Chemistry	/		- -				
Analyte	Result	RL	Units	DF	Analyzed	By	Method

mg/l

50

05/25/04 13:15 LN

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RL = Reporting Limit



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EPA 353.2

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		Repo	ort of An	alysis			Page 1 of
Client San Lab Sam Matrix: Method; Project:	mple ID: BLANCO MW-13 ple ID: T7502-2 AQ - Water SW846 8260B Blanco South			Date : Date : Perce	Sampled Received nt Solids	05/17/04 05/19/04 n/a	
Run #1 Run #2	File ID DF F0061274.D 1	Analyzed 05/20/04	By LJ	Prep D n/a	Date	Prep Batch n/a	Analytical Batch VF1246
Run #1 Run #2	Purge Volume 5.0 ml						
Volatile s	pecial list.						
CAS No.	Compound	Result	RL	MDL	Units	Q	
75-34-3	1,1-Dichloroethane	41.2	2.0	1.0	ug/l		
156-59-2	cis-1,2-Dichloroethylene	21.2	2.0	1.0	ug/l		
95-50-1	o-Dichlorobenzene	29.2	2.0	1.0	ug/l		
156-60-5	trans-1,2-Dichloroethylene	4.0	2.0	1.0	ug/l		
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l		
79-01-6	Trichloroethylene	22.5	2.0	1.0	ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its		
1868-53-7	Dibromofluoromethane	95%		72-1	35%		
17060-07-0	0 1.2-Dichloroethane-D4	97%		65-1	36%		

95%

109%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

2037-26-5

460-00-4

Toluene-D8

4-Bromofluorobenzene

E = Indicates value exceeds calibration range

77-142%

87-150%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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			Repo	ort of Ar	nalysis			Page 1 of
Client Sample ID: Lab Sample ID: Matrix:	BLANC T7502-2 AQ - W	O MW-13 ater			Date S Date B Perce	Sampled: 05/17/ Received: 05/19/ nt Solids: n/a	/04 /04	
Project:	Blanco S	South						
General Chemistry	1					, "'		
Analyte		Result	RL	Units	DF	Analyzed	By	Method
Nitrogen, Nitrate +	Nitrite	9.8	2.5	mg/l	50	05/25/04 13:15	5 LN	EPA 353.2

RL = Reporting Limit



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		Repo	ort of An	alysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: BLANCO MW-12 e ID: T7502-3 AQ - Water SW846 8260B Blanco South			Date Date Perce	Sampled Received nt Solids	: 05/17/04 : 05/19/04 : n/a	· ·
Run #1 Run #2	File ID DF F0061275.D 1	Analyzed 05/20/04	By LJ	Prep E n/a	Date	Prep Batch n/a	Analytical Batch VF1246
Run #1 Run #2	Purge Volume 5.0 ml						
Volatile spe	ecial list.						
CAS No.	Compound	Result	RL	MDL	Units	Q	
75-34-3 75-35-4 156-59-2 95-50-1 156-60-5 127-18-4 79-01-6	1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene o-Dichlorobenzene trans-1,2-Dichloroethylene Tetrachloroethylene Trichloroethylene	4.6 ND 5.1 3.4 ND 2.3 4.0	2.0 2.0 2.0 2.0 2.0 2.0 2.0	1.0 1.0 1.0 1.0 1.0 1.0 1.0	ug/l ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	uits		
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	93% 90% 96% 117%		72-1 65-1 77-1 87-1	.35% .36% .42% .50%		

MDL - Method Detection Limit ND = Not detected

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



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**Report of Analysis** 

Client Sample ID: BLANCO MW-12 Lab Sample ID: T7502-3 Date Sampled: 05/17/04 AQ - Water Date Received: 05/19/04 Matrix: Percent Solids: n/a Blanco South Project: **General Chemistry** RL Analyte Result Units DF Analyzed By Method 05/25/04 13:15 LN Nitrogen, Nitrate + Nitrite 7.6 1.0 mg/l 20 EPA 353.2

RL = Reporting Limit



Page 1 of 1

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		Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:	ple ID: BLANCO MW-14 e ID: T7502-4 AQ - Water SW846 8260B Blanco South			Date S Date J Perce	Sampled Received nt Solids	: 05/17/04 : 05/19/04 : n/a	
Run #1 Run #2	File ID DF F0061276.D 1	Analyzed 05/20/04	By LJ	Prep D n/a	ate	Prep Batch n/a	Analytical Batch VF1246
Run #1 Run #2	Purge Volume 5.0 ml						· · · · ·
Volatile spe	ecial list.						
CAS No.	Compound	Result	RL	MDL	Units	Q	
75-34-3 75-35-4 156-59-2 95-50-1 156-60-5	1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene o-Dichlorobenzene trans-1,2-Dichloroethylene	5.7 ND 2.1 ND ND	2.0 2.0 2.0 2.0 2.0	1.0 1.0 1.0 1.0 1.0	ug/l ug/l ug/l ug/l ug/l		
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l	Ŧ	
79-01-6 CAS No.	surrogate Recoveries	1.0 Run# 1	2.0 Run# 2	1.0 Lim	ug/1 uits	J	
1868-53-7 17060-07-0 2037-26-5	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	94% 89% 97%		72-1 65-1 77-1	35% 36% 42%		

116%

**Report of Analysis** 

ND = Not detected MDL - Method Detection Limit

4-Bromofluorobenzene

RL = Reporting Limit

460-00-4

E = Indicates value exceeds calibration range

J = Indicates an estimated value

87-150%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Report of Analysis

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Client Sample ID: Lab Sample ID: Matrix:	BLANC T7502-4 AQ - Wa	O MW-14 ater			Date S Date J Perce	Sampled: 05/17/0 Received: 05/19/0 nt Solids: n/a	)4 )4		
Project:	Blanco S	outh							
General Chemistry	7								
Analyte		Result	RL	Units	DF	Analyzed	Ву	Method	
Nitrogen, Nitrate +	Nitrite	16.0	2.5	mg/l	50	05/25/04 13:15	LN	EPA 353.2	

RL = Reporting Limit



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Report of Analysis

Client Sam Lab Sample Matrix: Method: Project:	ple ID: BLANCO TRIP BL e ID: T7502-5 AQ - Trip Blank W SW846 8260B Blanco South	ANK 2 ater		Date : Date : Perce	Sampled Received nt Solids	: 05/17/04 : 05/19/04 : n/a	
Run #1 Run #2	File ID         DF           F0061273.D         1	Analyzed 05/20/04	By LJ	Prep D n/a	)ate	Prep Batch n/a	Analytical Batch VF1246
	Purge Volume						·····
Run #1 Run #2	5.0 ml						
Volatile spe	ecial list.						
CAS No.	Compound	Result	RL	MDL	Units	Q	
75-34-3	1,1-Dichloroethane	ND	2.0	1.0	ug/l		
75-35-4	1,1-Dichloroethylene	ND	2.0	1.0	ug/l		
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	1.0	ug/l		
95-50-1	o-Dichlorobenzene	ND	2.0	1.0	ug/l		
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	1.0	ug/l		
127-18-4	Tetrachloroethylene	ND	2.0	1.0	ug/l		
79-01-6	Trichloroethylene	ND	2.0	1.0	ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	nits		
1868-53-7	Dibromofluoromethane	91%		72-1	135%		
17060-07-0	1,2-Dichloroethane-D4	90%		65-1	136%		
2037-26-5	Toluene-D8	95%		77-1	42%		
460-00-4	4-Bromofluorobenzene	111%		87-1	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

Page 1 of 1

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# Misc. Forms

**Custody Documents and Other Forms** 

Includes the following where applicable:

• Chain of Custody



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Laboratorie	5		TEL.	713-27 W	1-4700 ww.acc	FAJ cutest	K: 71 .com	3-271-	4770	Accul	est Quote	#		A6		150	2	
Comparing Interment Client / Reporting Interment Comparity Name EL PASO didfress G14 Reilly AV States G14 Reilly AV States OFT POPE Toole & SOS S99 21 ampler's Name MONEE Accutent Field ID / Point of Collection Sampler's Name I BLANCO MW-12 S BLANCO MW-12 4 REARCO MW-12 4	с. В 740 / Е-mail 2-U/ SUMMA // Меснчин / 3- 5- 	Project Name Project Name BLAN Street City Project # Fax # 50 Citent Purchaso Or Collection Oela Time 177/09 1625 17/09 1115 17/09 1115	Sangue Brite Brite Brite Brite Brite Brite Brite Matrice Matrice Matrice Matrice Matrice Matrice Matrice Matrice Matrice Matrice Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Brite Bri					Berred D Berred D Berred D	ottica 3	XXXXVITATE / NIGTE								Matrix Codes Matrix Codes GW - Ground Walk GW - Ground Walk WW - Water SW - Surface Walk SO - Sol SL - Sludge OI - OR LIO - Other Uquid AR - Air SOL - Other Solid WP - Wop LAB USE ONLY
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T7502: Chain of Custody Page 3 of 4 3.1 3

TEST       SAMPLE RECEIVED: Cited Yes variance         PHS       DATETIME RECEIVED: Cited Yes variance         PHS       INITIALS:         Cited Yes and Wife no. 11 'Wit's cicled, see variance         Course sufficient for and sample received in undemaged condition:       2.0 N Sample received with proper prime.         Date include the mage of condition:       2.0 N Sample received with proper prime.         Date include the mage of the month in the mage received with proper prime.       2.0 Mathematical sample received with proper prime.         Date include the mage of the month in the mage received with proper prime received in the mage received with proper prime.       2.0 Mathematical sample received with proper prime.         Description of the mage of the mage reviewed in the mage reviewed with proper prime.       2.0 Mathematical sample reviewed with proper prime.         BOTTLER       Date and sample reviewed with an builts.       2.0 Mathematical sample reviewed with proper prime.         BOTTLER       Date and sample reviewed with proper prime.       2.0 Mathematical sample reviewed with proper prime.         BOTTLER       Date and sample reviewed with an builts.       2.0 Mathematical sample reviewed with an builts.         BOTTLER       Date and sample reviewed with an builts.       2.0 Mathematical sample reviewed with an builts.         BOTLER       Joint an antianameter with an antianameter with an antianameter with an antianamater with an antianamater with an antianamater with an a	Stant	J. evolution	ithin terms and only the second and	LOCATION PRESERV. PH	ULT (2.34,5,6 U, -2, >12 (NA)	17 1,2,3,6 U 3,12, NA	WLEF (23,4,5,6 U, 42, >12, (A)	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			: 3 <sup>2</sup> COOLER TEMP: COOLER TEMP:	Slient Form: SM012								
THEST       SAMPLE RECEVED:         PHSX       DATERTIME RECEIVED:         PHSX       DATERTIME RECEIVED:         PHSX       DATERTIME RECEIVED:         PHSX       DATERTIME RECEIVED:         Circle Y* for yes and "N" for no. If "N" is no buscledy matches sample IDs on containers.         Dustody matches sample IDS         Dotter #         L - 3         For L #         Dustody usines         Nr. volatile Refine         Star IGS         Matches         Star IGS         Dustody usines         Matches         Dustody usines         Star IGS         Dustody scieles         Dustody usines         Storage Idention         Dustody usines         Dustody usines	серт LOG <i>SJR loq II<sup>2</sup>3</i>	INITIALS:	Samples received in Sample received in Sample received wi Sample received wi order.	TRIX VOLUME	2 your	Soul	your														: Encore Freezer ther	ents:	COOLER TEMP COOLER TEMP	Hold Return to C	
22 LEST. 22 LAST. 24 PHSO PHSO Circle ** for yes and acceived in undamage cerived in undamage Dustody matches sam acceived intact an Electric for ar 1 - 3 Circle ** for yes 1 - 3 Circle ** for yes 2 - 4 Circle ** for yes 2 - 3 Circle ** for yes 2 - 4 Circle ** for yes 2 - 3 Circle ** for yes 2 - 4 Circle ** for yes 2 - 4 Circle ** for yes 2 - 4 Circle one) 2 - 5 Circle ** for yes 2 - 4 Circle one)	SAMPLE REC	"N" for no. 11 "N" is ci	1 condition. 2 2 1 N 1 condition. 2 2 N 1 alysis. 6 N ple IDs on containers. d tamper evident on ci	DATE SAMPLED MA	5/17109 A		- <del>-</del>					Wester 104									SUB: Subcontract EF 4: H2SO4 5: NAOH 6: O			Accutest disposal	
	JTEST.	Circle "Y" for ves and	sceived in undamagee sceived with proper pl olume sufficient for ar Dustody matches sam eal received intact an eal received intact an	BOTTLE#	6-1	4									<u> </u>						NR: Volatile Refrig.	cluding volatites	rier: <u>R.d.C.X</u> 9#: 89215279 62	sposal: (circle one)	

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T7502: Chain of Custody Page 4 of 4



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# GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike SummariesMatrix Spike and Duplicate Summaries



Method Job Numb Account: Project:	l Blank Summary per: T7502 MWHSLCUT Montgom Blanco South	nery Watson					Page 1
Sample VF1246-M	File ID DF B F0061271.D 1	Analyzed 05/20/04	By LJ	Prep I n/a	Date	Prep Batch n/a	Analytical Batch VF1246
The QC re T7502-1, 7	eported here applies to the fo 17502-2, T7502-3, T7502-4, T Compound	llowing sam 7502-5 Result	ples: RI	MDL	Units	Method: SW	7846 8260B
The QC ro T7502-1, 7 CAS No.	eported here applies to the fo 7502-2, T7502-3, T7502-4, T Compound	llowing sam 7502-5 Result	ples: RL	MDL	Units	Method: SW	7846 8260B
The QC ro T7502-1, 7 CAS No. 75-34-3	eported here applies to the fo 7502-2, T7502-3, T7502-4, T Compound 1,1-Dichloroethane	llowing sam 7502-5 Result ND	ples: RL 2.0	MDL 1.0	Units ug/l	Method: SW	/846 8260B
The QC ro T7502-1, 7 CAS No. 75-34-3 75-35-4	eported here applies to the fo C7502-2, T7502-3, T7502-4, T Compound 1,1-Dichloroethane 1,1-Dichloroethylene	llowing sam 7502-5 Result ND ND	ples: RL 2.0 2.0	MDL 1.0 1.0	Units ug/l ug/l	Method: SW Q	/846 8260B
The QC ro T7502-1, 7 CAS No. 75-34-3 75-35-4 156-59-2	eported here applies to the fo C7502-2, T7502-3, T7502-4, T Compound 1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene	llowing sam 7502-5 Result ND ND ND	ples: RL 2.0 2.0 2.0	MDL 1.0 1.0 1.0	Units ug/l ug/l ug/l	Method: SW	/846 8260B
The QC ro T7502-1, 7 CAS No. 75-34-3 75-35-4 156-59-2 95-50-1	eported here applies to the fo C7502-2, T7502-3, T7502-4, T Compound 1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene o-Dichlorobenzene	llowing sam 7502-5 Result ND ND ND ND	ples: RL 2.0 2.0 2.0 2.0	MDL 1.0 1.0 1.0 1.0	Units ug/l ug/l ug/l ug/l	Method: SW	/846 8260B
The QC ro T7502-1, 7 CAS No. 75-34-3 75-35-4 156-59-2 95-50-1 156-60-5	eported here applies to the fo C7502-2, T7502-3, T7502-4, T Compound 1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene o-Dichlorobenzene trans-1,2-Dichloroethylene	llowing sam 7502-5 Result ND ND ND ND	Ples: RL 2.0 2.0 2.0 2.0 2.0	MDL 1.0 1.0 1.0 1.0 1.0	Units ug/l ug/l ug/l ug/l ug/l	Method: SW	/846 8260B
The QC ro T7502-1, 7 CAS No. 75-34-3 75-35-4 156-59-2 95-50-1 156-60-5 127-18-4	eported here applies to the fo C7502-2, T7502-3, T7502-4, T Compound 1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene o-Dichlorobenzene trans-1,2-Dichloroethylene Tetrachloroethylene	Ilowing sam 7502-5 Result ND ND ND ND ND ND	Ples: RL 2.0 2.0 2.0 2.0 2.0 2.0 2.0	MDL 1.0 1.0 1.0 1.0 1.0 1.0	Units ug/l ug/l ug/l ug/l ug/l	Method: SW	/846 8260B

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	92%	72-135%
17060-07-0	1,2-Dichloroethane-D4	84%	65-136%
2037-26-5	Toluene-D8	96%	77-142%
460-00-4	4-Bromofluorobenzene	110%	87-150%

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## Blank Spike Summary

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Account:	MWHSLO	MWHSLCUT Montgomery Watson							
Project:	Blanco So	Blanco South							
Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch			

The QC reported here applies to the following samples:

T7502-1, T7502-2, T7502-3, T7502-4, T7502-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
75-34-3	1,1-Dichloroethane	25	24.0	96	71-123
75-35-4	1,1-Dichloroethylene	25	27.5	110	69-138
156-59-2	cis-1,2-Dichloroethylene	25	23.6	94	69-116
95-50-1	o-Dichlorobenzene	25	22.5	90	73-114
156-60-5	trans-1,2-Dichloroethylene	25	25.4	102	72-129
127-18-4	Tetrachloroethylene	25	24.1	96	76-126
79-01-6	Trichloroethylene	25	24.7	99	73-119
CAS No.	Surrogate Recoveries	BSP	Lin	nits	
1868-53-7	Dibromofluoromethane	90%	72-	135%	
17060-07-0	1,2-Dichloroethane-D4	80%	65-	136%	
2037-26-5	Toluene-D8	<b>97%</b>	77-	142%	
460-00-4	4-Bromofluorobenzene	103%	87-	150%	

Method: SW846 8260B

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Analytical Batch VF1246 7

4.2

#### Matrix Spike/Matrix Spike Duplicate Summary Job Number: T7502

Account: Project:	MWHSLCUT Montgomery Watson Blanco South						
Sample T7502-2MS T7502-2MSD	File ID F0061278.D F0061279 D	DF 1	Analyzed 05/21/04 05/21/04	By LJ	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch VF1246 VF1246
T7502-2	F0061274.D	1	05/20/04	LJ	n/a	n/a	VF1246

The QC reported here applies to the following samples:

Method: SW846 8260B

T7502-1, T7502-2, T7502-3, T7502-4, T7502-5

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CAS No.	Compound	T7502-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
75-34-3 75-35-4 156-59-2 95-50-1 156-60-5 127-18-4 79-01-6	1,1-Dichloroethane 1,1-Dichloroethylene cis-1,2-Dichloroethylene o-Dichlorobenzene trans-1,2-Dichloroethylene Tetrachloroethylene Trichloroethylene	41.2 ND 21.2 29.2 4.0 ND 22.5	25 25 25 25 25 25 25 25	65.5 21.4 40.7 47.2 24.8 22.1 45.5	97 86 78 72 83 88 92	63.9 22.2 41.1 46.7 24.6 20.8 45.4	91 89 80 70 82 83 92	2 4 1 1 1 6 0	67-127/21 63-141/25 62-120/24 64-117/20 67-132/22 70-128/21 68-122/19
CAS No. 1868-53-7 17060-07-0 2037-26-5 460-00-4	Surrogate Recoveries Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	MS 95% 92% 93% 104%	MSD 92% 84% 90% 109%	T75 959 979 959 109	502-2 6 6 6 %	Limits 72-135% 65-136% 77-142% 87-150%	, , , , , ,		



Page 1 of 1

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# General Chemistry

### QC Data Summaries

Includes the following where applicable:

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



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# METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: T7502 Account: MWHSLCUT - Montgomery Watson Project: Blanco South

Analyte	Batch (D	RL	MB Result	Units	BSP %Recov	QC Limits	
Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite	GN6427 GN6427	0.050	<0.050	mg/l	104.0 107.0	80-114% 80-114%	 .1
Associated Samples: Batch GN6427: T7502-1, T7502-	·2, T7502-3, T75	02-4					জ

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#### . DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

# Login Number: T7502 Account: MWHSLCUT - Montgomery Watson Project: Blanco South

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits	
Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite Nitrogen, Nitrate + Nitrite	GN6427 GN6427 GN6427	T7455-1 T7500-1 T7502-3	mg/l mg/l mg/l	0.52 0.29 7.6	0.52 0.29 7.7	0.0 0.0 1.3	0-5% 0-5% 0-5%	5.2
Associated Samples:	2 77602 2 776	02.4						থা

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Associated Samples: Batch GN6427: T7502-1, T7502-2, T7502-3, T7502-4



#### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: T7502 Account: MWHSLCUT - Montgomery Watson Project: Blanco South

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits	}
Nitrogen, Nitrate + Nitrite	GN6427	T7455-1	mg/l	0.52	0.200	0.72	100.0	90-115%	່ຫ
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mg/l	0.29	0.200	0.49	100.0	90-115%	చు
Nitrogen, Nitrate + Nitrite	GN6427	T7500-1	mq̃∕l	0.29	0.200	0.50	103.0	90-115%	
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mğ∕l	7.6	2.00	9.7	105.0	90-115%	
Nitrogen, Nitrate + Nitrite	GN6427	T7502-3	mğ∕l	7.6	2.00	9.7	105.0	90-115%	5

Associated Samples: Batch GN6427: T7502-1, T7502-2, T7502-3, T7502-4

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