# **AP - 069**

# ANNUAL MONITORING REPORT

4/03/2008



BUILDING A BETTER WORLD

April 3, 2008

Mr. Glenn von Gonten New Mexico Oil Conservation Division (NMOCD) 1220 South St.; Francis Drive Santa Fe, New Mexico 87505

### RE: 2007 Annual Report for the EPNG San Juan River Plant Project NMOCD Reference Number: AP-69-0

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso Natural Gas Company (EPNG) is submitting the enclosed 2007 Annual Report for the San Juan River Plant project. The report presents the 2007 monitoring data and includes recommendations for 2008 activities at this Site.

If you have any questions or comments concerning the enclosed report, please call either Nancy Prince of EPTPC (719-520-4690) or me (303-291-2276).

Sincerely,

Jed Smith Project Manager

cc: Brandon Powell – NMOCD, Aztec, NM Nancy Prince – EPTPC MWH Project File

> 1801 California Street Suite 2900 Denver, Colorado 80202

 TEL
 303 291 2222

 FAX
 303 291 2221

 www.mwhglobal.com

# TABLE OF CONTENTS

Section Section	on No.	<u>Page No</u>
EXEC	UTIVE SUMMARY	ES-1
1.0	INTRODUCTION	1-1
2.0	PROJECT HISTORY	
3.0	SUMMARY OF 2007 ACTIVITIES	
3.1 3.2	GROUNDWATER MONITORING PROGRAM HYDROCARBON REMEDIATION	
4.0	DISCUSSION OF 2007 RESULTS	4-1
4.1 4.2	SITE-WIDE GROUNDWATER MONITORING RESULTS QUARTERLY SAMPLING RESULTS	
5.0	CONCLUSIONS AND RECOMMENDATIONS	5-1
5.1 5.2	SITE-WIDE GROUNDWATER MONITORING PROGRAM HYDROCARBON REMEDIATION PROGRAM	
6.0	REFERENCES	6-1

### LIST OF FIGURES

### Figure No. Description

1 Site Location Map

2 Site Layout Map, San Juan River Plant

- 3 Groundwater Potentiometric Surface Contours and BTEX Concentrations February 2007
- Groundwater Potentiometric Surface Contours and BTEX Concentrations 4 May 2007
- 5 Groundwater Potentiometric Surface Contours and BTEX Concentrations August 2007
- 6 Groundwater Potentiometric Surface Contours and BTEX Concentrations November 2007
- 7 TDS Isoconcentration Map – August 2007
- 8 Sulfate Isoconcentration Map – August 2007
- 9 Historic MW-5 BTEX Concentrations and Groundwater Elevations
- 10 Historic MW-8 BTEX Concentrations and Groundwater Elevations
- 11 Historic MW-9 BTEX Concentrations and Groundwater Elevations

### LIST OF TABLES

### Table No. **Description**

- 1 Summary of 2007 BTEX Analytical and Field Data 2
  - Summary of 2007 Inorganic Analytical Data

### LIST OF APPENDICES

### Appendix Description

- 2007 Documentation of Field Activities А
- В 2007 Laboratory Reports

## LIST OF ACRONYMS

BTEX	Benzene, toluene, ethylbenzene, and total xylenes
EPNG	El Paso Natural Gas Company
mg/L	Milligrams per liter
μg/L	Micrograms per liter
NMOCD	New Mexico Oil Conservation Division
NMWQCC	New Mexico Water Quality Control Commission
ORC	Oxygen-releasing compound
SJRP	San Juan River Plant
TDS	Total dissolved solids
WGR	Western Gas Resources, Inc

### **EXECUTIVE SUMMARY**

The San Juan River Plant (SJRP) is located in San Juan County, near Kirtland, New Mexico. The SJRP processes natural gas collected from production wells located in the San Juan Basin of New Mexico and southern Utah. In June 1992, the SJRP was sold to Western Gas Resources, Inc. (WGR), which is now a wholly owned subsidiary of Anadarko Petroleum Corporation. Closure of evaporation ponds, pits, and other potential source areas within the SJRP occurred in 1992 through 1995. Based on past soil and soil gas investigations, the dissolved phase hydrocarbons are associated with relatively limited soil contamination. Groundwater monitoring has been performed at the SJRP since 1995.

Hydrocarbon impacts to groundwater have been observed primarily in the vicinity of monitoring wells MW-8 and MW-9. Samples from these two wells have consistently indicated that benzene is the only hydrocarbon constituent exceeding the New Mexico Oil Conservation Division (NMOCD) groundwater standards. El Paso Natural Gas (EPNG) has accordingly pursued active groundwater remediation, consisting of chemical oxygen enhancement and air sparging, to reduce the dissolved-phase benzene concentrations in this area.

Groundwater monitoring suggests that concentrations in monitoring well MW-8 have generally declined through the use of in-well oxygen-releasing compound socks, though the data show significant seasonal fluctuations. MW-8 benzene concentrations during 2007 ranged from <2.0 ug/L to 28.1 ug/L. The air sparging system at MW-9 was shut down in February 2004 and has remained off throughout 2007 in order to assess groundwater conditions. During this shut-down period, benzene concentrations in MW-9 have slowly increased. In 2007, concentrations of benzene ranged from 44.8 ug/L to 90.9 ug/L. The remediation efforts at monitoring wells MW-8 and MW-9 will continue, as needed, until quarterly sampling results indicate compliance with standards. The remedial efforts will then be suspended and closure monitoring will begin.

The NMOCD has requested annual monitoring of metals and inorganic parameters in all site monitoring wells as part of the current groundwater monitoring program. Elevated concentrations of some inorganic constituents, including total dissolved solids and sulfate, have historically been detected in various wells. It is possible that these elevated concentrations may be associated with past practices; however, past closure activities have addressed any site-related sources and this region is known to contain elevated total dissolved solids concentrations. There are no known affected downgradient users of the groundwater.

EPNG has initiated a Stage I Abatement Plan to investigate hydrocarbon impacts encountered in groundwater near the Praxair lined pond. The results of the initial investigation were discussed in the Stage I Interim Report, submitted to the NMOCD on March 28, 2006. This report included a work plan for additional investigation activities. In September 2006, EPNG made slight revisions to the work plan and re-submitted it. EPNG is currently awaiting work plan approval from the NMOCD.

### **1.0 INTRODUCTION**

This annual report has been prepared on behalf of El Paso Natural Gas Company (EPNG) to present a summary of physical activities performed and analytical data collected at the San Juan River Plant (SJRP) during 2007. This site is located in San Juan County, Township 29N, Range 15W, Section 1, near Kirtland, New Mexico, as shown on **Figure 1**.

Current remedial action at the SJRP is limited to in-situ oxygen enhancement of groundwater through use of oxygen-releasing compound (ORC) in monitoring well MW-8. Dissolved phase groundwater impacts are monitored annually for the entire site and quarterly in the MW-8/MW-9 area.

**Site Description.** EPNG owned the SJRP until June 1992. Since that time, the facility has been owned and operated by Western Gas Resources, Inc. (WGR), which is now a wholly owned subsidiary of Anadarko Petroleum Corporation. The plant processes natural gas collected from production wells located in the San Juan Basin of New Mexico and southern Utah. The SJRP is a 630-acre facility that has contained gas processing facilities, two raw water ponds (now closed), three wastewater evaporation ponds (now closed), a sulfur recovery plant, water and hydrocarbon tanks, a pigging station, flare pits, and several 16- to 24-inch-diameter natural gas pipelines that cross the facility. In 2002-2003, the Praxair Nitrogen Plant was built in the area north of the SJRP, to the south of monitoring wells MW-8 and MW-9. **Figure 2** presents a detailed site map of the SJRP. Closure of the evaporation ponds, flare pits, and other potential contaminant source areas was completed during 1992 through 1995. Groundwater has been monitored at this site since 1995.

**<u>Report Organization.</u>** This report is organized into six sections and supporting appendices. Section 2.0 provides a discussion of the SJRP project history. Section 3.0 includes a summary of field activities conducted at the SJRP during 2007, and Section 4.0 provides a discussion of results. Conclusions and recommendations are provided in Section 5.0, and references are listed in Section 6.0.

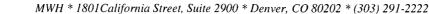
### MWH \* 1801California Street, Suite 2900 \* Denver, CO 80202 \* (303) 291-2222

# 2.0 PROJECT HISTORY

The SJRP was previously owned by EPNG, but was sold to the current operator, WGR, on June 19, 1992. Investigation and remediation activities conducted at the SJRP have included the following components:

- Several investigations were conducted at the SJRP between 1985 and 1995. As a result, 24 monitoring wells have been installed at various locations at the plant.
- The north and south flare pits were closed in 1992 after removing 18,200 cubic yards (cy) and 3,520 cy of contaminated material from the north and south pits, respectively.
- The former wastewater evaporation ponds were closed during 1995 and early 1996. The pit and pond closure activities included capping the ponds with compacted, lowpermeability soils.
- EPNG abandoned 17 monitoring wells, upgraded two wells, installed five new monitoring wells, and conducted a soil gas investigation during the summer of 1995. Results of the soil gas investigation indicated shallow hydrocarbon contamination near monitoring wells MW-8 and MW-9.
- EPNG submitted a groundwater remediation work plan to the New Mexico Oil Conservation Division (NMOCD) in January 2001 to address elevated benzene in monitoring wells MW-8 and MW-9, and received approval to begin remedial actions on June 4, 2001. The work plan included provisions to install an air sparging system with two air sparging wells; one injection point located within 10 feet of each monitoring well.
- The air sparging system air injection wells (SW-8 and SW-9) were installed on October 30, 2001. Both wells were developed on November 12, 2001.
- A pre-pilot air sparging test was conducted at both wells on November 13, 2001. Results from this test indicated good communication between SW-9 and MW-9 but poor communication between SW-8 and MW-8.
- Because of poor communication between SW-8 and MW-8, an ORC sock consisting of magnesium peroxide and manufactured by Regenesis, Inc., was recommended for remediation in this area. The ORC sock was installed in MW-8 on November 14, 2001.
- The air sparging pilot test was initiated on November 14, 2001. With the exception of a 48-hour shutdown prior to the four-week sampling event on December 26, 2001, the air sparging system operated continuously from November 14, 2001 to January 18, 2002. The air sparging pilot test culminated with a sampling event on January 25, 2002. An additional sampling event was performed on February 21, 2002, to evaluate the potential for contaminant concentration rebound following a four-week shutdown.

- From February 2002 through December 2002, site activities included continued operation and maintenance (O&M) of the air sparging system, which was placed into continuous operation following the pilot test, and site-wide annual groundwater monitoring.
- During 2003, site activities included periodic O&M of the air sparging system, replacement of ORC socks into MW-8, quarterly sampling of MW-8 and MW-9, and site-wide annual groundwater monitoring.
- Based on benzene, toluene, ethylbenzene and total xylenes (BTEX) concentrations below New Mexico Water Quality Control Commission (NMWQCC) standards, the air sparging system was shut-down in February 2004 to assess static groundwater conditions at the site.
- During 2004 through 2006, site activities included replacement of ORC socks into MW-8, quarterly sampling of MW-8 and MW-9, and site-wide annual groundwater monitoring.
- EPNG submitted a Stage I Abatement Plan to NMOCD in November 2005 to investigate hydrocarbon impacts encountered in groundwater near the Praxair evaporation pond at the SJRP. Approval was received on January 23, 2006 to begin investigative actions. Results of this investigation are detailed in the Stage I Interim Report, submitted March 28, 2006, which recommended that further investigation be conducted via hollow-stem auger, as the effectiveness of direct push technology at the site was found to be limited.
- The air sparge system has remained off since system shut down in 2004. Site activities for 2007 included quarterly sampling of MW-8 and MW-9, and site-wide annual groundwater monitoring.
- In May 2007, monitoring well MW-7, which was located immediately adjacent to the Praxair facility, was plugged and abandoned at Praxair's request, in order to facilitate new process construction.



### 3.0 SUMMARY OF 2007 ACTIVITIES

The current environmental program at the SJRP consists of dissolved-phase hydrocarbon remediation (chemical oxygen enhancement) and site-wide groundwater monitoring. In February 2004, the air sparging system was shut down in anticipation of groundwater sampling. The system has remained off since that time in order to monitor static groundwater conditions at the site and pending additional investigation in the area. The following section details site activities conducted at the SJRP during 2007.

### 3.1 GROUNDWATER MONITORING PROGRAM

The groundwater monitoring program included the following components during 2007:

- On August 23, 2007, the six site monitoring wells (W-2, MW-4 through MW-9) were sampled for BTEX compounds, NMWQCC trace metals, total dissolved solids (TDS), alkalinity, chloride, and sulfate.
- Remediation monitoring wells MW-8 and MW-9 were sampled quarterly in February, May, August, and December 2007 and analyzed for BTEX compounds to evaluate the effectiveness of hydrocarbon remediation activities.
- Site-wide groundwater elevation measurements were collected quarterly at each well.

All groundwater monitoring activities during 2007 were conducted by Lodestar, Inc. Laboratory analyses were performed by Accutest Laboratories in Houston, Texas.

### 3.2 HYDROCARBON REMEDIATION

Since 2002, dissolved phase hydrocarbon remediation activities at the SJRP have included oxygen enhancement using ORC socks in MW-8 and air sparging in the vicinity of MW-9. The following paragraphs describe 2007 remediation activities.

**ORC Enhancement.** The ORC socks in MW-8 were not replaced during 2007. Dissolved oxygen was measured during the February, May and August sampling events; dissolved oxygen concentrations were 9.02 mg/L, 11.4 mg/L, and 4.82 mg/L respectively, indicating that sufficient oxygen was still available for biodegradation. In addition, BTEX concentrations in MW-8 were below their respective NMWQCC standards in the third and fourth quarters of 2007. ORC socks will generally be replaced annually, or as-needed, based on quarterly monitoring of dissolved oxygen and BTEX concentrations in this well.

<u>Air Sparging System</u>. As described in Section 2.0, air sparging has not been conducted at the site since January 2004. Pending additional source material investigation in the vicinity of MW-8 and MW-9, the system will likely remain off.

ر. مراجع در مارود

### 4.0 DISCUSSION OF 2007 RESULTS

This section describes the results of activities conducted at the SJRP during 2007.

### 4.1 SITE-WIDE GROUNDWATER MONITORING RESULTS

**Groundwater Elevation Monitoring.** Groundwater elevation maps for each quarter are presented in **Figures 3** through **6**. In general, groundwater flows radially outward from the topographic rise on which the SJRP is located. In the north plant area, groundwater flows towards the northwest. Groundwater beneath the southern portion of the plant generally flows to the southwest. Field documentation for water level monitoring activities is presented in **Appendix A**.

**<u>BTEX Sampling Results.</u>** Figures 9, 10, and 11 depict long-term trends in the three wells with detectable concentrations (i.e., MW-5, MW-8, and MW-9). BTEX results from annual samples collected during August 2007 are presented in Table 1 and on Figure 5. During the annual sampling event, BTEX concentrations in W-2 and MW-6, were below analytical detection limits. MW-4 and MW-5 had a benzene concentrations of 0.37  $\mu$ g/L (estimated results below the reporting limit) and 3.7  $\mu$ g/L respectively, both. below the NMWQCC standard of 10  $\mu$ g/L. These results are consistent with the results from 2002 through 2006. Results from MW-8 and MW-9 are discussed in the next section, along with the other quarterly sampling results. Documentation of 2007 field activities are included in Appendix A, and the analytical laboratory reports are included in Appendix B.

**Inorganic Sampling Results.** Results for inorganic samples collected during 2007 are presented in **Table 2.** Elevated concentrations of some inorganic constituents, including TDS and sulfate, were detected in various wells. This finding is consistent with previous annual sampling events. Isoconcentration maps presenting TDS and sulfate concentrations for samples collected during August 2007 are shown on **Figures 7** and **8**, respectively. It is possible that these elevated concentrations may be associated with past practices; however, past closure activities have addressed any site-related sources of these constituents, and this region is known to contain elevated inorganic concentrations. There are no downgradient users of the groundwater. Documentation of field activities and laboratory reports are presented in **Appendix A** and **Appendix B**, respectively.

### 4.2 QUARTERLY SAMPLING RESULTS

The quarterly groundwater sampling results are shown on **Table 1** and on **Figures 3** through **6**. During the 2007 quarterly sampling, MW-8 benzene concentrations were above NMWQCC standards at 28.1  $\mu$ g/L and 19.6  $\mu$ g/L in the first and second quarters, respectively, then fell below detection limits in the third and fourth quarters of 2007. Concentrations in this well show significant fluctuations historically.

Benzene concentrations in MW-9 have remained above standards (44.8  $\mu$ g/L, 82  $\mu$ g/L, 88.1  $\mu$ g/L, and 90.9  $\mu$ g/L), during each respective quarter. These results indicate that air sparging in the area was effective when operational and that continued remediation would

help to further reduce BTEX concentrations. However, it is unclear whether or not sparging would be able to remediate the area sufficiently to prevent rebounding concentrations in MW-9. Air sparging will be re-evaluated following the pending additional investigation activities.

### 5.0 CONCLUSIONS AND RECOMMENDATIONS

The following conclusions and recommendations are provided based on the information presented in this report.

### 5.1 SITE-WIDE GROUNDWATER MONITORING PROGRAM

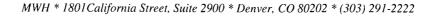
Groundwater sampling performed as part of the site-wide groundwater monitoring at SJRP resulted in the following conclusions and recommendations:

- Groundwater flows radially away from the topographic rise on which SJRP is located. In the north plant area, groundwater flow is towards the northwest; in the south plant area, groundwater flow is primarily towards the southwest.
- The remaining groundwater impacts in excess of BTEX standards appear to be in the region of MW-8 and MW-9.
- Consistent with historic monitoring, inorganic constituents were measured above NMWQCC standards during the August 2007 sampling event. The elevated concentrations of TDS and sulfate may result from past site practices; however, it is likely that some elevated concentrations are naturally occurring in the region.
- EPNG recommends continuation of the annual site-wide groundwater monitoring program.

### 5.2 HYDROCARBON REMEDIATION PROGRAM

The following conclusions and recommendations are provided regarding the hydrocarbon remediation performed near wells MW-8 and MW-9:

- Benzene concentrations in MW-9 have remained above standards. However, the benzene concentrations in MW-8 were non-detect during the third and fourth quarters of 2007.
- EPNG recommends continuation of quarterly monitoring at MW-8 and MW-9 for BTEX concentrations and dissolved oxygen content.
- ORC socks will be replaced in MW-8, as needed, based on quarterly monitoring of dissolved oxygen and BTEX concentrations.
- In November 2005, EPNG submitted a Stage I Abatement Plan to NMOCD to investigate hydrocarbon impacts encountered in groundwater near the Praxair evaporation pond at the SJRP. Approval of this abatement plan was received from NMOCD on January 23, 2006, and the investigation was performed in February 2006. Results of the initial investigation were detailed in the Stage I Interim Report submitted by March 28, 2006. Revisions to the work plan for additional investigation



included in the Stage I Interim Report were submitted on September 28, 2006. The MW-9 area will be evaluated following the additional investigation activities.

### 6.0 **REFERENCES**

- AE Schmidt Environmental, 2002, Air Sparge Pilot Test Data, San Juan River Plant, Kirtland, NM, prepared for Montgomery Watson Harza, Inc., Albuquerque, New Mexico, February 2002.
- El Paso Energy Corporation, November 27, 2001, Electronic communication from Mr.
   Scott Pope (EPNG) to Mr. William Olson, New Mexico Oil Conservation Division,
   Proposal to install an Oxygen Release Compound (ORC) sock for oxygenation of
   MW-8 in lieu of sparging, documenting conversation between the parties on
   November 26, 2001.
- El Paso Energy Corporation, September 19, 2001, Letter to Mr. William Olson, New Mexico Oil Conservation Division, *Revised Work Plan for Groundwater Remediation for the San Juan River Plant*.
- El Paso Energy Corporation, January 24, 2001, Letter to Mr. William Olson, New Mexico Oil Conservation Division, RE: Work Plan for Groundwater Remediation and 2000 Groundwater Sample Results for the San Juan River Plant.
- El Paso Energy, November 19, 1992, *Summary of Analytical Data from the San Juan River Plant:* Memorandum from N.K. Prince, Environmental Affairs, to S. D. Miller.

MWH, 2002, 2001 Annual Report San Juan River Plant. March 2002.

MWH, 2003, 2002 Annual Report San Juan River Plant. April 2003.

MWH, 2004, 2003 Annual Report San Juan River Plant. March 2004.

MWH, 2005, 2004 Annual Report San Juan River Plant. March 2005.

MWH, 2006, 2005 Annual Report San Juan River Plant. March 2006.

MWH, 2006, Stage I Abatement Plan Interim Report – Investigation Update. March 2006.

MWH, 2006, Proposed Workplan for Additional Phase I Investigation of Potential Hydrocarbon Impacts as Part of a Stage I Abatement Plan at the San Juan River Plant, San Juan Basin, New Mexico. Revised September 2006.

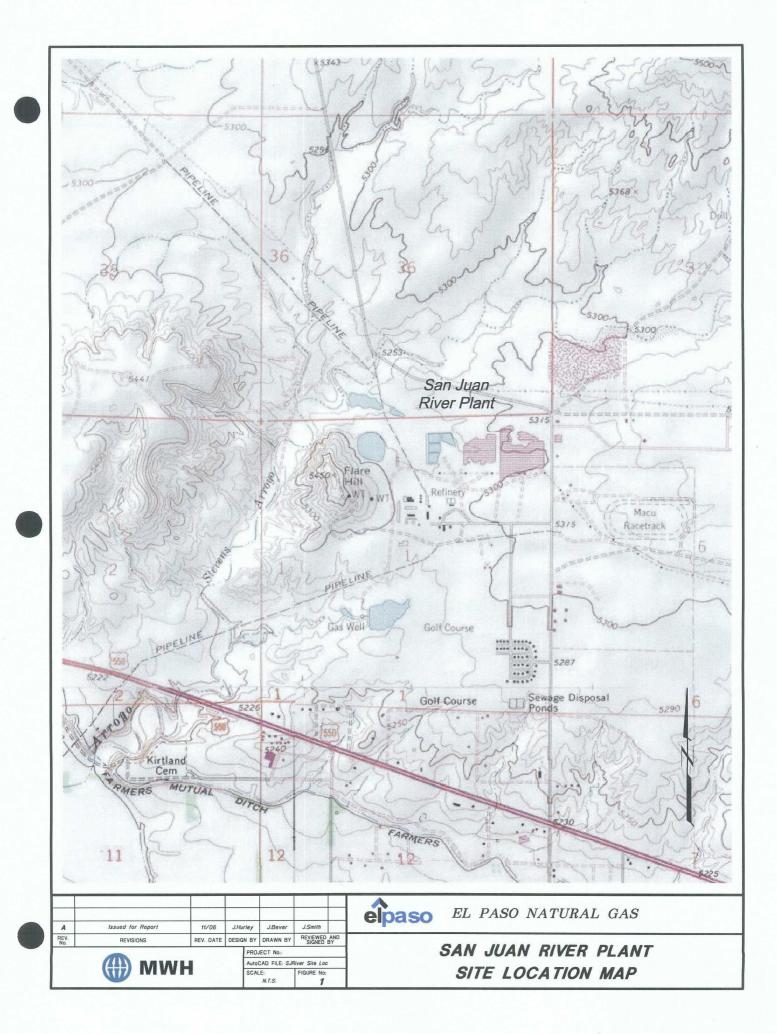
MWH, 2007, 2006 Annual Report San Juan River Plant. March 2007.

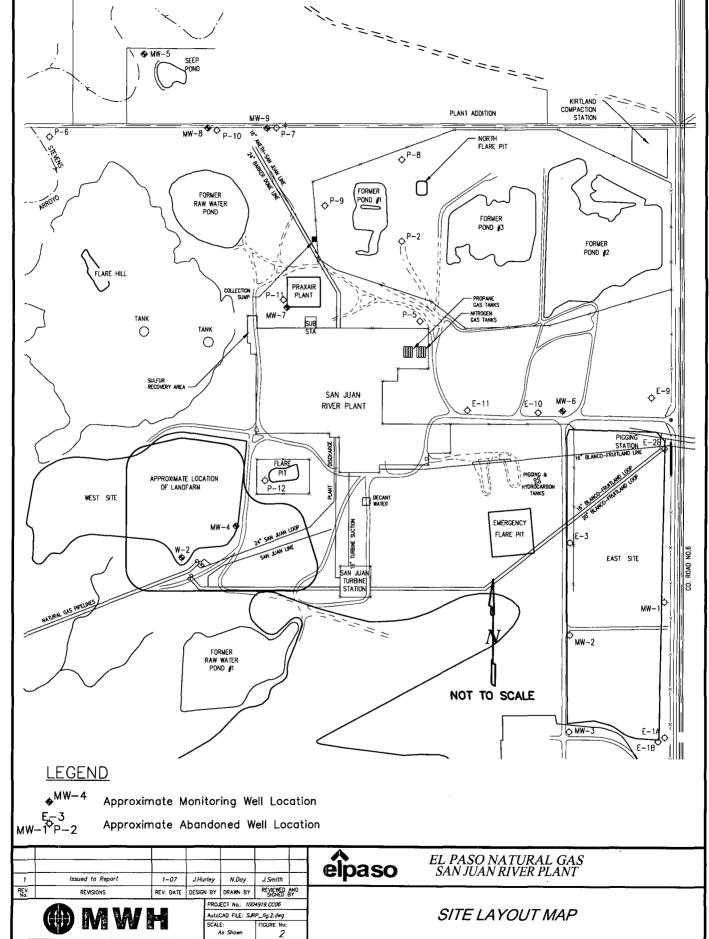
- New Mexico Oil Conservation Division, October 13, 1999. Letter from NMOCD requiring annual groundwater sampling.
- New Mexico Oil Conservation Division, June 4, 2001, Letter to Mr. Scott Pope, El Paso Energy Corporation, Case #GW039R, *Groundwater Monitoring Results and Remediation Work Plan*, San Juan River Plant, Kirtland, New Mexico.
- New Mexico Oil Conservation Division, January 23, 2006, Letter to Mr. Scott Pope, El Paso Energy Corporation, Case #GW039R, Stage 1 Abatement Plan Proposal El Paso Natural Gas – San Juan River Plant/ Praxair Nitrogen Plant, San Juan River Plant, Kirtland, New Mexico.
- Philip Services Corporation, 2000, San Juan River Plant: *Groundwater Remediation Work Plan, Prepared for El Paso Natural Gas,* Farmington, New Mexico, December 2000.
- Philip Environmental, 1998, Summary of Investigations at the San Juan River Plant, Kirtland, New Mexico, prepared for El Paso Natural Gas Company, Farmington, New Mexico, June 1998.
- Philip Environmental, 1995, Soil-Gas and Soil Survey, San Juan River Plant, Kirtland, New Mexico, prepared for El Paso Natural Gas Company, Farmington, New Mexico, August 1995.

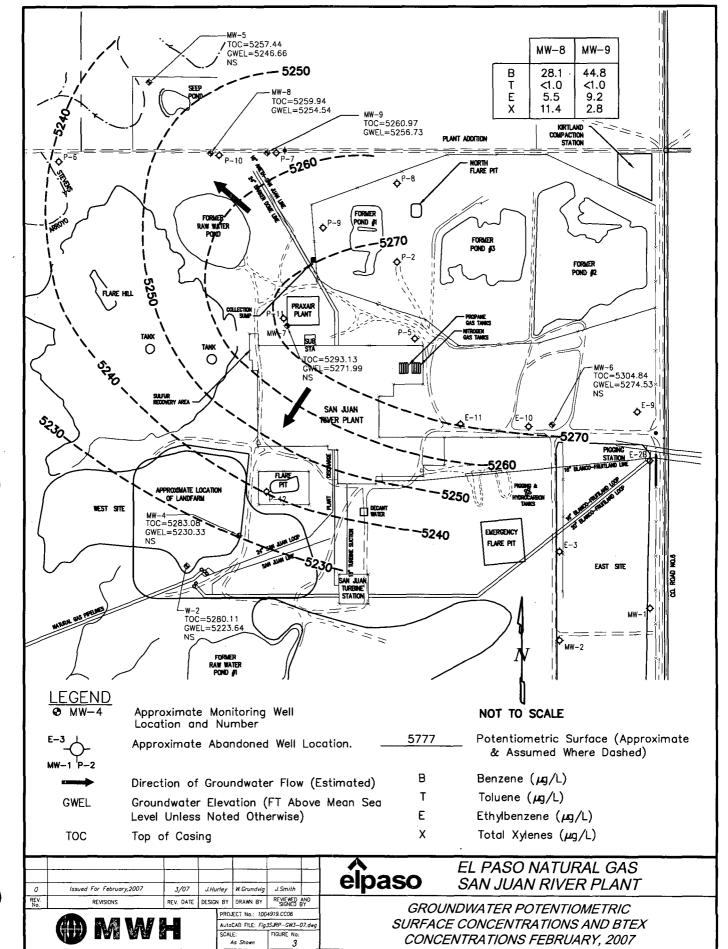


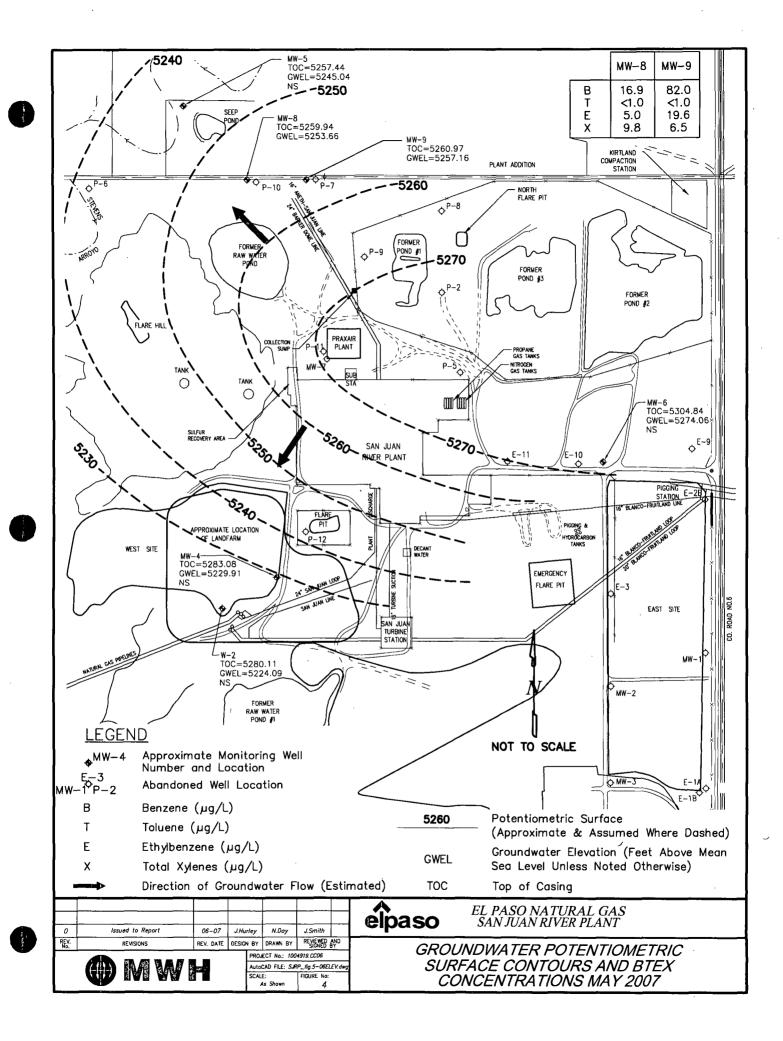
FIGURES

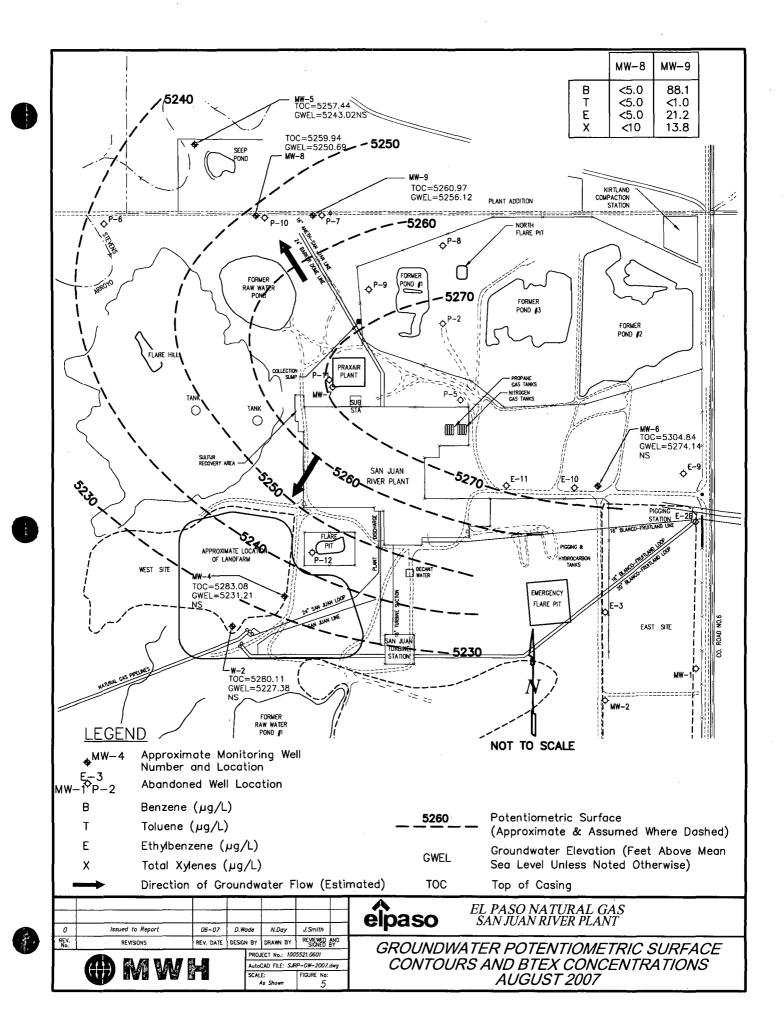


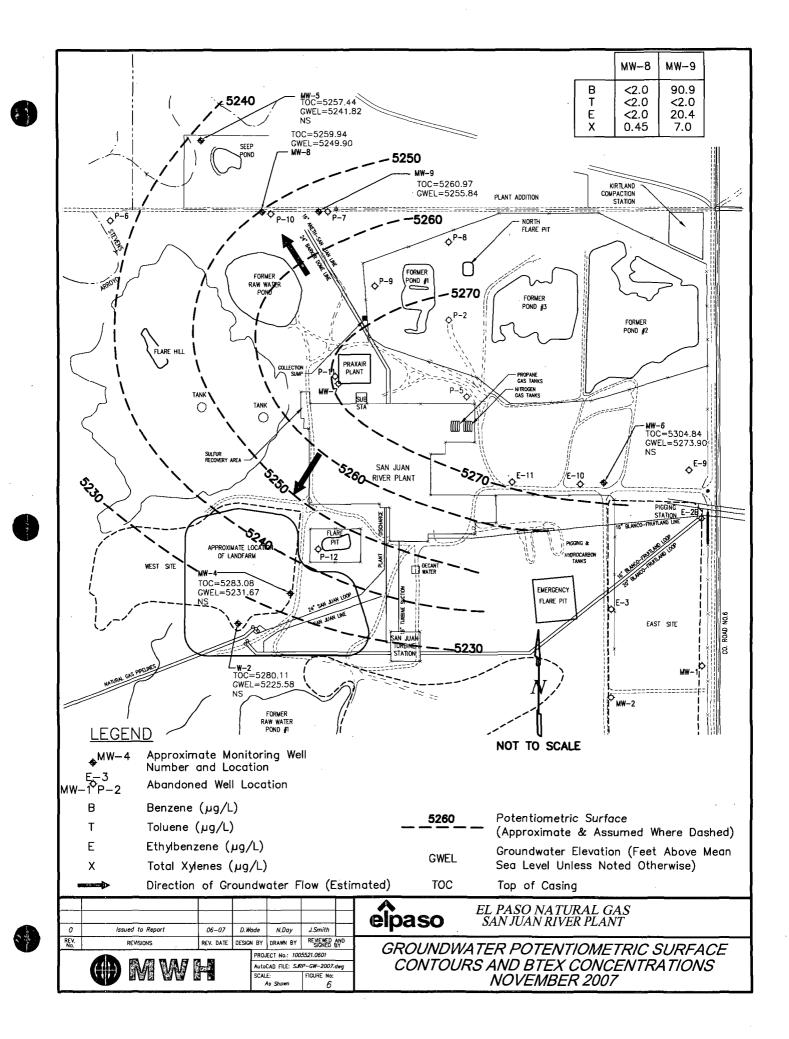


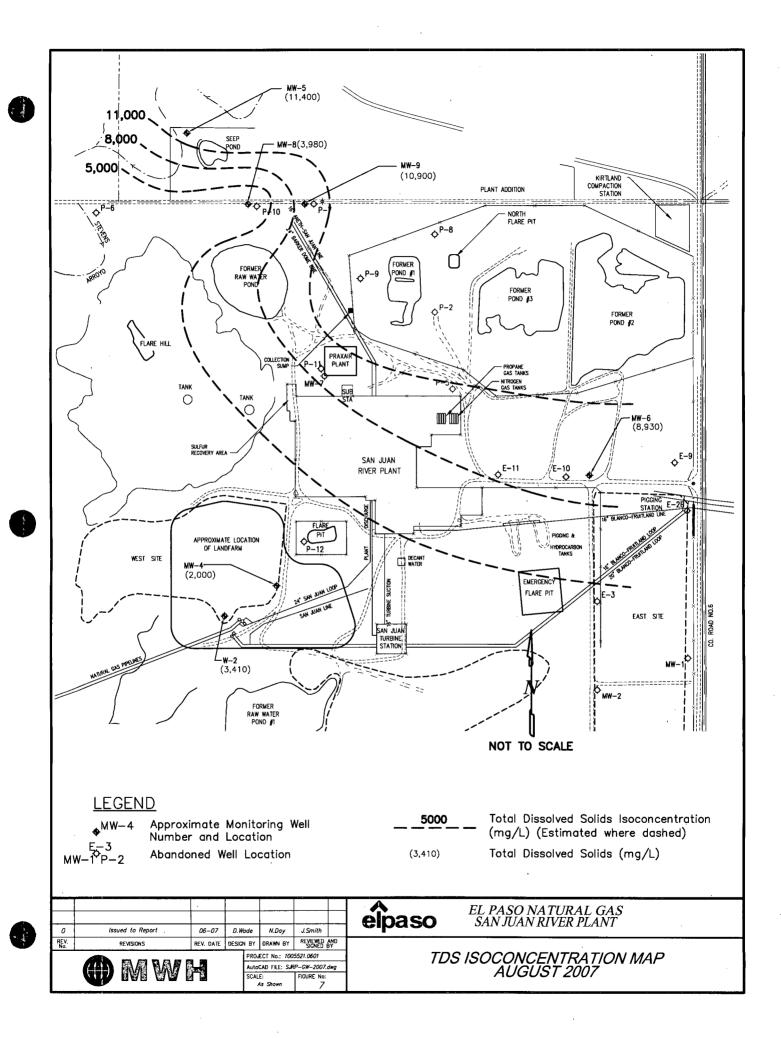


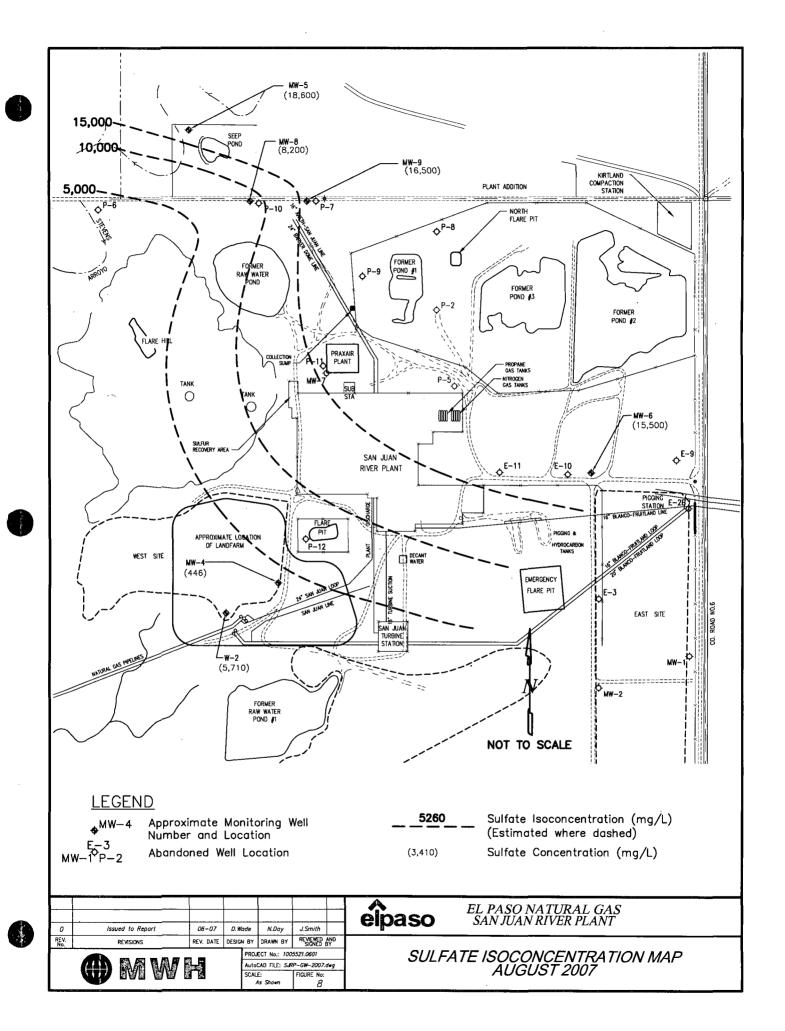




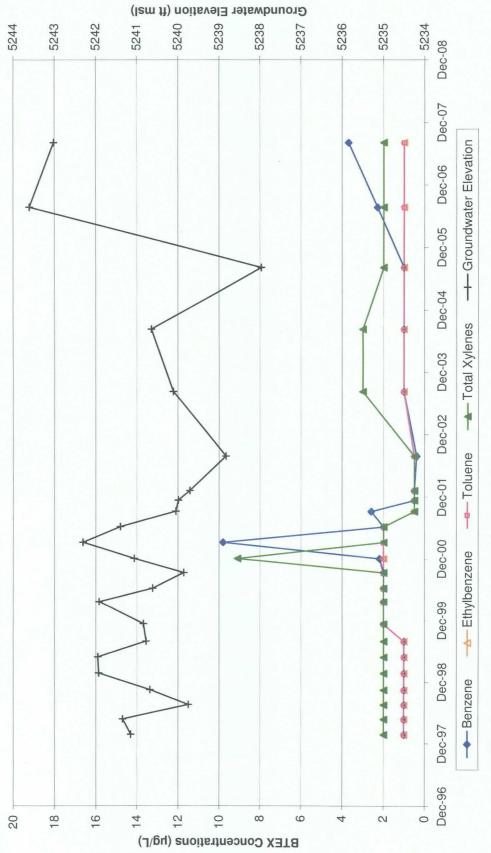








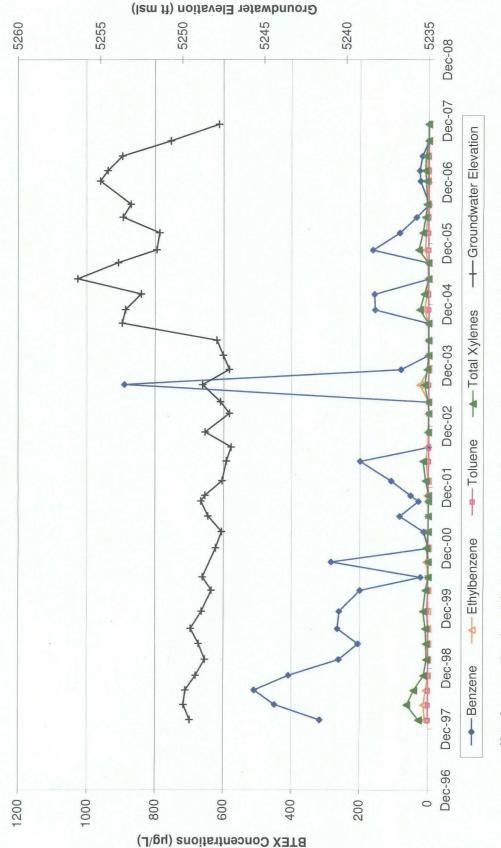




Note: A concentration of 1 µg/L for benzene, toluene, or ethylbenzene and a concentration of 2 µg/L for total xylene indicates parameter not detected.

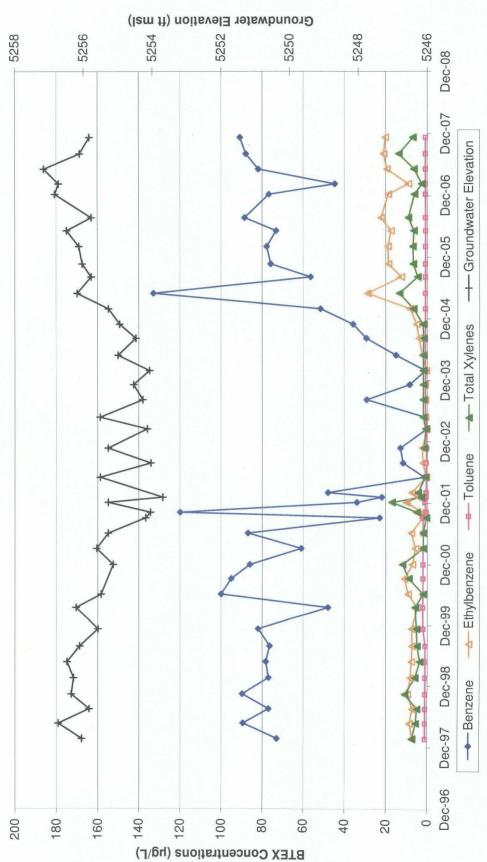






Note: A concentration of 1 µg/L for benzene, toluene, or ethylbenzene and a concentration of 2 µg/L for total xylene indicates parameter not detected.

FIGURE 11 Historic MW-9 BTEX Concentrations and Groundwater Elevations San Juan River Plant Site



Note: A concentration of 1 µg/L for benzene, toluene, or ethylbenzene and a concentration of 2 µg/L for total xylene indicates parameter not detected.



TABLES

.

.

.

•

**TABLE 1** 

# SUMMARY OF 2007 BTEX ANALYTICAL AND FIELD DATA

SAN JUAN RIVER PLANT SITE

Location Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	m,p-Xylene (µg/L)	o-Xylene (μg/L)	Total Xylenes (µg/L)	Field pH (Std. Units)	Temperature (°F)	Conductivity (µmhos/cm)	Depth to Water (feet bgs)
• W-2	8/23/2007	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	7.07	16.3	4,610	52.73
MW-4	8/23/2007	0.37J	<1.0	<1.0	<2.0	<1.0	<2.0	6.74	18.6	4,040	51.87
MW-5	8/23/2007	3.7	<1.0	<1.0	<1.0	<1.0	<2.0	5.11	15.8	12,740	14.42
9-MM	8/23/2007	<1.0	<1.0	<1.0		<1.0	<2.0	5.24	16.1	11,270	30.70
8-WM	2/27/2007	28.1	<1.0	5.5	11.4	<1.0	11.4	6.41	12.7	7,570	5.40
MW-8	5/25/2007	19.6	<1.0	. 5.0	9.8	<1.0	9.8	7.04	13.9	10,460	6.28
MW-8	8/23/2007	<5.0J	<5.0J	<5.01	<5.0J	<5.0J	<10J	6.97	17.0	6,440	9.25
MW-8	11/28/2007	<2.0J	<2.0J	<2.0J	<4.0J	<2.0J	0.45J	7.50	13.4	14,970	12.16
6-MM	2/27/2007	44.8	<1.0	9.2	2.8	<1.0	2.8	4.71	14.8	16,010	4.24
6-MM	5/25/2007	82	<1.0	19.6	6.5	<1.0	6.5	4.64	14.0	19,640	3.81
6-WM	8/23/2007	88.1	<1.0	21.2	13.8	<1.0	13.8	4.81	15.7	11,400	4.85
6-MM	11/28/2007	90.9	<2.0	20.4	7.0	<2.0	7	5.53	12.4	15,570	5.13
J = Estimated value or reporting limit	e or reporting lit	mit.									

Esumated value or reporting limit.

TABLE 2 SUMMARY OF 2007 INORGANIC ANALYTICAL DATA SAN JUAN RIVER PLANT SITE

	NMWQCC	W-2	MW-4	MW-5	9-MW	8-WM	6-MM
rarameter	Standard	8/23/2007	8/23/2007	8/23/2007	8/23/2007	8/23/2007	8/23/2007
Metals							
Aluminum (µg/L)	5,000	12,800	9,290	16,900	12,600	1,300	16,300
Arsenic (µg/L)	100	< 5.0	21.1	< 5.0	< 5.0	< 5.0	< 5.0
Barium (μg/L)	1,000	< 200	< 200	< 200	< 200	< 200	< 200
Cadmium (µg/L)	10	0.37J	< 4.0	4.8	8.1	< 4.0	< 4.0
Calcium (µg/L)	NE	404,000	249,000	342,000	325,000	69,500	108,000
Chromium (µg/L)	50	< 10	< 10	< 10	< 10	< 10	< 10
Cobalt (µg/L)	50	< 50	88.3	63.7	161	< 50	205
Copper (µg/L)	1,000	32.9	68.3	30	38.7	< 25	121
Iron (µg/L)	1,000	<5.0J	<5.0J	<5.0J	<5.0J	<5.0J	<10J
Lead (µg/L)	50	<2.0J	<2.0J	<2.0J	<4.0J	<2.0J	0.45J
Magnesium (µg/L)	NE	133,000	108,000	232,000	356,000	288,000	289,000
Manganese (µg/L)	200	223	6,590	8,040	5,880	590	6,420
Mercury (µg/L)	2	< 0.20	0.42	< 0.20	< 0.20	< 0.20	< 0.20
Molybdenum (µg/L)	1,000	< 10	< 10	< 10	< 10	16.5	, <10
limit.	200	< 40	268	183	187	< 40	318
Potassium (µg/L)	NE	8,880	10,100	46,400	39,400	87,400	23,700
Selenium (µg/L)	50	143 *	< 5.0	< 5.0	893	< 5.0	<5.0
Silver (µg/L)	50	< 10	< 10	< 10	< 10	< 10	< 10
Sodium (µg/L).	NE	1,120,000	910,000	4,410,000	3,370,000	2,220,000	3,590,000
Zinc (µg/L)	10,000	169	110	304	594	132	732
Inorganics							
Alkalinity as CaCO3 (mg/L)	NE	165*	820	35	30	2,580	25
Chloride (mg/L)	250	338	303	1730	. 1830	165	775
Nitrate+Nitrite (mg/L)	10	18	2.1	2.6	258	0.6	0.4
Sulfate (mg/L)	600	5,710	4,460	18,600	15,500	8,200	16,500
Total Dissolved Solids (mg/L)	1,000	3,410	2,000	11,400	8,930	3,980	10,900

NE = Not established





**APPENDICES** 

### **APPENDIX A**

### 2007 DOCUMENTATION OF FIELD ACTIVITIES

(Included electronically on attached CD)

# Lodestar Services, Incorporated

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

### WATER LEVEL DATA

Project Name_	San Juan Basin Ground Water	Project No.	30001.0
Project Manager	MJN		
<b>Client Company</b>	MWH	Date	022707
Site Name	San Juan River Plant	·	

MW-4         11           W-2	20 -	56 30 21	.47 .31 .14	
MW-6 MW-7 MW-8		30 21	31 14	
MW-7 MW-8		21	.14	
MW-8				
		5.	40	
MW-9	-		40	Sampled for BTEX
		4.	24	Sampled for BTEX
MW-5	-	10	.78	

Comments: Reinstalled ORC in MW-8 following sampling.

Signature:

Martín J. Nee

Date:

February 27, 2007

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River</u>	Plant Client: <u>MWH/EL Paso</u>
Location: <u>SJRP</u>	Well No: <u>MW-8</u>	Development Sampling
Project Manager MJN	Date 022707	Start Time <u>1004</u> Weather <u>windy 40s</u>
Depth to Water5.4 Depth to Pro	oduct <u>na</u> Product Thickness_	na Measuring Point <u>TOC</u>
Water Column Height <u>16.8</u>	Well Dia4"	

### WELL DEVELOPMENT AND SAMPLING LOG

Sampling Method: Submersible Pump 🗋 Centrifugal Pump 📋 Peristaltic Pump 🔲 Other 📋

Bottom Valve Bailer x Double Check Valve Bailer

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other <u>or bail dry</u>

	Water Volu	ime in Well	
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
16.8 x 0.65	10.92 x 3		32.76

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1011	5.96	6810	11.7				4.5	clear, yellow tinge
	5.84	6650	11.3				9	clear, yellow tinge
	5.79	6700	11.8			•	13.5	clear, yellow tinge
	5.85	6850	12.0				18	clear, yellow tinge
	6.46	7340	12.5				22.5	clear, yellow tinge
	6.34	7420	12.7				27	clear, yellow tinge
	6.41	7740	12.8				31.5	clear, yellow tinge
<u>1102</u>	6.41	7570	12.7		9.02		36	clear, yellow tinge
							<u> </u>	
							<u></u>	

Final:							Ferrous	and a set of set	
Time	pH .	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>1102</u>	6.41	7570	12.7		9.02			36	clear, yellow tinge

COMMENTS: ORC socks had been out of the well since 022607 Replaced them after sampling.

INSTRUMENTATION:	pH Meter >	x	Temperat	ure Meter x
	DO Monitor)	x	Other	
Condu	uctivity Meter <b>)</b>	x		
Water Disposal <u>Rio Vista</u>	Sample ID	D_SJRP MW-8	Sample Time_	1103
<b><u>BTEX</u></b> VOCs Alkalinity	TDS Cations	Anions Nitrate	Nitrite Ammonia TKN NM	WQCC Metals Total Phosphorus
MS/MSD	BD		BD Name/Time	TB_ <u>260207tb01</u>

### WELL DEVELOPMENT AND SAMPLING LOG

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u> Client: <u>MWH/EL Paso</u>
Location:_SJRP	Well No: <u>MW-9</u> Development <u>Sampling</u>
Project Manager MJN	Date 022707 Start Time 1127 Weather Windy 40s
Depth to Water <u>4.24</u> Depth to I	Product <u>na</u> Product Thickness <u>na</u> Measuring Point <u>TOC</u>
Water Column Height <u>17.68</u>	Well Dia 4"

Sampling Method: Submersible Pump 🗋 Centrifugal Pump 📋 Peristaltic Pump 📋 Other 📋

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

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

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
17.68 x 0.65	11.49 x 3		33.69

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1149	4.45	17350	14.6				4.5	clear yellow tinge
	4.23	15240	13.9				9	clear yellow tinge
	4.26	15470	14.2				13.5	clear yellow tinge
	4.45	16390	14.8				18	clear yellow tinge
	4.70	15940	14.8				22.5	clear yellow tinge, well is bailing down
<u>1217</u>	4.71	16010	14.8		1.02		26.5	clear yellow tinge, well has bailed down

Final:							Ferrous		
Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>1217</u>	4.71	16010	14.8		1.02	-		26.5	clear yellow tinge, well has bailed down

Γ

INSTRUMENTATION:	pH Meter X		Temperature Meter x				
	DO Monitor <b>X</b>		Oth	ner _			
Cond	uctivity Meter X						
Water Disposal <u>Rio VIsta</u>	Sample ID_	SJRP MW-9	Sample	Time	1220		
<b><u>BTEX</u></b> VOCs Alkalinity	TDS Cations	Anions Nitrate	Nitrite Ammonia TK	N NMW	WQCC Metals Total Phosphorus		
MS/MSD	BD	BI	D Name/Time		TB		

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

### WATER LEVEL DATA

Project Name_ Project Manager Client Company Site Name			n Juan Basin IN WH n Juan River		Proje Date		<u>30001.0</u> 052507		
Well Ti		e	Depth to Product (ft)	Depth to Water (ft)		Total Depth		Comments	
MW-4	083	0	-	53.17					
W-2			-	56.02				· .	
MW-6			-	30.78					
MW-7			-	na			W	ell abandoned	
MW-8			-	6.28				npled for BTEX	
MW-9			-	3.81			Sam	Sampled for BTEX	
MW-5	-		-	12.40					

Comments: Reinstalled ORC in MW-8 following sampling.

Signature: N

Martín J. Nee

Date:

May 25, 2007

1

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u>	Client: MWH/EL Paso		
Location: SJRP	Well No: <u>MW-8</u>	Development Sampling		
Project Manager MJN	Date052507 Start Time_	<u>1012</u> Weather <u>70s</u>		
Depth to Water 6.28	Depth to Product na Product Thickness na	Measuring Point		
Water Column Height <u>15.92</u>	Well Dia4"			

Sampling Method: Submersible Pump 🗋 Centrifugal Pump 🗇 Peristaltic Pump 🗇 Other 📋

Г

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

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other <u>or bail dry</u>

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
15.92 x 0.65	10.35 x 3		31.04

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1018	6.73	7310	15.6				1	clear
	6.72	7050	13.9				5	clear
	6.67	6890	13.7				10	clear
	7.22	7650	14.0				15	clear, slight yellow tinge
	6.94	7580	13.8				20	clear, slight yellow tinge
	6.86	8860	14.0				25	clear, slight yellow tinge
	9.10	8290	14.0				30	clear, slight yellow tinge, well is bailing down
	9.49	8600	14.0				31	clear, slight yellow tinge
<u>1053</u>	7.04	10460	13.9		11.4		32	clear, slight yellow tinge, well has bailed down

Final:								
Time	pH _	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
<u>1053</u>	7.04	10460	13.9		11.4		32	clear, slight yellow tinge, well has bailed down

COMMENTS: ORC socks had been out of the well since 052407 Replaced them after sampling.

INSTRUMENTATION:	pH Meter X		Temperature Me	eter x
	DO Monitor <b>X</b>		Other	
Condi	uctivity Meter <b>X</b>			
Water Disposal <u>Rio Vista</u>	_ Sample ID	SJRP MW-8	Sample Time 1055	I
<b><u>BTEX</u></b> VOCs Alkalinity	TDS Cations	Anions Nitrate Nitrite	Ammonia TKN NMWQCC	Metals Total Phosphorus
MS/MSD	BD	BD Nam	e/Time	TB_240507tb01_

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u>	Client: <u>MWH/EL Paso</u>
Location: SJRP	Well No:MW-9	Development Sampling
Project Manager MJN	Date052507 Start Time	0925 Weather 70s
Depth to Water 3.81	Depth to Product <u>na</u> Product Thickness <u>na</u>	Measuring Point
Water Column Height18.11	Well Dia4"	

Sampling Method: Submersible Pump 🗌 🛛 Centrifugal Pump 📋 Peristaltic Pump 🔲 Other 🔲

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

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

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
18.11 x 0.65	11.77 x 3		35.31

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0928	4.48	16260	16.4				1	clear yellow tinge, sudsy
	4.39	15430	14.5				5	clear yellow tinge, sudsy
	4.45	15070	14.0				10	clear yellow tinge, sudsy
	4.44	15170	14.1				15	clear yellow tinge, sudsy
	4.01	15830	14.0				20	clear yellow tinge, sudsy, well is bailing down
	4.44	15330	13.9				25	clear yellow tinge, sudsy
<u>0956</u>	4.64	19640	14.0		1.93		28	clear yellow tinge, sudsy, well has bailed down
	-							
	<u> </u>						<u> </u>	· · · · · · · · · · · · · · · · · · ·

Final:								
Time	рН	SC	Temp	Eh-ORP	D.O.	Turbidity	Vol Evac.	Comments/Flow Rate
<u>0956</u>	4.64	19640	14.0		1.93		28	clear yellow tinge, sudsy, well has bailed down

COMMENTS:

INSTRUMENTATION:	pH Meter X		Temperat	ure Meter x
	DO Monitor <b>X</b>		Other	
Cond	uctivity Meter X			
Water Disposal <u>Rio VIsta</u>	Sample ID_	SJRP MW-9	Sample Time	1000
<b><u>BTEX</u> VOCs</b> Alkalinity	TDS Cations	Anions Nitrate	Nitrite Ammonia TKN NM	WQCC Metals Total Phosphorus
MS/MSD	BD	E	BD Name/Time	TB_240507TB01

Lodestar Services, Incorporated

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

### WATER LEVEL DATA

Project Name_ Project Manager Client Company Site Name Well Tim		Sa	n Juan Basin	Ground W	ater Pr	oject No.	30001.0	
			JN		Da	40	002207	
			WH n Juan River	Plant	Da		082307	
		1e	Depth to Product (ft)	Depth to Water (ft)	Total Depth	C	Comments	
MUV 4 0(49 51 97					Sampled (	omplata analyta list		

			(II)	
MW-4	0648	-	51.87	Sampled, complete analyte list
W-2		-	52.73	Sampled, complete analyte list
MW-6		-	30.70	Sampled, complete analyte list
MW-7		-		abandoned 5/07
MW-8		-	9.25	Sampled, complete analyte list
MW-9		-	4.85	Sampled, complete analyte list
MW-5		-	14.42	Sampled, complete analyte list
			-	

Comments: MW-8 not static, pulled ORC socks 4 hrs before sampling. Reinstalled ORC in MW-8 following sampling.

Signature: 1

Martin J. Nee

Date:

August 23, 2007

.

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u> Client: <u>MWH/EL Paso</u>
Location: SJRP	Well No:MW-4 Development Sampling
Project ManagerMJN	Date 8/23/07 Start Time 0831 Weather sunny 80s
Depth to Water <u>51.87</u>	Depth to Product <u>na</u> Product Thickness <u>na</u> Measuring Point <u>TOC</u>
Water Column Height <u>5.04</u>	Well Dia2"

Sampling Method: Submersible Pump Centrifugal Pump Peristaltic Pump Other

Bottom Valve Bailer x Do

Double Check Valve Bailer

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

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
5.04 x 0.16	.80 x 3		2.42 g

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (ounces)	Comments/ Flow rate
0842	6.82	3880	18.2				.25	clear
	6.87	3820	17.6				.5	clear
	6.83	4030	17.6				.75	clear, well is bailing down
<u>0851</u>	6.74	4040	18.6				1.25	cloudy, well has bailed down

Final:						1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	Ferrous		
Time	pН	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
0851	6.74	4040	18.6					1.25	cloudy, well has bailed down

COMMENTS:

INSTRUMENTATION: pH Meter X	Temperature Meter x
DO Monitor <b>X</b>	Other
Conductivity Meter X	
Water Disposal <u>Rio Vista</u> Sample ID_SJRP M	<u>MW-4</u> Sample Time0852
<b><u>BTEX</u></b> VOCs Alkalinity TDS Cations A Phosphorus	nions Nitrate Nitrite Ammonia TKN NMWQCC Metals Total
MS/MSDBD	BD Name/Time TB

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u> Client: <u>MWH/EL Paso</u>
Location: SJRP	Well No: <u>MW-5</u> Development <u>Sampling</u>
Project Manager MJN	Date 8/23/07 Start Time 0918 Weather sunny 80s
Depth to Water <u>14.42</u>	Depth to Product <u>na</u> Product Thickness <u>na</u> Measuring Point <u>TOC</u>
Water Column Height <u>17.49</u>	Well Dia 4"

Sampling Method: Submersible Pump Centrifugal Pump Peristaltic Pump Other

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

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

	Water Volu	me in Well	
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
17.49 x 0.65	11.35 x 3		34.07

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0923	4.78	13420	18.4				1	clear
	4.76	12650	17.0				2	grey, cloudy
	4.78	13790	16.4				3	grey, cloudy
	4.78	12590	16.1				5	grey, cloudy
	4.74	12760	16.8				10	grey, cloudy
	4.82	12920	16.5				15	grey, cloudy
	4.93	14040	16.2				20	grey, cloudy
	4.92	13060	16.4				25	grey, cloudy
	4.95	13130	16.1				26	cloudy, well is bailing down
	4.98	12750	15.8				27.5	cloudy
<u>0952</u>	5.11	12740	15.8				27.75	cloudy, well has bailed down

Final:		, ·					Ferrous					
Time	рН	SC	Temp	Eh-ORP	D.O	Turbidity	Iron	Vol Evac.	Commer	nts/Flov	w Rat	е
<u>0952</u>	5.11	12740	15.8					27.75	cloudy,	well	has	bailed
									down			

COMMENTS:

Γ

· · · · · · · · · · · · · · · · · · ·	Temperature Meter x
	Other
PMW-5 Sam	nple Time0955
Anions Nitrate Nitri	te Ammonia TKN NMWQCC Metals Total
BD Name/Time	ТВ
	Anions Nitrate Nitri

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u> Client: <u>MWH/EL Paso</u>
Location: SJRP	Well No: <u>MW-6</u> Development <u>Sampling</u>
Project ManagerMJN	Date <u>8/23/07</u> Start Time <u>0702</u> Weather <u>sunny 80s</u>
Depth to Water <u>30.70</u>	Depth to Product <u>na</u> Product Thickness <u>na</u> Measuring Point <u>TOC</u>
Water Column Height <u>11.45</u>	Well Dia4"

Sampling Method: Submersible Pump 🔲 Centrifugal Pump 🔲 Peristaltic Pump 📋 Other 🔲

Bottom Valve Bailer x Double Check Valve Bailer 🗆 Stainless-Steel Kemmerer

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

	Water Volu	ume in Well	
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
11.45 x 0.65	7.42 x 3		22.29
11.40 × 0.00	1.12 × 0		22.20

Tìme (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
0702	6.84	10600	16.4				1	tan, cloudy
	7.09	10820	16.2				2	tan, cloudy
	7.15	12160	16.2				3	tan, cloudy
	7.09	10880	16.1				5	tan, cloudy
	6.29	11310	16.3				10	tan, cloudy
	5.81	11310	16.1				15	tan, cloudy
	5.61	11360	16.1				20	tan, cloudy
	5.52	11300	16.1				21	tan, cloudy
	5.63	11220	16.1	<u> </u>			22	tan, cloudy
0734	5.24	11270	16.1				23	tan, cloudy

Final:							Ferrous		
Time	рН	SC	Temp	Eh-ORP	D.Q.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>0734</u>	5.24	11270	16.1					23	tan, cloudy

COMMENTS:

INSTRUMENTATION:	pH Meter	X			Temperatu	ire Meter x	
	DO Moni	tor <b>X</b>			Other		
Cond	uctivity Met	ter X					
Water Disposal <u>Rio Vista</u>	Sample I	D_SJRP_MV	<u>N-6</u>		Sample Time 073	5	
BTEX VOCs Alkalinit	y TDS (	Cations A	Anions	Nitrate	Nitrite Ammonia	A TKN <b>NMWQCC</b> I	Metals Total
Phosphorus							
MS/MSD	BD_	·		BD Name/	Time	ТВ	

Project No.: <u>30001.0</u>	Project Name: San Juan River Plant	Client: <u>MWH/EL Paso</u>
Location: <u>SJRP</u>	Well No: <u>MW-8</u>	Development Sampling
Project Manager MJN	Date <u>08/23/07</u> Start Time	_1105 Weather_clear 90s
Depth to Water <u>9.25</u>	Depth to Product <u>na</u> Product Thickness <u>na</u>	Measuring PointTOC
Water Column Height12.95	Well Dia 4"	

Sampling Method: Submersible Pump C Centrifugal Pump Peristaltic Pump Other

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

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

ſ		Water Volur	ne in Well	
	Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
	12.95x 0.65	8.42 x 3		25.25

Comments/ Flow rate	Vol Evac. (gallons)	Turbidity (NTU)	D.O. (mg/L)	ORP (millivolts)	Temp (°C)	SC (umhos/cm)	pH (su)	Time (military)
hydrocarbon odor	1				21.8	6750	7.02	1110
clear, yellow tinge	2				19.8	6300	6.97	
clear, yellow tinge	3	]			18.7	6300	6.93	
clear, yellow tinge	5				18.1	8610	6.98	
light brown	10				18.1	7260	7.12	x
light brown	15				16.9	7280	7.66	
well is bailing down	17.75				16.4	7080	8.51	
light brown	18.5				16.0	6570	8.21	
well has bailed down	20.5				17.0	6440	6.97	<u>1124</u>
_	20.5				17.0	6440	6.97	<u>1124</u>

Final: Time	рН	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
<u>1124</u>	6.97	6440	17.0		4.82		· .	20.5	well has bailed down

COMMENTS: ORC socks had been out of the well since 082307 0700 hrs, replaced them after sampling

INSTRUMENTATION:	pH Meter X		Temperature Meter x
	DO Monitor <b>X</b>	<u> </u>	Other
Cond	uctivity Meter X		
Water Disposal Rio Vista	Sample ID_S	JRP MW-8	Sample Time <u>1140</u>
<b><u>BTEX</u></b> VOCs Alkalinity	TDS Cations A	nions Nitrate Nitrite An	mmonia TKN NMWQCC Metals Total Phosphorus
MS/MSD	BD	BD Name/Ti	Time TB

Project_No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u>	Client: <u>MWH/EL Paso</u>
Location: SJRP	Well No: <u>MW-9</u>	Development Sampling
Project Manager <u>MJN</u>	Date 08/23/07 Start Time	1015 Weather clear 80s
Depth to Water <u>4.85</u>	Depth to Product <u>na</u> Product Thickness <u>na</u>	Measuring Point <u>TOC</u>
Water Column Height <u>17.07</u>	Well Dia4"	

Sampling Method: Submersible Pump 🗌 Centrifugal Pump 🔲 Peristaltic Pump 🔲 Other 🔲

Bottom Valve Bailer x Double Check Valve Bailer 🗆 Stainless-Steel Kemmerer 🛛

Criteria: 3 to 5 Casing Volumes of Water Removal X stabilization of Indicator Parameters X Other\_\_or bail dry\_

	Water Volu	ıme in Well	
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
17.07 x 0.65	11.09 x 3	, , ,	33.29

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1018	4.47	14390	22.8				1	clear yellow tinge
	4.35	12480	21.3				2	clear yellow tinge
	4.37	12550	20.7				3	clear yellow tinge
	4.38	12890	19.8				5	clear yellow tinge
· ·	4.44	11830	17.3				10	clear yellow tinge
	4.59	12670	16.8				15	clear yellow tinge
	4.45	12670	15.8				20	clear yellow tinge
	4.60	11390	15.4				22.5	clear yellow tinge, well is bailing down
1038	4.81	11400	15.7				24.5	clear yellow tinge, well has bailed down

Final:							Ferrous		
Time	pH	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron ·	Vol Evac.	Comments/Flow Rate
<u>1038</u>	4.81	11400	15.7		0.98			24.5	clear yellow tinge, well has bailed down

COMMENTS:

Г

INSTRUMENTATION:	pH Meter X		Temper	ature Meter x
н. 	DO Monitor <b>X</b>		Other	
Con	ductivity Meter X			
Water Disposal <u>Rio VIsta</u>	a Sample ID_	SJRP MW-9	Sample Time	e <u>1040</u>
<b><u>BTEX</u></b> VOCs Alkalinit	y TDS Cations	Anions Nitrate	Nitrite Ammonia TKN N	MWQCC Metals Total Phosphorus
MS/MSD	BD	B	D Name/Time	ТВ

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u>	Client: <u>MWH/EL Paso</u>	
Location: SJRP	Well No: <u>W-2</u>	Development <u>Sampling</u>	
Project ManagerMJN	Date <u>8/23/07</u> Start Time	0750 Weather sunny 80s	
Depth to Water <u>52.73</u>	Depth to Productna Product Thicknessna	Measuring Point <u>TOC</u>	
Water Column Height <u>11.64</u>	Well Dia2"		

Sampling Method: Submersible Pump Centrifugal Pump Peristaltic Pump Other

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

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

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
11.6 x 0.16	1.8 x 3		5.58

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (oz)	Comments/ Flow rate
0804	6.98	4580	16.8				.25	clear
	7.04	4610	16.5				.5	clear
	7.20	4710	16.5				.75	clear
	7.24	4540	16.5				1	clear
	7.04	4690	16.3				2	slightly cloudy, well is bailing down
	7.07	4620	16.3				2.125	slightly cloudy
<u>0819</u>	7.07	4610	16.3				2.2	slightly cloudy, well has bailed down
								•
							i	

Final:							Ferrous	5	
Time	рН	SC	Temp	Eh-ORP	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>0819</u>	7.07	4610	16.3				·.	2.2	slightly cloudy, well has bailed down

CO	ΜN	1EN	TS:

INSTRUMENTATION: p	oH Meter X	Tem	perature Meter x
	DO MonitorX	Othe	er
Conduc	tivity Meter X		
Water Disposal Rio Vista	Sample ID_SJRP W-2_	Sample Tim	e <u>0820</u>
BTEX VOCs Alkalinity	TDS Cations Anion	s Nitrate Nitrite Am	monia TKN NMWQCC Metals Total
Phosphorus			
MS/MSD	BD	BD Name/Time	ТВ

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

### WATER LEVEL DATA

Project Name_	San Juan Basin Ground Water	Project No.	30001.0
<b>Project Manager</b>	MJN		•
<b>Client Company</b>	МѠН	Date	11/28/07
Site Name	San Juan River Plant		····

Well	Time	Depth to Product (ft)	Depth to Water (ft)	Total Depth	Comments
MW-4	0648	_	51.41		Static
W-2		_	54.53		Static
MW-6		-	30.94		Static
MW-7		-			abandoned 5/07
MW-8		-	10.04		Sampled, BTEX, static
MW-9		_	5.13		Sampled, BTEX, static
MW-5		-	15.62		Static

Comments: Reinstalled ORC in MW-8 following sampling.

Signature: M

Martin J. Nee

Date:

November 28, 2007

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u>	Client: <u>MWH/EL Paso</u>	
Location: SJRP	Well No: <u>MW-8</u>	Development Sampling	
Project Manager <u>MJN</u>	Date <u>11/28/07</u> Start Time	_1313 Weather_clear 40s	
Depth to Water <u>12.16</u>	Depth to Productna Product Thicknessna	Measuring Point <u>TOC</u>	
Water Column Height <u>12.16</u>	Well Dia 4"		

Sampling Method: Submersible Pump Centrifugal Pump Peristaltic Pump Other

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

ſ

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

	Water Volu		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
12.16 x 0.65	7.90 x 3		23.71

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1315	7.18	12970	14.8				1	hydrocarbon odor
	7.23	13950	14.4				2	clear, yellow tinge
	7.03	13410	14.6				3	clear, yellow tinge
	7.02	13880	14.4				5	clear, yellow tinge
	7.19	14260	13.8				10	light brown
	7.85	15860	13.6				15	light brown
<u>1330</u>	7.50	14970	13.4				16.67	well has bailed down

<b>Final:</b> Time	рН	SC	Temp	Eh-ORP	D.O.	Turbidity	Ferrous Iron	Vol Evac.	Comments/Flow Rate
<u>1330</u>	7.50	14970	13.4		,		-	16.67	well has bailed down

COMMENTS: Replaced ORC after sampling. Collected duplicate sample MW-52 time 1531

INSTRUMENTATION:	pH Meter X	Temperat	ture Meter x
	DO MonitorX	Other	
Condu	ctivity Meter X		
Water Disposal <u>Rio Vista</u>	_ Sample ID_SJR	PMW-8Sample Time_	1331
<b><u>BTEX</u></b> VOCs Alkalinity	TDS Cations Anio	ns Nitrate Nitrite Ammonia TKN NM	WQCC Metals Total Phosphorus
MS/MSD	BD	BD Name/Time	TB <u>112807tb01</u>

,

Project No.: <u>30001.0</u>	Project Name: <u>San Juan River Plant</u> Client: <u>MWH/EL Paso</u>
Location: SJRP	Well No:MW-9 Development Sampling
Project Manager MJN	Date <u>11/28/07</u> Start Time <u>1334</u> Weather clear 40s
Depth to Water <u>5.13</u>	Depth to Product <u>na</u> Product Thickness <u>na</u> Measuring Point <u>TOC</u>
Water Column Height <u>16.79</u>	Well Dia 4"

Centrifugal Pump 📋 Peristaltic Pump 🗌 Sampling Method: Submersible Pump Other

Bottom Valve Bailer x

Double Check Valve Bailer 
Stainless-Steel Kemmerer

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

	Water Volum		
Gal/ft x ft of water	Gallons	Ounces	Gal/oz to be removed
16.79 x 0.65	10.91 x 3		32.74

Time (military)	pH (su)	SC (umhos/cm)	Temp (°C)	ORP (millivolts)	D.O. (mg/L)	Turbidity (NTU)	Vol Evac. (gallons)	Comments/ Flow rate
1336	5.2	15750	12.5				1	clear yellow tinge
,	5.25	14580	13.0				2	clear yellow tinge
	5.23	14270	13.4				3	clear yellow tinge
	5.19	14100	13.6				5	clear yellow tinge
	5.22	15950	13.8				10	clear yellow tinge
	5.33	13880	13.4				15	clear yellow tinge
· · · · · · · · · · · · · · · · · · ·	5.43	14030	12.8				20	clear yellow tinge, well is bailing down
<u>1356</u>	5.53	15570	12.4				21.5	clear yellow tinge, well has bailed down

Final:							Ferrous		
Time	рH	SC - SC -	Temp	Eh-ORP,	D.O.	Turbidity	Iron	Vol Evac.	Comments/Flow Rate
<u>1356</u>	5.53	15570	12.4					21.5	clear yellow tinge, well has bailed down

COMMENTS:

Г

INSTRUMENTATION:	pH Meter X	· · · · · · · · · · · · · · · · · · ·	Temperature Meter x
	DO Monitor <b>X</b>		Other
Condu	uctivity Meter X		
Water Disposal Rio VIsta	Sample ID <u>SJI</u>	<u>RP MW-9</u> Sa	ample Time <u>1357</u>
<b><u>BTEX</u></b> VOCs Alkalinity	TDS Cations And	ons Nitrate Nitrite Ammoni	ia TKN NMWQCC Metals Total Phosphorus
MS/MSD	BD	BD Name/Time	TB_112807tb01

## APPENDIX B

## 2007 LABORATORY REPORTS

(Included electronically on attached CD)

### **DATA VERIFICATION WORKSHEET** (Page 1 of 2)

Analytical Method/Analytes:	SW-846 8021B (BTEX)	Sample Collection Date(s): _	02/27/07				
Laboratory: _	Accutest	MWH Job Number: _	SJRB				
Batch Identification:	T16473	 Matrix:	Water				
MS/MSD Parent(s) <sup>(a)</sup> :	None	Field Replicate Parent(s): _	None				
Verification _	( inight	- 06/26/	07				
	(Date/Signature)						

Foot				Hits		
Notes	Site ID	Sample ID	Lab. ID	(Y/N)	Quals.	Comments
None	SJRB	MW-8,SJRP	T16473-1	Y	None	
None	SJRB	MW-9,SJRP	T16473-2	Y	None	
				[		
					·	
		· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			
				<u> </u>		
				<u> </u>		
				· · · · · · · · · · · · · · · · · · ·		
					·····	
			· · · · · · · · · · · · · · · · · · ·			
·						
				<u> </u>		· · · · · · · · · · · · · · · · · · ·
·		<b></b>				
	l					

#### DATA VERIFICATION WORKSHEET (Page 2 of 2)

Analytical Method:	SW-846 8021B (BTEX)	MWH Job Number:	SJRB	
Laboratory:	Accutest	<b>Batch Identification:</b>	T16473	

Verification Criteria MW-8 MW-9 Sample ID Lab ID T16473-1 T16473-2 Holding Time A Α Analyte List А A Reporting Limits A А Surrogate Spike Recovery A Α Trip Blank A Α Equipment Rinseate Blanks N/A N/A Field Duplicate/Replicate N/A N/A Initial Calibration Ν Ν Initial Calibration Verification (ICV) Ν Ν Continuing Calibration Verification (CCV) Ν Ν Method Blank A A Laboratory Control Sample (LCS) A А Laboratory Control Sample Duplicate (LCSD) Ν Ν Matrix Spike/Matrix Spike Dup. (MS/MSD)  $A^3$ N/A Retention Time Window Ν Ν Injection Time(s) Ν Ν Hardcopy vs. Chain-of-Custody A A EDD vs. Hardcopy N N. EDD vs. Chain of Custody Ν Ν

(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:



e-Hardcopy 2.0 Automated Report



03/02/07

**Technical Report for** 

Montgomery Watson

San Juan River Plant (SJRP)

D-ALAB-SANJUAN-006

Accutest Job Number: T16473

Sampling Date: 02/27/07

Report to:

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

ATTN: Ms. Jennifer Hurley

Total number of pages in report: 15



helaci

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.





# **Table of Contents**

N

ශ

4

6

### -1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	5
<b>3.1:</b> T16473-1: MW-8,SJRP	6
<b>3.2:</b> T16473-2: MW-9,SJRP	7
Section 4: Misc. Forms	8
4.1: Chain of Custody	9
Section 5: GC Volatiles - QC Data Summaries	11
5.1: Method Blank Summary	12
5.2: Blank Spike Summary	14
5.3: Matrix Spike/Matrix Spike Duplicate Summary	15



Accutest Laboratories

## Sample Summary

### Montgomery Watson

Job No: T16473

San Juan River Plant (SJRP) Project No: D-ALAB-SANJUAN-006

Sample	Collected	Matrix	Client
Number	Date Time By	Received Code Type	Sample ID
T16473-1	02/27/07 11:03 M	N 02/28/07 AQ Water	MW-8,SJRP
T16473-2	02/27/07 12:20 M	N 02/28/07 AQ Water	MW-9,SJRP





### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Montgomery Watson

Site: San Juan River Plant (SJRP)

**Job No** T16473

3/2/2007 3:58:16 PM

**Report Date** 

2 Samples were collected on 02/27/2007 and were received at Accutest on 02/28/2007 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of T16473. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

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

#### Volatiles by GC By Method SW846 8021B

	Matrix	AQ	Batch ID:	GKK1020
•				

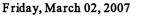
All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

• Sample(s) T16479-7MS, T16479-7MSD were used as the QC samples indicated.

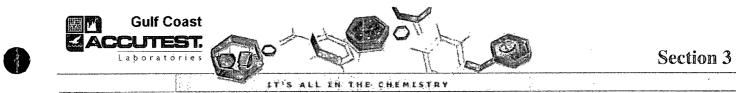
(

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



Page 1 of 1





Sample Results
Report of Analysis



ඖ

#### Accutest Laboratories

		Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:		ant (SJRP)		Date I	Sampled: Received: nt Solids:	02/28/07	
Run #1 Run #2	File IDDFKK018290.D1	Analyzed 03/01/07	<b>By</b> ZLH	Prep D n/a	ate	<b>Prep Batch</b> n/a	Analytical Batch GKK1020
Run #1 Run #2	Purge Volume 5.0 ml						
Purgeable CAS No.	Aromatics Compound	Result	RL .	MDL	Units	Q	
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene	28.1 ND 5.5	1.0 1.0 1.0	0.35 0.20 0.33	ug/l ug/l ug/l	×	
1330-20-7 95-47-6	Xylenes (total) o-Xylene m,p-Xylene	11.4 ND 11.4	2.0 1.0 1.0	0.36 0.14 0.36	ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	<b>Run#</b> 1	Run# 2	Lim	its		
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	92% 92%			36% 44%		

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



<u>ω</u>

#### Accutest Laboratories

7

			Repo	rt of An	alysis			Page 1 of
Client Sam Lab Sampl Matrix: Method: Project:	le ID: T16473 AQ - V SW846	3-2 Vater 8021B	ant (SJRP)		Date I	Sampled: Received 1t Solids	: 02/28/07	
Run #1 Run #2	<b>File ID</b> KK018291.D	DF 1	<b>Analyzed</b> 03/01/07	<b>By</b> ZLH	Prep D n/a	ate	Prep Batch n/a	Analytical Batch GKK1020
Run #1 Run #2	Purge Volume 5.0 ml					<u> </u>		
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		44.8 ND 9.2 2.8 ND 2.8	1.0 1.0 2.0 1.0 1.0	0.35 0.20 0.33 0.36 0.14 0.36	ug/l ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its		

CAD NO.	Surrogate Recoveries	Nulliff I	қсан <i>н 2</i>	Linits
460-00-4	4-Bromofluorobenzene	90%		56-136%
98-08-8	aaa-Trifluorotoluene	104%		50-144%

ND = Not detectedMDL - Method Detection LimitRL = Reporting LimitE = 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



3.2

சூ



Custody Documents and Other For	ms

Includes the following where applicable:

• Chain of Custody





							0165 Ha 3-271-4							Accultors Qu			648 so Pricing	$v_{\perp}$	ttle Order cutest Jo			<u> </u>	12
	Laborator	re ş												Sales Land	n na s	2.623.92	1971 8 20	1.74		- <b>A</b> - <b>O</b> -		<u>041</u>	- <u>)</u> #17888959
	Client / Reporting Information	21.28.63744.28		NU ACCER I	Proj	ect Infor	mation	E	(Teas	28 X X	1111	6000	(29 <b>2</b> 5)	<b></b>			1 1	Request	ed Ana	ysis	00703004425	statt Matrix	Codes
mpany N	ame MWH Americas, Inc.			Project N	lame:	SAN JU	AN BASI	N Plani	1	1													Drinking Water Ground Water
dress				Street																			W-Water
1601 Cal Y	Itomia <u>St.</u> Sutte 2900 State		2ip	CHY					late	<u> </u>													Surface Water SO- Soll
				Colorado	Springs				Co													s	SL-SLIDGe
Danver bject Cont	CO	80202		Project #					••	+			_										01-01
one#	Chandler Cole			Fax #									•									LO OF	her Liquid
	303-291-2161						_															AIF	R- Ak
mpters's l	Name Martin D			Client Pu	rchase Order	*	D-ALA	3_\$an.	Juan-0	06				÷			1					604	-Other Solid
cutest				Collecti	ion			Num	per of		erved	Bott	es	(802					ļ				MP-Wipe
imple #	Field ID / Point of Collection		Date	Time	Sampled by	Matrix	# of bottles	Ţ.	5 5	12504	¥	RCH F	ACOR!	BTEX (8021								LAB	USE ONLY
	MW-8, SJRP		2270)	1103	mN	24	3	x	-	1		4*	L I	x	_		††			-	++	+	
2	MW-9, SJRP		267-1				3	x	+		$\vdash$			$\frac{\hat{\mathbf{x}}}{\mathbf{x}}$							+-+		
0				1224	MN	wo	3	<del> ^</del>					$\square$	<u>^</u>	_						╄╾┼╴		
								$\vdash$							$\rightarrow$	_					$\square$	—	
					1																		
								Π								-					$\square$		
								H	1			- -							-		+		
					t			$\vdash$	+-		$\left  + \right $					-					+		
										+	┝╌┼╸	-+-	┝╼╶┨				++				╉━┥╴		
and in the	Turnaround Time ( Business days)	Albahati Katin	ALCONTRACT,	lice's failes	190731 ST(192	Data De	liverable	Informa	tion	1403	and the second	114717		<b>4449</b> 8	01120045464			Comr	uenus / Re	marks	1		eseres proje
XX	Std. 19 Business Days	Approved By		111111111111111	Level 1						- <u>-</u>						e					2000000000000000	<u></u>
	10 Day RUSH	<u> </u>		_	X Level 2				NYASF														
	5 Day RUSH 3 Day EMERGENCY			-	Level 3			_	NYASF State F			3						•					
	2 Day EMERGENCY		• • •		Cither		_		EDD F					H							·,-••		
	1 Day EMERGENCY			_	I																		
	Other		····-	-	Comm	arcial "A"	= Resu	ts Only															
Emerg	gency T/A data available VIA La	blink stody must b	doour	ated hat-			e cha-		mener!		-							Jac	1				
Reinquist	od by Sampler	stody must b	Date Time:		Received By	sample	is chan	fa boa	3835	Ralla	ncludi nquishe	ng co d By:	inier (	envery.	Date	firne:			caived By		ARCHINESS STATE	Constanting of the	MINISTICS CONTRACTOR
Relinguist		22707	16C	0	1					2				·				2		-			
quist			Gate Lame:		Received By			_		In etin	nquisha	ч ву:			Date	ane:		R	ceived By	•			
Relinquish	ed by:		31. TO		3 Received By	fr	<del>/</del>	)	-	Cup	ing Ap	al #		Pre	eserved whe		ble	4			lce C	ooler an p.	
			Plas	0110	<b>0</b> ] #1	A	<u> </u>	5	$\lambda$	Į					C	]			·	ς	1	_k.	0_
				1.	•				/ )	)													-

T16473: Chain of Custody Page 1 of 2



4.1

4

		range. tiners. ustody.	nn Pr	3 U, <2, >12, NA	) U, <2, >12, NA	S U, <2, >12, NA	s   u, <2, ≻12, NA	в ⊔, <2, >12, NA	6 U, <2, >12, NA	6 U, <2, >12, NA	5 U, <2, >12, NA	6 U, <2, >12, NA	5 U <2, >12, NA	6 U, <2, >12, NA		2, O COOLER TEMP: COOLER TEMP: COOLER TEMP: Form: SM012, Rev.07728/06, QAO					
		lation): hin temp. r oper conta chain of cr	PRESERV	123,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6		COOLER TEMP: COOLER TEMP: 1012, Rev.07/28/06
	110:10 MZ	circled, see variance for explanation): ON Samples received within temp. range. N Sample received in proper containers. ON Sample received with chain of custody containers.	LOCATION	VLEF													-				0
1	ALS:	rcled, see varia N Sample N Sample N Sample ntainers.	ioler. Jottles.	ton.	2	10									/					e Freezer	COOLER TEMP.
		If "N" is circ 2 4. 6. Ysis on con	vident on co evident on t MATRIX	AN AN	-	20	2, 0,C													A EF: Encore Freezer H 6: Other Comments:	
	SAMPLE RECEIPT LOG DATE/TIME RECEIVED: <u>) / X{/U</u> <u>U.S</u> IMTI		A Custody seal received intect and tamper not evident on cooler. NA Custody seal received intect and tamper not evident on bottles.	tele			100	5	>											SUB: Subcontract EF: En 4: H2SO4 5: NAOH 6: Other Comments:	· . .
	1	Variance (Circle "Y" for yes and "N" for no Sample received in undamaged condition. Sample received with proper pH. Sample volume sufficient for analysis. Chain of Custody matches acample IDs an Sommles Headstance accentable	al received intact seal received intac BOTTIF#	~						1										VR: Volatile Refrig. 2: HCL 3: HNO3 ding voiatiles	JE I
	JOB#IU473 JUB#IU473 CLIENT:UU44AMLEY	Condition/Variance (Circle "Y" for yes and "N" for no or NA. 1. (") N Sample received in undamaged condition. 3. Y (W-Sample received with proper pH. 5. N Sample volume sufficient for analysis. 7. N Chain of Custody matches <b>sample IDs and anal</b> 8. ("N Samples Headshace accentable		:																l: Walk-In IS: 1: None ecked exclu	pH of soils N/A Delivery method: Courier:

T16473: Chain of Custody Page 2 of 2





## Section 5

### GC Volatiles

## QC Data Summaries

Includes the following where applicable:

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





#### Method Blank Summary Job Number: T16473

JOD NUMBER:	1104/3
Account:	MWHSLCUT Montgomery Watson
Project:	San Juan River Plant (SJRP)

Sample	File ID	<b>DF</b> .	<b>Analyzed</b> 03/01/07	<b>By</b>	Prep Date	Prep Batch	Analytical Batch
GKK1020-MB2	KK018289.1	D1		ZLH	n/a	n/a	GKK1020

The QC reported here applies to the following samples:

Method: SW846 8021B

T16473-1, T16473-2

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ŇD	1.0	0.35	ug/l
100-41-4	Ethylbenzene	ŇD	1.0	0.33	ug/l
108-88-3	Toluene	ND	1.0	0.20	ug/l
1330-20-7	Xylenes (total)	ND	2.0	0.36	ug/l
95-47-6	o-Xylene	ND	1.0	0.14	ug/l
	m,p-Xylene	ND	1.0	0.36	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
460-00-4	4-Bromofluorobenzene	90%	56-13	36%	
98-08-8	aaa-Trifluorotoluene	<b>93</b> %	50-14	4%	



5.<u>1</u>



#### Method Blank Summary Job Number: T16473

JOU NUMBER.	110475
Account:	MWHSLCUT Montgomery Watson
Project:	San Juan River Plant (SJRP)

Sample	File ID	DF	<b>Analyzed</b> 03/01/07	<b>By</b>	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch
GKK1020-MB	KK018266.	D1		ZLH	n/a	n/a	GKK1020

The QC reported here applies to the following samples:

Method: SW846 8021B

GKK1020-BS, T16479-7MS, T16479-7MSD

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 ND	1.0 1.0 2.0 1.0 1.0	0.35 0.33 0.20 0.36 0.14 0.36	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No. 460-00-4 98-08-8	Surrogate Recoveries 4-Bromofluorobenzene aaa-Trifluorotoluene	90% 92%	Limit 56-13 50-14	ts 6%	-0-



×,

5.1



#### Blank Spike Summary Job Number: T16473

Account: Project:	MWHSLCUT Mont San Juan River Plant		-			
Sample GKK1020-BS	File ID DF KK0 <u>18267.D</u> 1	Analyzed 03/01/07	<b>By</b> ZLH	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch GKK1020
<b>The QC repo</b> T16473-1, T1	rted here applies to the	e following san	aples:		Method: SW	/846 8021B
CAS No. C	Compound	Spike ug/l	BSP ug/l	BSP % Limits		
71 40 0 5	,	00	17.0	0 7 70 105		

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	17.0	85	72-125
100-41-4	Ethylbenzene	20	19.6	98	76-125
108-88-3	Toluene	20	19.3	97.	74-125
1330-20-7	Xylenes (total)	60	59.6	99	78-124
95-47-6	o-Xylene	20	19.4	97	78-124
	m,p-Xylene	40	40.2	101	78-125
CAS No.	Surrogate Recoveries	BSP	Liı	mits	
460-00-4	4-Bromofluorobenzene	87%	56	-136%	
98-08-8	aaa-Trifluorotoluene	93%	50	-144%	



5.2

জ



#### Matrix Spike/Matrix Spike Duplicate Summary Job Number: T16473

JOD Number:	110473
Account:	MWHSLCUT Montgomery Watson
Project:	San Juan River Plant (SJRP)

	Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
	T16479-7MS	KK018272.	D1	03/01/07	ZLH	n/a	n/a	GKK1020
	T16479-7MSD	KK018273.	D 1	03/01/07	ZLH	n/a	n/a	GKK1020
	T16479-7	KK018271.	D1	03/01/07	ZLH	n/a	n/a	GKK1020
•								

The QC reported here applies to the following samples:

Method: SW846 8021B

T16473-1, T16473-2

CAS No.	Compound	T16479-7 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	16.5	83	16.5	83	 0	45-137/21
100-41-4	Ethylbenzene	ND	20	19.1	96	19.1	96	0	68-126/15
108-88-3	Toluene	ND	20	18.6	93	18.3	92	2	63-130/22
1330-20-7	Xylenes (total)	ND	60	57.8	96	57.7	96	<sup></sup> 0	72-125/19
95-47-6	o-Xylene	ND	20	18.6	93	18.4	92	1	70-128/20
	m,p-Xylene	ND	40	39.2	98	39.3	98	• • 0	63-136/19
CAS No.	Surrogate Recoveries	MS	MSD	T1	6479-7	Limits			
460-00-4	4-Bromofluorobenzene	87%	<b>89</b> %	86	%	56-136	%		
98-08-8	aaa-Trifluorotoluene	91%	92%	.92	%	50-144	%		







#### **DATA VERIFICATION WORKSHEET** (Page 1 of 2)

1

Analy	tical Metho	l/Analytes: _	SW-846 8021B (BT	EX) Sa	mple Collec	tion Date(s): _	05/25/07	
	L	aboratory:	Accutest	<u></u>	MWH J	ob Number: _	SJRB	
	Batch Ide	ntification: _	T17627			– Matrix: _	Water	
	MS/MSD I	Parent(s) <sup>(a)</sup> : _	None Field Replicate Parent(s):N					
	Ver	ification	Ciaig	noo	re - (	06/26/	07	
	(Date/Signature)							
Foot	1			Hits				
Notes	Site ID	Sample	e ID Lab. ID	(Y/N)	Quals.	Con	nments	
None	SJRB	MW-8,SJRF	P T17627-1	Y	None			

None	21KB	MW-8,SJRP	11/02/-1	Y	None	
None	SJRB	MW-9,SJRP	T17627-2	Y	None	
						· ·
					1	
						· · · · · · · · · · · · · · · · · · ·
			46.04.000 F.			
÷						
	1.					

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

Analytical Method:	SW-846 8021B (BTEX)	<b>MWH Job Number:</b>	SJRB
			÷.,
Laboratory:	Accutest	<b>Batch Identification:</b>	<b>T17627</b>

Verification Criteria					
Sample ID	MW-8	MW-9			
Lab ID	T17627-1	T17627-2			
Holding Time	А	· A			
Analyte List	А	А			
Reporting Limits	A	А			
Surrogate Spike Recovery	А	А			
Trip Blank	А	А			
Equipment Rinseate Blanks	N/A	N/A			1
Field Duplicate/Replicate	N/A	N/A			
Initial Calibration	N	N			
Initial Calibration Verification (ICV)	N	N			
Continuing Calibration Verification (CCV)	N	N			
Method Blank	A	A			
Laboratory Control Sample (LCS)	A	А			
Laboratory Control Sample Duplicate (LCSD)	N	N			
Matrix Spike/Matrix Spike Dup. (MS/MSD)	A <sup>3</sup>	N/A			
Retention Time Window	N	N			
Injection Time(s)	N	N	1		
Hardcopy vs. Chain-of-Custody	А	A		1	
EDD vs. Hardcopy	N	N			
EDD vs. Chain of Custody	N	N			

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

A indicates verification criteria were met

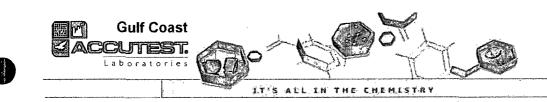
A/L indicates verification criteria met based upon Laboratory's QC Summary Form

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:



06/08/07

## **Technical Report for**

**Montgomery Watson** 

San Juan River Plant (SJRP)

D-ALAB-SANJUAN-006

Accutest Job Number: T17627

Sampling Date: 05/25/07

Report to:

Montgomery Watson

Jennifer.A.Hurley@us.mwhglobal.com

**ATTN: Jennifer Hurley** 

Total number of pages in report: 15



Test results relate only to samples analyzed.

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.

Client Service contact: Agnes Vicknair 713-271-4700

Ron Martino Laboratory Manager



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

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







# **Table of Contents**

N

භ

4

տ

## -1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	5
<b>3.1:</b> T17627-1: MW-8, SJRP	6
<b>3.2:</b> T17627-2: MW-9, SJRP	7
Section 4: Misc. Forms	8
4.1: Chain of Custody	9
Section 5: GC Volatiles - QC Data Summaries	12
5.1: Method Blank Summary	13
5.2: Blank Spike Summary	14
5.3: Matrix Spike/Matrix Spike Duplicate Summary	15

2 of 15 ACCUTEST. 117627 Laboratories Accutest Laboratories

### Sample Summary

### Montgomery Watson

T17627-1

Sample	Collected		Matrix	 Client	
Number	Date Time By		Received Code Type	Sample ID	

MW-8, SJRP

T17627-2 05/25/07 10:00 MN 05/30/07 AQ Ground Water MW-9, SJRP

05/25/07 10:55 MN 05/30/07 AQ Ground Water







Client:	Montgomery Watson	Job No	T17627
Site:	San Juan River Plant (SJRP)	Report Date	6/8/2007 1:47:05 PM

2 Samples were collected on 05/25/2007 and were received at Accutest on 05/30/2007 properly preserved, at 2.2 Deg. C and intact. These Samples received an Accutest job number of T17627. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

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

## Volatiles by GC By Method SW846 8021B

ſ	Matrix	AQ	Batch ID:	GKK1088

All samples were analyzed within the recommended method holding time.

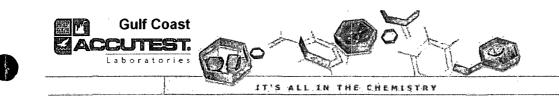
All method blanks for this batch meet method specific criteria.

Sample(s) T17634-1MS, T17634-1MSD were used as the QC samples indicated.

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







Section 3

ල්

Sample Results	
Report of Analysis	



98-08-8

		Repo	rt of An	alysis			Page 1 of 1
Client Samj Lab Sample Matrix: Method: Project:				Date 1	Sampled: Received nt Solids	05/30/07	
Run #1 Run #2	File ID         DF           KK019981.D         1	<b>Analyzed</b> 06/01/07	By ZLH	<b>Prep D</b> n/a	ate	Prep Batch n/a	Analytical Batch GKK1088
Run #1 Run #2	Purge Volume 5.0 ml				x		
Purgeable	Aromatics						
CAS No.	Compound	Result	RL	MDL	Units	Q	
71-43-2	Benzene	19.6	:1.0	0.21	ug/l		
108-88-3	Toluene	ND	1.0	0.23	ug/l		
100-41-4	Ethylbenzene	5.0	1.0	0.35	ug/l		
1330-20-7	Xylenes (total)	9.8	2.0	0.55	ug/l		
95-47-6	o-Xylene	'ND	1.0	0.55	ug/l		
	m,p-Xylene	9.8	1.0	0.66	ug/l		
CAS No.	Surrogate Recoverie	s Run#1	Run#2	Lim	its		
460-00-4	4-Bromofluorobenzen	e 96%		56-1	36%		

97%

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

aaa-Trifluorotoluene

J = Indicates an estimated value

50-144%

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound



ල

<u>ω</u>

			Repo	rt of An	alysis			Page 1 of
Client Sam Lab Samp Matrix: Method: Project:	le ID: T17623 AQ - C SW846	7-2 Ground Wa 6 8021B	ater Plant (SJRP)		Date I	Sampled: Received nt Solids	: 05/30/07	
Run #1 Run #2	<b>File ID</b> KK019982.D	<b>DF</b> 1	<b>Analyzed</b> 06/01/07	<b>By</b> ZLH	Prep D n/a	ate	Prep Batch n/a	Analytical Batch GKK1088
Run #1 Run #2	Purge Volume 5.0 ml							
Purgeable	Aromatics							
CAS No.	Compound		Result	RL	MDL	Units	Q	
71-43-2	Benzene		82.0	1.0	0.21	ug/l		
108-88-3	Toluene		ND	1.0	0.23	ug/l		
100-41-4 1330-20-7	Ethylbenzene Xylenes (total)	)	19.6 6.5	1.0 2.0	0.35 0.55	ug/l		
95-47-6	o-Xylene	,	ND	2.0 1.0	0.55	ug/l ug/l		
00 11 0	m,p-Xylene		6.5	1.0	0.66	ug/l		
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its		

CAS NO.	Surrogate Recoveries	Kull# 1	Kull# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		56-136%
98-08-8	aaa-Trifluorotoluene	117%		50-144%

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

۶ •

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



3.2

ල



Section 4

# Misc. Forms

**Custody Documents and Other Forms** 

Includes the following where applicable:

• Chain of Custody





23	ACCUTES	51.					0165 H 3-271-4							FED-6	X Tracht	77	88	44	71	Bottle O					
	Laborator													Accul	ast Quote		EL Par	o Pricir	9	Accuter	ו"ב"ו	107	7	,	
														1976		(distant	18:312	385		自然的	输出	325	in New Y		
mpany Nami	ient / Reporting Information	Same and the second	स्टब्स ुमेर	1. A.B.	Proj	ect Infor	mation		通知	:(1940) 	法书题			23. 2444	<b>688</b> 6885	88(3))(2)(6) 	escorta da		Requi	ested A	nalysi	s	denties		Matrix Codes ow-Drinking Wat
	WH Americas, Inc.			Project N	sme:	SAN JU	AN BAŞI	N Pla	int							1									GW- Ground Wate
dross				Street																					ww.wgter
1801 Califor	nia St. Suite 2900 State		Zlip	City					State					_				l l						j	SW- Surface Wat SO- Soil
				Colorado	Sortner					Co							E	ŀ							SL-Sludge
Denver ject Contact	<u> </u>	80202		Project #	aprings									_											OI-ON
Ject Contact	Chandler Cole			FIGULT													ł	ļ							LIQ-Other Liquid
one #				Fax#										-											
30 nplers's Nar	3-291-2161 , me	•		Client Pu	rchase Order	r#	THEF				000			-			1								AIR- Air
	What No	<u></u>				,	TWO D.		-	of on			-	(3021)											SOL-Other Soli
cutest	-			Collecti		1	#of	NU	ΓŤ	- (-	T	<u>ड</u> ा	- T	10 10 10 10 10 10 10 10 10 10 10 10 10 1	1	1									WP-Wrpe
mple #	Field ID / Point of Collection		Date	Ime	Sampled by	Matrix	botiles	₽	ġ	100 H	NOV	SHe N	He	BTEX											LAB USE ON
1 M	W-8, SJRP		5 2500	juto	mu	wa	3	x						X											
2_ M	W-9, SJRP		52501	1000	mu	WL	а	x						X					[						
-	······			10-0				-			+	$\vdash$	+		-		+								
						<u> </u>			$\vdash$		┢				_	_	_								
												_			_		_								
		1												1											
										T	- T														
-+								1-		-†-	•														
								$\vdash$	+	+	+		-+-			-	+								
									$\square$	$\perp$	+		-	-	_	_	+						·		
		_																							
	_																						I		
	furnaround Time ( Business days)				1970 DA		elderable %	Infor				ange i	NHUT I	<b>Bar</b> sa	1 ( <b>1</b> 84)	THE OFF			Co	mments	/ Rema	rks		2.48 <u>8</u> 5	Standing Balanti, Two
	td. 15 Business Days 0 Day <i>RUSH</i>	Approved B	// Date:		Lavel 1					L CLP															
	Day RUSH			-	Level 3			-		ASP Ca ASP Ca										-					
	Day EMERGENCY			_	Level 4			H		le Forn		-													
2	Day EMERGENCY			_	Other		_			) Form															
	Day EMERGENCY			_																					. <u> </u>
	ther			-	Comm	ercia! "A"	= Resu	ts Or	ıly													-			
Emerge	ncy T/A data available VIA L																			State of State	100000		-	er friha	State of the Parameters of the
Relinguisted	Bregnpler:	uscody must b			Received By	e sample	is chan	ge pr	osses	Re	linguis	ung hed 8y	couri /:	er deliv	ery.	Date Ti	me:			Received	i By:	et an		0.499	No. 10 Carrier
MA	Ke		5240 16	30	1					2						1				2					
Relinguished	by:		Date Time:		Received By					Re	linqula	had By	<i> </i> :			Date Ti	me:			Received	By:				
Relinguished	hu		Date Time:	<i>n</i>	3	,				4	slody .				Brace	wed where	- Annella -			4		Onla		Cool	Temp.
	-,.		Sal	218	5 CAN	No.S	Frei	1	5		Prod A S				11050		* •hbircy(					A C		2	) )
		J	(Shard)	<u>•  </u>				-	-															-	<u> </u>

.

T17627: Chain of Custody Page 1 of 3



ATETIME RECEIVED: EJ30 07 - 9:18 NTTALS: CNE NTTALS: CNE NTTO TO OT NA. If "N" is circled, see variance for explanation); condition. 2 ON Samples received with tham of tunge. and tamper not evident on cooler. and tamper not evident on cooler. and tamper not evident on bottle. DJ20b1 R0 NOLL VECT 103.4,5,6 u.c. DJ20b1 R0 NOLL 12.3,4,5,6 u.c. 1,2.3,4,5,6 u.c.	Destimine RECEIVED:     C/20/01     9:18       Thruw.Coll     Inmus. CNE       Three with three and the more in containent.     CNN       Samples received with three and the more intervalue of the containent.     CNN       Samples received in undamaged condition.     CNN       Samples received with three and the more intervalue.     CNN       Samples received into an other.     CNN       Samples received into an other.     CNN       Samples acceptable     CNN       Samples acceptable     MATRAX       Samples acceptable     11,234,56       Samples acceptable     11,234,56       Samples acceptable     11,234,56       Joint VECF     11,234,56       Joint VECF <th>DATETIME RECEIVED:     C/20/07 - 9:18 INTIALS:       THE MELLINE:     DATETIME RECEIVED:       The "Y" for yes and "N" for no or NA, I" "N" is check, see variance for exclaration).       The "Y" for yes and "N" for no or NA, I" "N" is check, see variance for exclaration.       Stored with proper pH.       Stored with the max with the phone.       Stored with the max w</th> <th></th> <th></th> <th>SAMPLE</th> <th>SAMPLE RECEIPT LUG</th> <th>LOG</th> <th></th> <th></th> <th></th>	DATETIME RECEIVED:     C/20/07 - 9:18 INTIALS:       THE MELLINE:     DATETIME RECEIVED:       The "Y" for yes and "N" for no or NA, I" "N" is check, see variance for exclaration).       The "Y" for yes and "N" for no or NA, I" "N" is check, see variance for exclaration.       Stored with proper pH.       Stored with the max with the phone.       Stored with the max w			SAMPLE	SAMPLE RECEIPT LUG	LOG			
HTMLS. Weight after the standard of the proper containers.       Circle "Try for yes and "Y for mo or NA. If "N" is clicled, see variance for explanation):       received with proper pH.       Received with proper pH.       Received with proper pH.       Custory matches stampe to containers.       Custory matches stampe for analysis.       Custory matches stampe for analysis.       Custory matches stampe for analysis.       Custory matches stampe for analysis on containers.       Pleadspace acceptable       District of the matches stampe for analysis on containers.       District of the matches stampe for analysis on containers.       Pleadspace acceptable       District of the matches stampe for analysis on containers.       District of the stampe for the matches for the stampe for the s	HTMLACD     INTRAF.       Circle "*" for yea and "#" for no or NA. If "W" is circled, see variance for exclanation).       Tecevela in undamaged condition.       Tecevela with proper (In the analysis).       Council of the analysis.       Lip 3       Di 2005 H R0       Homul VICET       Di 2005 R R0       Not the analysis.       Lip 3       Di 2005 R R0       Lip 3       Di 2005 R R0       Lip 3       Di 2005 R R0       Lip 3       Lip 3       Di 2005 R R0       Lip 3       Lip 3       Lip 3       Di 2005 R R0       Lip 3       Lip	HTMLACOL     INTALS:	ECUFIT :# BOL	.	DATE/TIME RECEI	WED: 513	1:1 - 4:1	لا		
On Sample received in proper condition.     2.0 N sample received in proper condition.       N Sample received in undamaged condition.     2.0 N sample received in proper condition.       N Sample received in undamaged condition.     2.0 N sample received in proper condition.       N Sample received in undamaged condition.     2.0 N sample received with notion and subject.       N Sample received in undamaged condition.     2.0 N sample received with notion and subject.       N Sample received into a sufficient for analysis.     6.0 N Sample received with chain of custody seal received or cooler.       N N Catabuy seal received into and tamper not evident on cooler.     0.1 NM Custody seal received into and tamper not evident on cooler.       N N Qustody seal received into and tamper not evident on cooler.     12.344.56 U.S.       N N Qustody seal received in proper condition.     12.344.56 U.S.       N N Qustody seal received in proper condition.     12.344.56 U.S.       N N Qustody seal received in on bottlas.     12.344.56 U.S.       N N Qustody seal received in on bottlas.     12.344.56 U.S.       N N Qustody seal received in the condition on bottlas.     12.344.56 U.S.       N N Qustody Seal received in proper condition.     12.344.56 U.S.       N N Qustody Qustody Seal received in proper condition.     12.344.56 U.S.       N N Qustody     12.344.56 U.S.       N N Qustody Qustody Qustody Qustody Qustody Qustody Qustody	and filter water and an analysis of the control of	and fictor variance (Irich "Y for yes and "W for no rn M. I' W' is circled, see variance for exclanation. Sample received in undampose or difficient. Sample received in undampose of any analysis on containers. N N and Custopy and Technic and Tampe in or analysis on containers. N N and Custopy and Technic and Tampe in or analysis on containers. N N and Custopy and Technic and Tampe in or analysis on containers. N N Actions year received intra and Tampe in or avaidant on bottles. N N Actions year received intra and Tampe in or avaidant on bottles. N N Actions year received intra and Tampe in or avaidant on bottles. N N Actions year received intra and Tampe in or avaidant on bottles. N N Actions year received intra and Tampe in or avaidant on bottles. N N Actions year received intra and Tampe in or avaidant on bottles. N N Octoby and Tecchino and Tampe in or avaidant on bottles. N N Octoby and Tecchino and Tampe in or avaidant on bottles. N N Octoby and Tecchino and Tampe in or avaidant on bottles. N N Octoby and Tecchino and Tampe in or avaidant on bottles. N N Octoby and Tecchino and Tampe in or avaidant on bottles. N N Octoby and Tecchino and Tampe in or avaidant on bottles. Sateries Files III - 2 J1-3 J1JJbJ P N N/M VCEF (12:24456 u.g. 1:2:24456 u.g. 1:2:24	CLIENT: MWH Y	American				NE		
N. N. Custory seal received intact and tamper not evident on bottes.           Y. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Custory seal received intact and tamper not evident on bottes.           M. N. Custory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. Outstory seal received intact and tamper not evident on bottes.           M. N. N. Outstory seal received intact and tamper not evident on bottes.           M. N. N. N. Outstory Seal received intact and tamper not evident on bottes.           M. N.	N. M. Custody seal received infact and tamper not evident on cooler.       V. N. Custody seal received infact and tamper not evident on bottles.       IPPLE     IPDL       IPPLE     IPPLE       IPPLE </th <th>N. M. Custody seal received infact and tamper not evident on coolet. W. M. Custody seal received infact and tamper not evident on bottles. W. G. Octodoy seal received infact and tamper not evident on bottles. W. E. Fieldon I. 12.3 A56 U.S. ARMEED MATRIX VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2012.045 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2013.045 P.M. V.S. 2014.05 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2013.045 P.M. V.S. 2014.05 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2014.05 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2014.05 P.M. V.S. 2014.05 P.M. V.S. 2014.05 P.M. V.S. 2014.15 P.M.S. 201</th> <th>ConditionVariance (C) 1. ON Sample rect 3. Y (N) Sample rect 5. N Sample volu 7. N N Chain of Cuu</th> <th>ircle "Y" for yes ar eived in undamag eived with proper arme sufficient for istody matches for adspace accepta</th> <th>nd "N" for no or NA eed condition. pH. analysis. ample IDs and ana sble</th> <th>. If "N" is cirr 2.2006 6.400 Bysis on cor</th> <th>cled, see vari: N Sample N Sample N Sample trainers.</th> <th>ance for explar is received with received in pri received with</th> <th>nation): hin temp. ra oper contair chain of cus</th> <th>inge. ners. stody.</th>	N. M. Custody seal received infact and tamper not evident on coolet. W. M. Custody seal received infact and tamper not evident on bottles. W. G. Octodoy seal received infact and tamper not evident on bottles. W. E. Fieldon I. 12.3 A56 U.S. ARMEED MATRIX VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2012.045 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2013.045 P.M. V.S. 2014.05 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2013.045 P.M. V.S. 2014.05 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2014.05 P.M. VOLUE LOCATION PRESERV. IL.2.3 A56 U.S. 2014.05 P.M. V.S. 2014.05 P.M. V.S. 2014.05 P.M. V.S. 2014.15 P.M.S. 201	ConditionVariance (C) 1. ON Sample rect 3. Y (N) Sample rect 5. N Sample volu 7. N N Chain of Cuu	ircle "Y" for yes ar eived in undamag eived with proper arme sufficient for istody matches for adspace accepta	nd "N" for no or NA eed condition. pH. analysis. ample IDs and ana sble	. If "N" is cirr 2.2006 6.400 Bysis on cor	cled, see vari: N Sample N Sample N Sample trainers.	ance for explar is received with received in pri received with	nation): hin temp. ra oper contair chain of cus	inge. ners. stody.
I-3     5/12561     AQmU     VZEF     123,456     u.c.       12,3,456     u.c.     12,3,456     u.c.       12,3,456     u.c.     1,2,3,456     u.c.       11,2,3,456     u.c.     1,2,3,456     u.c.	S/125/67     RO     NOmL     VZEF     12:34:56     u.c.       12:34:56     u.c.     12:34:56     u.c.       13:34:56     u.c.     12:34:56     u.c.       14:2:34:56     u.c.     12:34:56     u.c.       15:34:56     u.c.     12:34:56     u.c.       15:34:56     u.c.     12:34:56     u.c.       15:34:56     u.c.     12:34:56     u.c.       16:00     11:2:34:56     u.c.       17:01     11:2:34:56     u.c.       16:01     11:2:34:56	5/125/67     RQ     HOmL     VZEF     12:34.56     u.g.       1:2:34.56     u.g.     1:2:34.56     u.g.       1:1:1:1:1:1:1:1:1:1:1:1:1:1:1:1:1:1:1:	V N NA	seal received inte y seal received in BOTTLE #	act and tamper not stact and tamper no	evident on a of evident on MATRIX	ooler. bottles.	LOCATION	PRESERV	Ŧ
1,2,3,4,5,6     u, c2	112.345.6     U.G.       12.345.6     U.G.       13.2345.6     U.G.       13.2345.6     U.G.       14.2345.6     U.G.       15.345.6     U.G.       14.6     U.G.	1.2.3.4.5.6     u. c.       1.2.3.4.5.6 <t< td=""><td>1-2</td><td>1-3</td><td>Folcelo</td><td>Ð</td><td>HOml</td><td>VLGF</td><td>123,4,5,6</td><td>  ♥</td></t<>	1-2	1-3	Folcelo	Ð	HOml	VLGF	123,4,5,6	♥
1,2,3,4,5,6     u, c2	1,2,3,4,5,6     u, c2       1,2,3,4,5,6 <t< td=""><td>1,2,3,4,5,6     u, c2       1,2,3,4,5,6     <t< td=""><td></td><td></td><td></td><td></td><td></td><td>N</td><td>1,2,3,4,5,6</td><td>U, &lt;2, &gt;12, NA</td></t<></td></t<>	1,2,3,4,5,6     u, c2       1,2,3,4,5,6 <t< td=""><td></td><td></td><td></td><td></td><td></td><td>N</td><td>1,2,3,4,5,6</td><td>U, &lt;2, &gt;12, NA</td></t<>						N	1,2,3,4,5,6	U, <2, >12, NA
1,2,3,4,5,6     u, c.	1,2,3,4,5,6 u, c. 1,2,3,4,5,6 u	1,2,3,4,5,6 u, c, 1,2,3,4,5,6 u							1,2,3,4,5,6	U, <2, >12, NA
1/2.3,4,5,6     1,2,3,4,5,6     1, -2,       CNE     1,2,3,4,5,6     1, -2,       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6       1,2,3,4,5,6     1, -2,3,4,5,6     1, -2,3,4,5,6	1/2.34,5,6     u, c.       1/2.34,5,6     u, c. <td< td=""><td>1,2,3,4,5,6 u, c, 1,2,3,4,5,6 u</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>U, &lt;2, &gt;12, NA</td></td<>	1,2,3,4,5,6 u, c, 1,2,3,4,5,6 u							1,2,3,4,5,6	U, <2, >12, NA
GNE     1.2.3.4.5.6     u. c.       6/200-     1.2.3.4.5.6     u. c.       1.2.3.4.5.6     u. c.     1.2.3.4.5.6     u. c.	GNE     1.2.3.4.5.6     u. c.       1.2.3.	CNE     1/2.34.56     u.c.							1,2,3,4,5,6	U, <2, >12, NA
1,2,3,4,5,6     u, c2	1/2/3/4.56     u.c.	1,2,3,4,5,6 u, c, 1,2,3,4,5,6 u					CNE 6120107		1,2,3,4,5,6	U, <2, >12, NA
1,2,3,4,5,6     u, c2,	1/2/3,4,5,6     u, c2       1/2/3,4,5,6 <t< td=""><td>1,2,3,4,5,6 u, c2 1,2,3,4,5,6 u, c2 1,3,4,5,6 u, c2</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>U, &lt;2, ≻12, NA</td></t<>	1,2,3,4,5,6 u, c2 1,2,3,4,5,6 u, c2 1,3,4,5,6 u, c2							1,2,3,4,5,6	U, <2, ≻12, NA
1,2,3,4,5,6 1,2,2,4,5,6 1,2,2,5,6 1,2,2,5,6 1,2,2,4,5,6 1,2,2,4,5,6 1,2,2,4,5,6 1,2,2,4,5,	1/2,3,4,5,6       1/2,3,4,5,6 <t< td=""><td>1,2,3,4,5,6 1,2,2,4,5,6 1,2,2,4,5,6,5,6 1,2,2,2,4,5,6,6 1,2,2,4,5,6,5,6,5,6,5,6,5,6,5,6,5,</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>U, &lt;2, &gt;12, NA</td></t<>	1,2,3,4,5,6 1,2,2,4,5,6 1,2,2,4,5,6,5,6 1,2,2,2,4,5,6,6 1,2,2,4,5,6,5,6,5,6,5,6,5,6,5,6,5,							1,2,3,4,5,6	U, <2, >12, NA
1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6	1,2,3,4,5,6       1,2,3,4,5,6 <t< td=""><td>1,2,3,4,5,6 1,2,3,</td><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>L, &lt;2, &gt;12, NA</td></t<>	1,2,3,4,5,6 1,2,3,							1,2,3,4,5,6	L, <2, >12, NA
1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6	1,2,3,4,5,6       1,2,3,4,5,6 <t< td=""><td>1,2,3,4,5,6       1,2,3,4,5,6    <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>u, &lt;2, &gt;12, NA</td></t<></td></t<>	1,2,3,4,5,6       1,2,3,4,5,6 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>u, &lt;2, &gt;12, NA</td></t<>							1,2,3,4,5,6	u, <2, >12, NA
1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6 1,2,3,4,5,6	1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6	1,2,3,4,5,6     1,2,3,4,5,6       1,2,3,4,5,6 <td></td> <td></td> <td></td> <td>t</td> <td></td> <td></td> <td>1,2,3,4,5,6</td> <td>U, &lt;2, ≻12, NA</td>				t			1,2,3,4,5,6	U, <2, ≻12, NA
1,2,3,4,5,6	1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6           <	1,2,3,4,5,6       1,2,3,4,5,6 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>1,2,3,4,5,6</td><td>U, &lt;2, &gt;12, NA</td></t<>							1,2,3,4,5,6	U, <2, >12, NA
1.2.3,4.5.6	1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,2,3,4,5,6         1,2,3,4,5,6           1,1,2,3,4,5,6         1,2,3,4,5,6	Astrig. SUB: Subcontract EF: Encore Freezer HNO3 4: H2SO4 5: NACH 6: Other Comments:							1,2,3,4,5,6	u, <2, >12, NA
12.34.56	No. 1.2.3.4.5,6 No. 1.2.3.4.5,6 Subcontract EF: Encore Freezer HNO3 4: H2SC4 5: NOCH 6: Other Comments:	Not the second set of the seco							1,2,3,4,5,6	u, <2, ≻12, NA
1,2,3,4,5,6	Refrig. SUB: Subcontract EF: Encore Freezer HNO3 4: H2SC4 5: NACH 6: Other Comments:	Refrig. SUB: Subcontract EF: Encore Freezer HNO3 4: H2SC4 5: NAOH 6: Other Comments: Comments:							1,2,3,4,5,6	U, <2, >12, NA
	tefrig. SUB: Subcontract EF: Encore Freezer HNO3 4: H2SO4 5: NAOH 6: Other Comments:	Refrig. SUB: Subcontract EF: Encore Freezer HNO3 4: H2SO4 5: NAOH 6: Other Comments: Comments:					$\int$		1,2,3,4,5,6	U, <2, >12, NA

T17627: Chain of Custody Page 2 of 3



			<u> </u>	
ACCUTEST LAE		ACCI JTEST LABOR	ATORIES ODY SEAL	
DATE / TIME SEA	ALED: <u>529-07 1630</u>	INITIALS: MA	<u> </u>	
<u></u>	4		TI7627	
	In This portion can be removed for Recipient's record       In Standard       In Standard       In Standard       In Standard       In This portion can be removed for Recipient's record <td></td> <td></td> <td></td>			
	nders Martin Marca company Instruction 5 co			
	a <u>doress 7 6 C.C. 355000</u> 	State NITIT ZIP 537415		

.

T17627: Chain of Custody Page 3 of 3





# Section 5

# GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries

0

• Matrix Spike and Duplicate Summaries





# Method Blank Summary Job Number: T17627

	<b>Sample</b> GKK1088-MB		DF 1	<b>Analyzed</b> 06/01/07	<b>By</b> ZLH	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch GKK1088
The QC reported here applies to the following samples: Method: SW846 8021B	The QC report	ed here applie	es to the fol	lowing samj	ples:		Method: SW	/846 8021B

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 Yylene	ND ND ND ND ND	1.0 1.0 1.0 2.0	0.21 0.35 0.23 0.55	ug/l ug/l ug/l ug/l	
95-47-0	o-Xylene m,p-Xylene	ND	1.0 1.0	0.55 0.66	ug/l ug/l	
CAS No.	Surrogate Recoveries		Limi	ts		
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	92% 98%	56-13 50-14			



<u>5</u>

ଭ



## Blank Spike Summary Job Number: T17627

Sample	File ID	DF	Analyzed	By	Prep Date
Account: Project:	MWHSLC San Juan I	~	gomery Watson (SJRP)		
JOD Rumber.	111061				

Sample GKK1088-BS	File ID KK019963.I	<b>DF</b> D1	<b>Analyzed</b> 06/01/07	<b>By</b> ZLH	Prep Date n/a	<b>Prep Batch</b> n/a	Analytical Batch GKK1088

## The QC reported here applies to the following samples:

Method: SW846 8021B

T17627-1, T17627-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.4	92	72-125
100-41-4	Ethylbenzene	20	19.9	100	76-125
108-88-3	Toluene	20	19.2	-96	74-125
1330-20-7	Xylenes (total)	60	59.6	99	78-124
95-47-6	o-Xylene	20	20.1	101	78-124
	m,p-Xylene	40	39.6	- 99	78-125
CAS No.	Surrogate Recoveries	BSP	Li	nits	
460-00-4	4-Bromofluorobenzene	91%	56	-136%	
98-08-8	aaa-Trifluorotoluene	÷ <b>98%</b>	50	-144%	



.

 ບ

স্য

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	T17627
Account:	MWHSLCUT Montgomery Watson
Project:	San Juan River Plant (SJRP)
-	

	34-1MS 34-1MSD	File ID KK019966 KK019967 KK019965	.D 1	Analyzed 06/01/07 06/01/07 06/01/07	<b>By</b> ZLH ZLH ZLH	Prep Date n/a n/a n/a	Prep Batch n/a n/a n/a	Analytical Batch GKK1088 GKK1088 GKK1088
--	-------------------	---	------	--	--------------------------------	--------------------------------	---------------------------------	---

## The QC reported here applies to the following samples:

Method: SW846 8021B

T17627-1, T17627-2

CAS No.	Compound	T17634-1 ug/l (	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	20	18.5	.93	18.4	92	i i	45-137/21
100-41-4	Ethylbenzene	ND	20	19.3	97	18.9	95	2	68-126/15
108-88-3	Toluene	ND	20	18.5	93	18.7	94	1	63-130/22
1330-20-7	Xylenes (total)	ND	60	58.0	97	57.3	96	1	72-125/19
95-47-6	o-Xylene	ND	20	19.5	98	19.4	97	1	70-128/20
	m,p-Xylene	ND	40	38.5	96	37.9	95	2	÷ 63-136/19
CAS No.	Surrogate Recoveries	MS	MSD	<b>T</b> 1	7634-1	Limits			
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	91% 99%	94% 102%	92 98		56-136 50-144			



5.3

භ



(Page 1 of 2)

	Analytical Method/Analytes:			We	et Chemistry		Sample C	ollection Date(s):	08/23/07
		L	aboratory:		Accutest		MV	VH Job Number:	SJRB
		Batch Ide	ntification:		T18606			Matrix:	Water
		MS/MSD F	Parent(s) <sup>(a)</sup> :			•	Field Re	None	
1	/erifi	cation Co	omplete:	Ciaig"	moore -0				
L						(Dat	te/Signature)		
	Foot Notes	Site ID	Sam	ple ID	Lab. ID	Hits (Y/N)	Quals.	Commen	ts
	None	SJRB	MW-6		T18606-1	Y	None		
	None	SJRB	W-2		T18606-2	Y	None		
	None	SJRB	MW-4		T18606-3	Y	None		
	None	SJRB	MW-5		T18606-4	Y	None		
	None	SJRB	<u>MW-9</u>		T18606-5	Y	None		
	1	SJRB	MW-8		T18606-6	Y	None		
									<u> </u>
-									
				· · · · · · · · · · · · · · · · · · ·					
-								·····	
$\vdash$				······································					
			+						
				· · · · · ·	*				
					<u> </u>				
			1						······································
								- · · · · · · · · · · · · · · · · · · ·	
									·

(Page 2 of 2)

Analytical Method:	Wet Chemistry	MWH Job Number:	SJRB
Laboratory:	Accutest	Batch Identification:	T18606

Verification Criteria									
Sample ID	MW-6	W-2	MW-4	MW-5	MW-9	MW-8			
Lab ID	T18606-1	T18606-2	T18606-3	T18606-4	T18606-5	T18606-6			
Hardcopy vs. Chain-of-Custody	A	A	А	А	A	А			
Holding Time	А	A	A	А	A	А			
Analyte List	A	A	A	A	A	А			
Reporting Limits	А	A	A	A	A	A			
Method Blank (all methods)	А	A	A	A	A	A			
Laboratory Control Sample (all methods)	A	A	A	A	A	A			
Matrix Spike/Matrix Spike Duplicate (all organic methods)	A	N/A	А	N/A	А	A <sup>1</sup>			
Matrix Duplicate (Lab Specific)	А	N/A	А	N/A	A	A			

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

A indicates verification criteria were met

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

X indicates verification criteria were not met

N indicates data review were not a project specific requirement

N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

# **NOTES:**

1) Matrix spike (MS) recovery high sulfate (836% [75-125]). Sample concentration greater than four time spike concentration and therefore MS recovery does not apply and no data are qualifed.

(Page 1 of 2)

Analytical Method/Analytes:			Ν	<b>Ietals</b>	_		-		
	L	aboratory: _	A	ccutest		MWH Job	Number:	SJRB	
<b>Batch Identification:</b>			T	18606			Matrix:	Water	
	MS/MSD P	arent(s) <sup>(a)</sup> : _			Fiel	d Replicate	Parent(s):	None	
Verifi	cation Co	mplete:	Graig	moore -0		<u>5 / 0 7</u> te/Signature)			
Foot		·		· · ·	Hits			·	
Notes	Site ID	Sam	ole ID	Lab. ID	(Y/N)	Quals.	Ċ	omments	
None	SJRB	MW-6	·	T18606-1	Y ·	None			
None	SJRB	W-2		T18606-2	Y	None			
None	SJRB	MW-4		T18606-3	Y	None			
None	SJRB <sup>.</sup>	MW-5		T18606-4	Y	None			
None	SJRB	MW-9		T18606-5	Y	None			
1,2	SJRB	MW-8		T18606-6	Y	J J J+	Lead @ 4.8 µg/ Zinc @ 132 µg/ Potassium @ 8	/1	
						·		· · · · · · · · · · · · · · · · · · ·	
			<u> </u>						
								······	
<b>_</b> {		·····					, 		
	· · · · ·			+					
						· · · · · · ·			
		· · · · ·	<u></u>	-			<u> </u>	· · · · ·	
-				1					
			<u></u>						
						×		•	
				•			•		

(Page 2 of 2)

Analytical Method: SW-846 8021B (BTEX)

Accutest

MWH Job Number:

T18606

**SJRB** 

Laboratory:

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

Verification Criteria							
Sample ID	MW-6	W-2	MW-4	MW-5	MW-9	MW-8	
Lab ID	T18606-1	T18606-2	T18606-3	T18606-4	T18606-5	T18606-6	
Hardcopy vs. Chain-of-Custody	A	A	A	A	A	A	
Holding Time	A	A	A	A	A	A	
Analyte List	A	A	A	A	A	A	
Reporting Limits	A	<b>A</b> `	A	A	A	A	
Laboratory Control Sample (all methods)	A	A	A	A	A	A	
Laboratory Control Sample Duplicate (lab specific)	A	A	A	A	A	A	
Serial Dilution	, N/A	N/A	N/A	N/A	N/A	A	
Matrix Spike/Matrix Spike Duplicate (all organic methods)	N/A	N/A	N/A	N/A	A	A <sup>2</sup>	
Matrix Duplicate (Lab Specific)	N/A	N/A	N/A	N/A	A	· A <sup>1</sup>	

(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

 ${\bf X}$  indicates verification criteria were not met

 ${\bf N}$  indicates data review were not a project specific requirement

N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

## **NOTES:**

- 1) Laboratory replicate (LR) relative percent difference (RPD) outside acceptance criteria for lead (30.1% [20]) and zinc (105.6% [20]). Qualify data with a "J" flag indicating that the data are estimated.
- 2) Matrix spike (MS) and/or matrix spike duplicate (MSD) recoveries outside acceptance criteria for magnesium (92%/72%[75-125]), potassium (131%/123%[75-125]) and sodium (400%/220% [75-125]). Sample concentration greater than four time spike concentration for magnesium and sodium and therefore MS/MSD recoveries do no apply and data are not qualified. Qualify potassium data with a "J+" indicating that the datum is estimated, potentially biased high.

(Page 1 of 2)

	Analy	Analytical Method/Analytes:			SW-846 8021B (BTEX)			on Date(s):	08/23/07
		L	aboratory: _	Ac	cutest		MWH Jo	b Number:	SJRB
		<b>Batch Identification:</b>			T18606			Matrix:	Water
	MS/MSD Parent(s) <sup>(a)</sup> :					Fiel	d Replicate	Parent(s):	None
	Verifi	cation Co	omplete: _	Ciaig	Prove -0				
	Foot					Hits			
	Notes	Site ID	Samp	ole ID	Lab. ID	(Y/N)	Quals.	C	omments
	None	SJRB	MW-6		T18606-1	Ν			
	None	SJRB	W-2		T18606-2	Ν			
	None	SJRB	MW-4		T18606-3	Y			
	None	SJRB	MW-5		T18606-4	Y		ſ	· · · · · · · · · · · · · · · · · · ·
	None	SJRB	MW-9		T18606-5	Y			
)	1	SJRB	MW-8		T18606-6	N		Benzene @ <5. Toluene @ <5. Ethylbenzene @ Xylenes (total) o-Xylene @ <5 m,p-Xylene @	)µg/kg ∮<5.0µg/kg @<10µg/kg .0µg/kg
								· ·	
			-						
			· · ·					+	· · · · · · · · · · · · · · · · · · ·
	·							*	
									<u></u>
						·			
									1.0 <sup>-</sup>
									······································
				,					
							· · · · · · · · · · · · · · · · · · ·		

(Page 2 of 2)

Analytical Method: SW-846 8021B (BTEX) M

Accutest

MWH Job Number: \_\_\_\_\_

SJRB

Laboratory:

Batch Identification:

T18606

Verification Criteria							
Sample ID	MW-6	W-2	MW-4	MW-5	MW-9	MW-8	
Lab ID	T18606-1	T18606-2	T18606-3	T18606-4	T18606-5	T18606-6	
Holding Time	A	А	A	А	А	А	
Analyte List	A	A	A	А	A	А	
Reporting Limits	Á	A	A	А	А	А	
Surrogate Spike Recovery	A	A	A	А	А	А	
Trip Blank	N/A	N/A	N/A	N/A	N/A	N/A	
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A	N/A	N/A	
Field Duplicate/Replicate	N/A	N/A	N/A	N/A	N/A	N/A	
Initial Calibration	N	N	N	N	N	N	
Initial Calibration Verification (ICV)	N	N	N	N	N	N	
Continuing Calibration Verification (CCV)	N	N	N	N	N	N	
Method Blank	A	A	A	A	А	А	
Laboratory Control Sample (LCS)	А	A	A	А	А	А	
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	N	N	
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A	N/A	N/A	N/A	
Retention Time Window	N	N	N	N ·	N	N	
Injection Time(s)	N	N	N	N	N	N	
Hardcopy vs. Chain-of-Custody	A	A	А	A	A .	А	
EDD vs. Hardcopy	N	N	N	N	N	N	
EDD vs. Chain of Custody	N	N	N	N	N	N	

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

A indicates verification criteria were met

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

X indicates verification criteria were not met

N indicates data review were not a project specific requirement

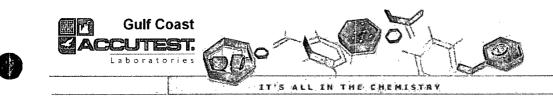
N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

## NOTES:

 Sample was not preserved, thus reducing the holding time from 14 days to seven. Sample analyzed thirteen days after sample collection or six days outside of holding time, introducing a possible low bias. Qualify associated positive sample results with "J-" flags, indicating the data are estimated and possibly biased low. Qualify associated non-detect sample results with "UJ" flags, indicating possible false negatives.





04/02/08

**Technical Report for** 

**Montgomery Watson** 

San Juan River Plant (SJRP)

D-ALAB-SANJUAN-006

Accutest Job Number: T18606

Sampling Date: 08/23/07

Report to:

MWH Americas, Inc.

jed.Smith@us.mwhglobal.com

ATTN: Mr. Jed Smith

Total number of pages in report: 49



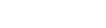
Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino Laboratory Manager



Client Service contact: Agnes Vicknair 713-271-4700

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.







# **Table of Contents**

N

\_\_\_\_\_

4

ល

0

7

# -1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	4
Section 3: Sample Results	6
<b>3.1:</b> T18606-1: MW-6	7
<b>3.2:</b> T18606-2: W-2	10
<b>3.3:</b> T18606-3: MW-4	13
<b>3.4:</b> T18606-4: MW-5	16
<b>3.5:</b> T18606-5: MW-9	19
<b>3.6:</b> T18606-6: MW-8	22
Section 4: Misc. Forms	
4.1: Chain of Custody	26
Section 5: GC Volatiles - QC Data Summaries	29
5.1: Method Blank Summary	30
5.2: Blank Spike Summary	32
5.3: Matrix Spike/Matrix Spike Duplicate Summary	34
Section 6: Metals Analysis - QC Data Summaries	36
6.1: Prep QC MP6503: Hg	37
6.2: Prep QC MP6507: Al,As,Ba,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Zn.	41
Section 7: General Chemistry - QC Data Summaries	46
7.1: Method Blank and Spike Results Summary	47
7.2: Duplicate Results Summary	48
7.3: Matrix Spike Results Summary	49



# Sample Summary

# Montgomery Watson

Job No: T

T18606

# San Juan River Plant (SJRP) Project No: D-ALAB-SANJUAN-006

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID	
T18606-1	08/23/07	07:35 MN	08/24/07	AQ	Ground Water	MW-6	· · · ·
T18606-2	08/23/07	08:20 MN	08/24/07	AQ	Ground Water	W-2	
T18606-3	08/23/07	08:52 MN	08/24/07	AQ	Ground Water	MW-4	
T18606-4	08/23/07	09:55 MN	08/24/07	AQ	Ground Water	MW-5	• •
T18606-5	08/23/07	10:40 MN	08/24/07	AQ	Ground Water	<b>MW-9</b>	
T18606-6	08/23/07	11:25 MN	08/24/07	AQ	Ground Water	MW-8	· ·





# SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson		Job No	T18606
Site:	EPFS San Juan Basin Groundwater Site	-	Report Date	9/10/2007 4:48:06 PM

EPFS San Juan Basin Groundwater Site Site:

6 Samples were collected on 08/23/2007 and were received at Accutest on 08/24/2007 properly preserved, at 1.7 Deg. C and intact. These Samples received an Accutest job number of T18606. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

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

## Volatiles by GC By Method SW846 8021B

Matrix AQ	Batch ID:	GKK1177	
All samples were analyzed within	the recommended method	d holding time.	

- All method blanks for this batch meet method specific criteria.
- Sample(s) T18613-5MS, T18613-5MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for Toluene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

	Matrix	AQ	Batch ID:	GKK1178	
ــــــــــــــــــــــــــــــــــــــ					

- 100 All samples were analyzed within the recommended method holding time.
- Sample(s) T18708-2MS, T18708-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

## Metals By Method SW846 6010B

Matrix AC	Q Batch ID:	MP6507		
 All samples were digested within the recommended method holding time.				

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T18606-6DUP, T18606-6MS, T18606-6MSD, T18606-6SDL, T18606-6DUP were used as the QC samples for metals. 16
- Matrix Spike Recovery(s) for Potassium are outside control limits. Spike recovery indicates possible matrix interference. 38
- 36 Matrix Spike Duplicate Recovery(s) for Potassium are outside control limits. Probable cause due to matrix interference.
- RPD(s) for Duplicate for Arsenic, Chromium, Cobalt, Copper, Lead, Nickel, Potassium, Zinc are outside control limits for EB sample MP6507-D1. RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Serial Dilution for Aluminum, Potassium are outside control limits for sample MP6507-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- MP6507-SD1 for Potassium: Serial dilution indicates possible matrix interference.

## Metals By Method SW846 7470A

Matrix AQ	Batch ID: MP6503			
All samples were digested within the recommended method holding time.				

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T18606-5DUP, T18606-5MS, T18606-5MSD were used as the QC samples for metals.





## Wet Chemistry By Method EPA 160.1



### Matrix AQ Ba

Batch ID: GN12322

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T18606-1DUP were used as the QC samples for Solids, Total Dissolved.

## Wet Chemistry By Method EPA 310.1

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T18606-1DUP, T18606-1MS were used as the QC samples for Alkalinity, Total as CaCO3.
- Matrix Spike Recovery(s) for Alkalinity, Total as CaCO3 are outside control limits. Probable cause due to matrix interference.

## Wet Chemistry By Method EPA 325.3

	·	Matrix	AQ		Batch ID:	61112520
_		1		1 1411 4		

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T18606-3DUP, T18606-3MS were used as the QC samples for Chloride.

## Wet Chemistry By Method EPA 353.2

Matrix	AQ	Batch ID: GN12314	

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) T18539-1DUP, T18539-1MS were used as the QC samples for Nitrogen, Nitrate + Nitrite.

## Wet Chemistry By Method EPA 375.3

	Matrix AQ	Batch ID:	GN12321	
Ċ	All samples were analyzed within	the recommended method	holding time.	
æ	All method blanks for this batch meet method specific criteria.			
	Sample(s) T18606-6DUP, T18606-6MS were used as the QC samples for Sulfate.			
ß	Matrix Spike Recovery(s) for Sulfate are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.			

	Matrix AQ	Batch ID: GN12364	
5	All samples were analyzed within	he recommended method holding time.	

- All method blanks for this batch meet method specific criteria.
- Sample(s) T18606-5DUP, T18606-5MS were used as the QC samples for Sulfate.

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



N



# Section 3

ලී

Depart of Analys	•		
Report of Analys	15		



	Report of Analysis										
Client Sam Lab Samp Matrix: Method: Project:	le ID: T18606 AQ - G SW846	round Wa 8021B	ater Plant (SJRP)	·	Date I	Sampled: Received nt Solids					
Run #1 Run #2	File ID KK022465.D	<b>DF</b> 1	<b>Analyzed</b> 09/05/07	By LJ	Prep D n/a	ate	<b>Prep Batch</b> n/a	Analytical Batch GKK1177			
Run #1 Run #2	<b>Purge Volume</b> 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 2.0 1.0 1.0	0.21 0.23 0.35 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l					

.

CAS No.	Surrogate Recoveries	Run# 1 · Run# 2	Limits
460-00-4	4-Bromofluorobenzene	76%	61-125%
98-08-8	aaa-Trifluorotoluene	93%	50-139%

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



ලී



	Rep	ort	of	Ana	lysis
--	-----	-----	----	-----	-------

Sampled: 08/23/07
Received: 08/24/07
ent Solids: n/a

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	12600	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Arsenic	< 5.0	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Barium	< 200	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cadmium	8.1	4.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Calcium	325000	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Chromium	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cobalt	161	50	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Copper	38.7	- 25	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Iron	3780	100	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Lead	11.0	3.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Magnesium	356000	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Manganese	5880	15	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A 4
Mercury	< 0.20	0.20	ug/l	1.	08/28/07	08/28/07 NS	SW846 7470A <sup>1</sup>	SW846 7470A <sup>3</sup>
Molybdenum	< 10	10	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Nickel	187	40	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A 4
Potassium	39400	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A 4
Selenium	893	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Silver	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Sodium	3370000	50000	ug/l	10	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Zinc	594	20	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>

(1) Instrument QC Batch: MA3076
 (2) Instrument QC Batch: MA3080
 (3) Prep QC Batch: MP6503
 (4) Prep QC Batch: MP6507





3.1

ළ

Sulfate

Report of Analysis									
Lab Sample ID:	MW-6 F18606- AQ - Gr	1 ound Water			Date I	Sampled: 08/23/0 Received: 08/24/0 nt Solids: n/a		•	
Project: San Juan River Plant (SJRP)					1 01 001				
General Chemistry									
Analyte		Result	RL	Units	DF	Analyzed	By	Method	l
Alkalinity, Total as C	aCO3	30.0	5.0	mg/l	1	08/28/07 16:00	TW	EPA 310	1 -
Chloride		1830	. 50	mg/l	50	08/30/07 17:00	ΤW	EPA 325	.3
Nitrogen, Nitrate + N	Vitrite	258	20	mg/l	400	08/28/07 08:00	СР	EPA 353	.2
Solids, Total Dissolve	ed	15500	10	mg/l	1	08/28/07	RM	EPA 160	.1
0.10		0000	1000	19	100				

mg/l

100

08/28/07 14:00 TW

EPA 375.3

1000

8930



、

Page 1 of 1

ස

95-47-6

CAS No.

460-00-4

98-08-8

o-Xylene

m,p-Xylene

Surrogate Recoveries

4-Bromofluorobenzene

aaa-Trifluorotoluene

	Page 1 of 1								
Client Sam Lab Sampl Matrix: Method: Project:	e ID: T18606 AQ - G SW846	ter lant (SJRP)		Date Sampled:08/23/07Date Received:08/24/07Percent Solids:n/a					
Run #1 Run #2	File ID KK022467.D	<b>DF</b> 1	<b>Analyzed</b> 09/05/07	By LJ	Prep D n/a	Date	Prep Batch n/a	Analytical Batch GKK1177	
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	Benzene Toluene Ethylbenzene Xylenes (total)		ND ND ND ND	1.0 1.0 1.0 2.0	0.21 0.23 0.35 0.55	ug/l ug/l ug/l ug/l			

1.0

1.0

Run# 2

0.55

0.66

Limits

61-125%

50-139%

ug/l

ug/l

ND

ND

Run#1

64%

79%

ND = Not detectedMDL - Method Detection LimitRL = Reporting LimitE = 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



3.2 2

ලා

Client Sample Lab Sample II Matrix:	<b>D:</b> T1860	6-2 Ground W	/ater			Date	Rec	n <b>pled:</b> 08/23/07 eived: 08/24/07 Solids: n/a	
Project:	San Ju	ian River	Plant (S	JRP)		1010		, in a	
Metals Analysi	is								
Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	12800	200	ug/l	1,	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Arsenic	< 5.0	5.0	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Barium	< 200	200	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cadmium	< 4.0	4.0	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Calcium	404000	5000	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Chromium	< 10	10	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A 4
Cobalt	< 50	50	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Copper	32.9	25	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Iron	10300	100	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Lead	14.0	3.0	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Magnesium	133000	5000	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Manganese	223	15	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Mercury	< 0.20	0.20	ug/l	1	08/28/07	08/28/07	NS	SW846 7470A <sup>1</sup>	SW846 7470A <sup>3</sup>
Molybdenum	< 10	10	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Nickel	< 40	· <b>40</b>	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Potassium	8880	5000	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010Å <sup>4</sup>
Selenium	143	5.0	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Silver	< 10	10	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Sodium	1120000	25000	ug/l	5	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Zinc	169	20	ug/l	1	08/28/07	08/30/07	NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>

(1) Instrument QC Batch: MA3076(2) Instrument QC Batch: MA3080

(3) Prep QC Batch: MP6503

(4) Prep QC Batch: MP6507

Page 1 of 1

**3.2** ළ

Report of Analysis

					•			
Client Sample ID: Lab Sample ID: Matrix:	W-2 T18606- AQ - Gr	2 ound Water			Date R	ampled: 08/23/0 eceived: 08/24/0 t Solids: n/a		
Project:	n River Plant	(SJRP)						
General Chemistry								
Analyte		Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as	CaCO3	165	5.0	mg/l	1	08/28/07 16:00	тw	EPA 310.1
Chloride		338	17	mg/l	16.67	08/30/07 17:00	ΤW	EPA 325.3
Nitrogen, Nitrate +	Nitrite	18.0	5.0	mg/l	100	08/28/07 08:00	СР	EPA 353.2
Solids, Total Dissolv	/ed	5710	10	mg/l	1	08/28/07	RM	EPA 160.1
Sulfate		3410	100	mg/l	10	08/28/07 14:00	TW	EPA 375.3





CAS No.

460-00-4

98-08-8

			Repo	rt of A	nalysis	Page 1 of 1		
Client Sam Lab Samp Matrix: Method: Project:	le ID: T18606 AQ - G SW846	round Wa 8021B	ter lant (SJRP)	Date Sampled: 08/23/07 Date Received: 08/24/07 Percent Solids: n/a				
Run #1 Run #2	File ID KK022468.D	<b>DF</b> 1	<b>Analyzed</b> 09/05/07	<b>By</b> LJ	Prep D n/a	ate	Prep Batch n/a	Analytical Batch GKK1177
Run #1 Run #2	<b>Purge Volume</b> 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		0.37 ND ND ND ND ND	1.0 1.0 2.0 1.0 1.0	0.21 0.23 0.35 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l .ug/l	J	

Run#2

Limits

61-125%

50-139%

Run#1

84%

113%

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

Surrogate Recoveries

4-Bromofluorobenzene

aaa-Trifluorotoluene

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



3.3 3

ക്ര)

# Report of Analysis

Client Sample ID:	MW-4			
Lab Sample ID:	T18606-3	Date Sampled:	08/23/07	
Matrix:	AQ - Ground Water	Date Received:	08/24/07	
	-	Percent Solids:	n/a	
Project:	San Juan River Plant (SJRP)			

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	9290	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Arsenic	21.1	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Barium	< 200	200	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cadmium	< 4.0	4.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Calcium	249000	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Chromium	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cobalt	88.3	50	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Copper	68.3	25	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Iron	21700	100	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Lead	14.0	3.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Magnesium	108000	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Manganese	6590	15	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Mercury	0.42	0.20	ug/l	1	08/28/07	08/28/07 NS	SW846 7470A <sup>1</sup>	SW846 7470A <sup>3</sup>
Molybdenum	<10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Nickel	268	40	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Potassium	10100	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Selenium	< 5.0	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Silver	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Sodium	910000	25000	ug/l	5	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Zinc	110	20	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>

(1) Instrument QC Batch: MA3076

(2) Instrument QC Batch: MA3080
(3) Prep QC Batch: MP6503
(4) Prep QC Batch: MP6507

ပ အ





# Report of Analysis

# Client Sample ID:MW-4Lab Sample ID:T18606-3Date Sampled:08/23/07Matrix:AQ - Ground WaterDate Received:08/24/07Project:San Juan River Plant (SJRP)Percent Solids:n/a

## General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Alkalinity, Total as CaCO3 Chloride Nitrogen, Nitrate + Nitrite Solids, Total Dissolved Sulfate	820 303 2.1 4460 2000	5.0 10 0.25 10 100	mg/l mg/l mg/l mg/l mg/l	1 10 5 1 10	08/28/07 16:00 08/30/07 17:00 08/28/07 08:00 08/28/07 08/28/07 14:00	TW CP RM	EPA 310.1 EPA 325.3 EPA 353.2 EPA 160.1 EPA 375.3



	Page 1 of 1							
Client Sam Lab Samp Matrix: Method: Project:	le ID: T18606 AQ - G SW846	round Wa 8021B	ater Plant (SJRP)		Date I	Sampled: Received nt Solids	: 08/24/07	
Run #1 Run #2	File ID KK022469.D	<b>DF</b> 1	<b>Analyzed</b> 09/05/07	By LJ	Prep D n/a	ate	<b>Prep Batch</b> n/a	Analytical Batch GKK1177
Run #1 Run #2	<b>Purge Volume</b> 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		3.7 ND ND ND ND	1.0 1.0 2.0 1.0 1.0	0.21 0.23 0.35 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l		

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	76%		61-125%
98-08-8	aaa-Trifluorotoluene	93%		50-139%

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



3.4

ලු

Client Sample Lab Sample II Matrix: Project:	D: T1860 AQ - (			JRP)		Date San Date Re Percent	ceived: 08/24/07		
Metals Analys	is								
Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method	
Aluminum	16900	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Arsenic	< 5.0	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Barium	< 200	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Cadmium	4.8	4.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Calcium	342000	5000	ug/l	1	08/28/07	08/30/07. NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Chromium	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Cobalt	63.7	50	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Copper	30.0	25	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Iron	12100	100	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Lead	20.5	3.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Magnesium	232000	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 601'0B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Manganese	8040	- 15	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Mercury	< 0.20	0.20	ug/l	1	08/28/07	08/28/07 NS	SW846 7470A <sup>1</sup>	SW846 7470A <sup>3</sup>	
Molybdenum	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Nickel	183	40	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Potassium	46400	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Selenium	< 5.0	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Silver	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Sodium	4410000	50000	ug/l	10	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	
Zinc	304	20	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>	

Report of Analysis

Instrument QC Batch: MA3076
 Instrument QC Batch: MA3080
 Prep QC Batch: MP6503
 Prep QC Batch: MP6507

3.4

RL = Reporting Limit



# Report of Analysis

#### Client Sample ID: MW-5 Lab Sample ID: T18606-4 Date Sampled: 08/23/07 Matrix: AQ - Ground Water Date Received: 08/24/07 Percent Solids: n/a San Juan River Plant (SJRP) Project: General Chemistry Analyte Result RL Units DF Analyzed By Method

35.0	5.0	mg/l	1	08/28/07 16:00 TW	EPA 310.1
1730	50	mg/l	50	08/30/07 17:00 TW	EPA 325.3
2.6	1.0	mg/l	20	08/28/07 08:00 CP	EPA 353.2
18600	10	mg/l	1	08/28/07 RM	EPA 160.1
11400	1000	mg/l	100	09/07/07 14:00 TW	EPA 375.3
	1730 2.6 18600	1730502.61.01860010	1730 50 mg/l 2.6 1.0 mg/l 18600 10 mg/l	1730 50 mg/l 50 2.6 1.0 mg/l 20 18600 10 mg/l 1	1730         50         mg/l         50         08/30/07         17:00         TW           2.6         1.0         mg/l         20         08/28/07         08:00         CP           18600         10         mg/l         1         08/28/07         RM

**3.4** ළි

	Report of Analysis													
	ethod: SW846 8021B Percent Solids: n/a													
Run #1 Run #2		<b>DF</b> 1	<b>Analyzed</b> 09/05/07	<b>By</b> LJ	Prep D n/a	Date	<b>Prep Batch</b> n/a	Analytical Batch GKK1178						
Run #1 Run #2	Purge Volume 5.0 ml													
Purgeable	Aromatics							· · · · · · · · · · · · · · · · · · ·						
CAS No.	Compound		Result	RL	MDL	Units	Q							
71-43-2	Benzene		88.1	1.0	0.21	ug/l								
108-88-3	Toluene		ND	1.0	0.23	ug/l								
100-41-4	Ethylbenzene		21.2	1.0	0.35	ug/l								
1330-20-7	Xylenes (total)		13.8	2.0	0.55	ug/l								
95-47-6	o-Xylene		ND	1.0	0.55	ug/l								
	m,p-Xylene		13.8	1.0	0.66	ug/l								
CAS No.	Surrogate Recov	veries	Run# 1	Run# 2	Lim	its								
			<b>0-0</b> (			050/								
460-00-4	4-Bromofluorobe	nzene	95%		61-1	.25%								

ND = Not detectedMDL - 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



3.5

ලා

<b>D</b> : T1860	6-5	/ater			Date Rec	eived: 08/24/07								
San Ju	an River	Plant (S	JRP)											
setals Analysis														
Result	RL	Units	DF	Ргер	Analyzed By	Method	Prep Method							
16300	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 5.0			1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 200	200		1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 4.0	4.0		1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
108000	5000		1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 10	10		1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
205	50		1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
121	25		1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
6330	100		1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
8.4	3.0		1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
289000	5000		1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2°</sup>	SW846 3010A <sup>4</sup>							
6420	15		1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 0.20	0.20	ug/l	1	08/28/07	<b>08/28/07</b> NS	SW846 7470A <sup>1</sup>	SW846 7470A <sup>3</sup>							
< 10	10	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
318	40	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
23700	5000	ug/l ·	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 5.0	5.0		1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
< 10	10	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
3590000	50000	ug/l	10	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
732	20	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>							
	D: T1860 AQ - ( San Ju is Result 16300 < 5.0 < 200 < 4.0 108000 < 10 205 121 6330 8.4 289000 6420 < 0.20 < 10 318 23700 < 5.0 < 10 318 23700 < 5.0 < 10 3590000	D:       T18606-5 AQ - Ground W San Juan River         is       Result       RL         16300       200         < 5.0	D:       T18606-5 AQ - Ground Water         San Juan River Plant (S.         San Juan River Plant (S.         is       Result       RL       Units         16300       200       ug/l         < 5.0	D:       T18606-5 AQ - Ground Water         San Juan River Plant (SJRP)         is         Result       RL       Units       DF         16300       200       ug/l       1         < 5.0	D:       T18606-5 AQ - Ground Water         San Juan River Plant (SJRP)         is         Result       RL       Units       DF       Prep         16300       200       ug/l       1       08/28/07         < 5.0	D:       T18606-5 AQ - Ground Water       Date Sam Date Rec Percent S         San Juan River Plant (SJRP)       DF       Prep       Analyzed By         is       Result       RL       Units       DF       Prep       Analyzed By         16300       200       ug/l       1       08/28/07       08/30/07       NS         < 5.0	D:       T18606-5 AQ - Ground Water       Date Sampled:       08/23/07 Date Received:       08/24/07 Percent Solids:       n/a         San Juan River Plant (SJRP)       San Juan River Plant (SJRP)       Prep       Analyzed By       Method         is       Result       RL       Units       DF       Prep       Analyzed By       Method         16300       200       ug/l       1       08/28/07       08/30/07       NS       SW846 60108       2         < 5.0							

Report of Analysis

(1) Instrument QC Batch: MA3076

(1) Instrument QC Batch: MA3080
(2) Instrument QC Batch: MA3080
(3) Prep QC Batch: MP6503
(4) Prep QC Batch: MP6507



Laboratories

AC T18606

**ЗТ.** 

3.5

			Repor	t of An	alysis		•	Page 1 of 1
Lab Sample ID:	MW-9 T18606- AQ - Gr	5 ound Water			Date 1	Sampled: 08/23/0 Received: 08/24/0 nt Solids: n/a		
Project:	San Juan	n River Plant	(SJRP)					
General Chemistry								
Analyte		Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Total as C Chloride Nitrogen, Nitrate + 2 Solids, Total Dissolv Sulfate	Nitrite	25.0 775 0.40 16500 10900	5.0 50 0.050 10 1000	mg/l mg/l mg/l mg/l mg/l	1 50 1 1 100	08/28/07 16:00 08/30/07 17:00 08/28/07 08:00 08/28/07 09/07/07 14:00	TW CP RM	EPA 310.1 EPA 325.3 EPA 353.2 EPA 160.1 EPA 375.3



.



မ မ

		Repo	rt of An	alysis			Page 1 of 1
Client Sample Lab Sample Matrix: Method: Project:	-			Date 1	Sampled: Received nt Solids	: 08/24/07	
Run #1 <sup>a</sup> Run #2	File ID         DF           KK022478.D         5	<b>Analyzed</b> 09/05/07	<b>By</b> LJ	<b>Prep</b> D n/a	Date	Prep Batch n/a	Analytical Batch GKK1178
Run #1 Run #2	Purge Volume 5.0 ml					• .	
Purgeable A	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	5.0 5.0 5.0 10 5.0 5.0	1.0 1.1 1.7 2.8 2.8 3.3	ug/l ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	<b>Run#</b> 1	Run# 2	Lim	its		
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	72% 81%			25% 39%		

(a) Sample analyzed beyond hold time; reported results are considered minimum values. Sample was not preserved to a PH < 2.

ND = Not detectedMDL - Method Detection LimitRL = Reporting LimitE = 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



3.6

# Report of Analysis

3.6

ලා

Client Sample ID: Lab Sample ID:	MW-8 T18606-6		Date Sampled:	08/23/07	
Matrix:	AQ - Ground Water	•	Date Received: Percent Solids:	08/24/07	
Project:	San Juan River Plant (SJRP)				

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Aluminum	1300	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Arsenic	< 5.0	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Barium	< 200	200	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cadmium	< 4.0	4.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Calcium	69500	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Chromium	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Cobalt	<sup>`</sup> < 50	50	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Copper	< 25	25	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Iron	855	100	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Lead	4.8	3.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Magnesium	288000	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Manganese	590	15	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Mercury	< 0.20	0.20	ug/l	1	08/28/07	08/28/07 NS	SW846 7470A <sup>1</sup>	SW846 7470A <sup>3</sup>
Molybdenum	16.5	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Nickel	< 40	40	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Potassium	87400	5000	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Selenium	< 5.0	5.0	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Silver	< 10	10	ug/l	1	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Sodium	2220000	50000	ug/l	10	08/28/07	08/30/07 NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>
Zinc	132	20	ug/l	1	08/28/07	<b>08/30/07</b> NS	SW846 6010B <sup>2</sup>	SW846 3010A <sup>4</sup>

Instrument QC Batch: MA3076
 Instrument QC Batch: MA3080
 Prep QC Batch: MP6503

(4) Prep QC Batch: MP6507



# Report of Analysis

# Client Sample ID: MW-8 Lab Sample ID: T18606-6 Matrix: AQ - Ground Water Project: San Juan River Plant (SJRP)

Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Alkalinity, Total as CaCO3	2580	20	mg/l	4	08/28/07 16:00	TW	EPA 310.1
Chloride	165	10	mg/l	10	08/30/07 17:00		EPA 325.3
Nitrogen, Nitrate + Nitrite	0.60	0.050	mg/l	1	08/28/07 08:00		EPA 353.2
Solids, Total Dissolved	8200	10	mg/l	1	08/28/07		EPA 160.1
Sulfate	3980	10	mg/l	10	08/28/07 14:00		EPA 375.3

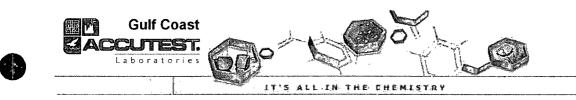
\_\_\_\_\_

Page 1 of 1

3.6







# Section 4

Misc. Forms

**Custody Documents and Other Forms** 

Includes the following where applicable:

• Chain of Custody



ACCUTEST.				1016	is IIarv TEL.	vin Dri 713-271 W	ive, St 1-4700 ww.ac	e. 150 FA) cutest	, Hou (: 71) .com	iston, 3-271	'fx 1 -477(	77036	FED-E	X Track X/7 ast Quol	ing# 73	86	52	ð	Bottle C	order Co st Job #	ntrol #			
pany Name	. ats s	Project	Name	i arair		rojeci info				in as								Reque	ested Ana	alysis		i ete	·····	Matrix Codes W - Drnkleg Water
NUI-1 AMERICES		Street	en l'i	in	රිද්ද	1-Y	1su	k		-			$\left\{ \right.$			Ŋ					ł		G	W - Ground Water
301 (alitania ste 2900	<u></u>								_				1	N.C.		12							s	WW - Water W - Surface Water
Jennes CO 30.	202	City				State	•							5		يلجن	$\left  \right $					1		SO - Sat
ect Contact E-n		Project	#										1	1.		Š								Si Sludge
net annih		Fax #					<u> </u>						1	5	$\mathbb{C}^{\mathbb{N}}$	ر. در								01-01
303211 2276		-													IJ	142							'	LIQ - Other Liquid AIR - Air
npler's Name A.) -C C		Client	Purchase Oro	ier# J 🔿 🖞	1) A( 9) - A	-43 -77	32	mJi	i224	n e	) ) (	0	W	1.0	N	0								SOL - Other Solid
Recutest Field ID / Point of Collection	SUMMA #	·	Collection				L-	Number I		1	• T	1	12	2	12	912				1			L	WP - Wipe
ample #	MECHIVIal	# Date	Time	Sampled By		# cf bottles	ę Ż	E SI	H2KOI	NUR		BACOTE		2	$\prec$	Þ								LAB USE OFTLY
1 mw-10	ļ	\$2307	0735	m	106	5	3	1	1	1	Ĺ		X	×	$\mathbf{\lambda}$	$\star$					_			
2 W-2		32307	9920	mu	WG	5	3	1		1			$\times$	X	X	X								
3 MW-4		TBUT	0852	MN	WB	5	3	1	1		1		×	X	$\star$	x						_		
4 MW-5		0823	0955	NM	ing	5	4	Į Į.		1			×	X	Х	X								
3 MW-9		0823	1040	MN	W	5	3	1	$\backslash$	$\mathbf{V}$			X	X	х	$\mathbf{x}$					T			
6 MW-3		0473	1125	man	10/2	5		1	$\left  \right\rangle$	4	T		X	X	×	$\mathbf{x}$							Γ	
					1													-					T	
	ľ	T		1				1															1	
				T	1			+				1	T T										1	
				<b> </b>			$\square$	1	$\square$		+		t -							-+	$\uparrow$		+	
Turnaround Time (Business Days)	jan na	nón ser			ù.	Data Da	liverabi			1		di la		Ìxpes	<u>an</u> j		<u>iani</u> n	жi с	amment	s / Rema	irks 🕅	andra	on se	
10 Day STANDARD Approved By: / Date: 1 5 Day RUSH			Comme				ΠE	DD For	mal					L	ß	<u>,</u> 72	:*	10	)A ·	5 N	ЛU.	<u>ع-</u> د	3	
3 Day EMERGENCY			Reduce	d Tier 1											a	بنه	- 11	01	ς. ζ	مير ۱ (	с, .e	140	d	
2 Day EMERGENCY			Full Tier																					<u> </u>
1 Day EMERGENCY	<u> </u>	-		•										-							•			
			Comn	nercial "A	A" > Res	ults On	y																	
mergency & Rush T/A data available VIA LabLink	_			<u> </u>								•												
anguistier کې Sempter: او Data Tirr		Received by	Custody mu	st be door	umented	below ea		sample: Relinquis		ge pos	session	i, includ	ng cou	ner deliv	ery. 👬		Time :		Received		(field)	1998 (A.	1940 (A)	A STORES
MX - 8/25/07/12	08	1						2									-		2					
Date In	e	Received by						Relinquisi 4	hed by							Oaxe	Time		Received	by:				
elinquished by: Date Tur	ie T	Received by						Custody !	Sual #					Pres	erved whi		cable		0η ice			Cooler	Temp	]
·		5						-								<u> </u>			<u> </u>					1

Ъ,

T18606: Chain of Custody Page 1 of 3



4.1

4

EXERCISE     THE TRISTING     Start 1 294/517       In the control of ites     The tristing item     Start 1 294/517       Intervention     Derivation     Start 1 294/517       Company Inter     Start 1 294/517     Start 1 294		CHAIN OF CUSTOD	
Barbon Status         Dart / Hauning internation         Barbon Status         Figael Monetaria         Figael Monetaria         Barbon Status		TEL. 713-271-4700 FAX: 713-271-4770	154177 886528
Company Write:       State		Print Information	
Address     State	y Name	Project Name	Requised Analysis and Maul
1700       (2)	WH Americas	Sontum Basin Plant	GW-G
Userver       CO       \$C2.02         Miled Color       Error       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       NC       Fig.#         Bread Color       NC       Bread Color         NC       Bread Color       Two C Bread Color         NC       Bread Color       Two C Bread Color         Strate Color       Strate Color       Strate Color         Bread Color       Strate Color       Strate Color         Image Color       Strate Color       Strate Color	a california sta acomp	Street	
Userver       CO       \$C2.02         Miled Color       Error       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       Fig.#       Fig.#         Bread Color       NC       Fig.#         Bread Color       NC       Bread Color         NC       Bread Color       Two C Bread Color         NC       Bread Color       Two C Bread Color         Strate Color       Strate Color       Strate Color         Bread Color       Strate Color       Strate Color         Image Color       Strate Color       Strate Color	State Zip	City State	S SW Su
Direct Smith     Fait     Fait<	enver CO 80202	·	
Proof #       Sample: Start       Fa.#       Vis D + 1		Project #	
Simplers Name       Collection       Delta Public Simplers       Notice 1       Not	JEA SMITH	Fax #	
NCC     Two Backson     Sample for the Collection     Number of generation before     Numerecold before     Number of generation before <td>03291 2276</td> <td></td> <td></td>	03291 2276		
According Serging #       Feek ID / Point of Cohector       SUMAL # WCO / Var #       Cohector       Number of preserved Potters       Number of preserved Potters       Number of preserved Potters         1       M WJ Co       22207 C7.35 m/L       WC 5       3       1       1       N       X <td>s Name</td> <td></td> <td></td>	s Name		
Sample 8       With Weight 1       Date       Time       Sample 7       Weight 2207 0735       Weight 220 0755       Weight 220		Collection Number of preserved Bottles	2V X 2 X 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
1       MWG       B220707337       MW WG S 3       1       1       X <td>e#</td> <td></td> <td></td>	e#		
1       W1 - 2       8 200 08 20 mg w w 5 3       1       1       X X X X         3       MW - 4       0260 08 52 mm w 5 3       1       1       X X X X         4       MW - 5       08 23 9955 NN w 5 3       1       1       X X X X         5       MW - 9       08 23 9955 NN w 5 3       1       1       X X X X         5       MW - 9       08 23 9955 NN w 5 3       1       1       X X X X         9       MW - 9       08 23 9955 NN w 5 3       1       1       4       X X X X         9       MW - 9       08 23 9955 NN w 5 3       1       1       4       X X X       1         9       MW - 9       08 23 9955 NN w 5 3       1       1       4       X X X       1         9       MW - 9       08 23 9955 NN w 5 3       1       1       4       X X X       1         9       MW - 8       952 3       125 7 NN w 5 3       1       1       4       X X X       1       1         9       MW - 9       082 800 MM m w 5 3       1       1       4       X X X       1       1       1       1       1       1       1       1       1       1       1       1<			<del>x x x x -++++++++++++++++++++++++++++++</del>
7       MW -4       03501 0372 m/m Wz 5       3       1       1       1       X       X       X         4       MW -5       0823 0755 N/M Wz 5       3       1       1       X       X       X       X         5       MW -9       0923 1040 m/M Wz 5       3       1       1       X       X       X       X         9       MW -9       0923 1040 m/M Wz 5       3       1       1       4       X       X       X       X         9       MW -8       9523 1125 m/M Wz 5       1       1       4       X       <			
U       MW -5       0823       955 N/N W2 5       0953       1114       A       A       A       A         S       MW -9       0823       9955 N/N W2 5       3       1114       A			
S       MW -9       0723       1040       NV W25       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1       1       4       X       X       X       1			
V       MW - B       042 3       1125       MW - S       1       14       X X X X         MW - B       042 3       1125       MW - S       1       14       X X X X       X         MW - B       042 3       1125       MW - S       1       14       X X X X       X         MW - B       042 3       1125       MW - S       1       14       X X X X       X         Must - B       Unaround Time (Business Days)       Base and the second			
		823 1040 MN WG 53	
I Day EMERGENCY     Other     Temergency & Rush T/A data available VIA LabLink     Commercial 'A' = Results Only     Commercial 'A' = Res	I MW-8 09	823 1125 mm w6 5 114	X   X   X   X
I Day EMERGENCY     Other     Temergency & Rush T/A data available VIA LabLink     Commercial 'A' = Results Only     Commercial 'A' = Res			
I Day EMERGENCY     Other     Temergency & Rush TIA data available VIA LabLink     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Commercial 'A' = Results Only     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Commercial 'A' = Results Only     Date Time     Recoved by     Date Time     Recoved			
I Day EMERGENCY     Other     Temergency & Rush T/A data available VIA LabLink     Commercial 'A' = Results Only     Commercial 'A' = Res		<del>─┼──┼─┼─┼┉┥┥┼┼┼╪┼╎┼</del>	─ <u>┤</u> ┤ <u></u> ┤─┤ <u>┤</u> ─ <del>┤</del> ─┥
I Day EMERGENCY     Other     Temergency & Rush T/A data available VIA LabLink     Commercial 'A' = Results Only     Commercial 'A' = Res	Turney of Time /Pupieses David		
			ATSX MAAS NALL - C2
I Day EMERGENCY     Other     Temergency & Rush T/A data available VIA LabLink     Commercial 'A' = Results Only     Commercial 'A' = Res			BICKVUNSINWAS
I Day EMERGENCY     Other     Temergency & Rush T/A data available VIA LabLink     Commercial 'A' = Results Only     Commercial 'A' = Res		-	are not preserved
Commercial "A" = Results Only  Emergency & Rush T/A data available VIA LabLink  Emerg			
Emergency & Rush T/A data available VIA LabLink  Emergency & Rush T/A data available V			
Emergency & Rush 1/A data available VA LabLink	n .	Commercial "A" = Results Only	
Reinguigher 77 mplar:         Date Time         Received by           1         1         2         2         2         2           1         1         2         2         2         2         2           1         1         2         2         2         2         2         2           3         1         2         4         1         2	ency & Rush TIA data available VIA LabLink		
1         2 <th2< th=""> <th2< th=""> <th2< th=""> <th2< th=""></th2<></th2<></th2<></th2<>			
Refragalade by Date Time Received by. 3 Refractished by Accessed	N/	2 EV. Reinquished by	Date Time Received by
		ad by. Relinquished by:	Date Time Received by.
			A Commentation and antice antice and antice and antice antice and antice antice and antice antice and antice and antice a
$s$ $ 0PH 0H 9_{s}$ ; $ A  PUVVV  A$	SPHA 9. TS	······································	Preserved where applicable On ice Cooler Temp

ı

T18606: Chain of Custody Page 2 of 3



4.1

4

		ange. ners. stody.	Ħ	U, <2, >12, NA	1,2,3 6,6 U, 2212, NA	U, &>12, NA	U ~2, >12, NA	U, <2, >12, €	U, 3 >12, NA	1,223A,5,6 U.(2)>12, NA	J.2,3,4,5,6 Q.<2, >12, NA	U. <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA				MP: 28/06, QAO
		nation): Thin temp. ra oper contai chain of cu	PRESERV.	123,4,5,6	1,2,3 6,6	1,264,5,6	(1. <b>}</b> .3,4,5,6	A2,3,4,5,6	1,2,3(4)5,6	1,2(3,4,5,6	(J,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6			COOLER TEMP	COOLER TEMP: Form: SM012, Rev.07/28/06, QAO
k	L &	see variance for explanation): Samples received within temp. range. Sample received in proper containers. Sample received with chain of custody. rs.	LOCATION	VAEF	λT	_		WEF	27														
е   сч   т гос		cied, see varia N Sample N Sample N Sample tainers. oter.	VOLUME	40ml -	1250	P500	P1001	40mg	Pro	P500	100n	4	5							e Freezer		COOLER TEMP:	COOLER TEMP:
SAMPLE RECEIPT LOG	VED: S	If "N" is clin 4.2 6. tysis on con evident on c	MATRIX	Ø							[		S, J4						4	bcontract EF: Encore Freezer 5: NAOH 6: Other	- CHILDING		
SAMPLE	DATE/TIME RECEIVED: <u>8/14/07</u>	Ition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation): N Sample received in undamaged condition. N Sample received with proper pH. N Sample volume sufficient for analysis. N Chain of Custody matches sample IDs and analysis on containers. N Samples Headspace acceptable N A Custody seal received intact and tamper not evident on cooler. N NA Custody seal received intact and tamper not evident on bottles.	DATE SAMPLED	2993							-1	-	N N	3		$\left\langle \right\rangle$			1	SUB: Subcontra 4: H2SO4 5: NAO		ł	
EST.	Americas	<i>la</i> tiance (Circle "Y" for yes and "N" for Sample received in undamaged condi Sample received with proper pH. Sample volume sufficient for analysis. Camples volume sufficient for analysis. Camples Headspace acceptable A Custody seal received intact and ta NA Oustody seal received intact and ta	BOTTLE#	1-3	÷	~	Ŋ	1-3	4	Ś	Ø		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		/					VR: Volatile Refrig. e 2: HCL 3: HNO3	ding volatiles	E L	
	Hund	on/Variance (Cirr Sample recet Sample recet Sample volun Chain of Cust Chain of Cust Samples Hea NA Custody st	SAMPLE or FIELD ID	V				b						/						LOCATION: WI: Waik-In V PRESERVATIVES: 1: None	ph.of.werens checked excluding volatile pH of soils N/A	Delivery method: Courier:	
	JOB #: _		SAMPI																	PRESER	pH of soils NA	Delivery	

T18606: Chain of Custody Page 3 of 3



4.1



## Section 5

# GC Volatiles

# QC Data Summaries

## Includes the following where applicable:

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



#### Method Blank Summary Job Number: T18606

Project:	San Juan River Plant (SJRP)
Account:	MWHSLCUT Montgomery Watson
JOD NUMBER:	118000

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
GKK1177-MB	KK022444.D	01	09/04/07	LJ	n/a	n/a	GKK1177

#### The QC reported here applies to the following samples:

Method: SW846 8021B

T18606-1, T18606-2, T18606-3, T18606-4

4

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 ND	1.0 1.0 2.0 1.0 1.0	0.21 0.35 0.23 0.55 0.55 0.66	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	70% 100%	61-12 50-13		



5.<u>1</u>

ன



#### Method Blank Summary Job Number: T18606

Job Number:I 18606Account:MWHSLCUT Montgomery WatsonProject:San Juan River Plant (SJRP)						
Sample GKK1178-MB	File ID DF KK022475.D 1	Analyzed 09/05/07	<b>By</b> LJ	<b>Prep Date</b> n/a	Prep Batch n/a	Analytical Batch GKK1178
The QC report	ed here applies to the	e following sam	ples:		Method: SW	/846 8021B

T18606-5, T18606-6

98-08-8

aaa-Trifluorotoluene

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 2.0 1.0 1.0	0.21 0.35 0.23 0.55 0.55 0.66	ug/l ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
460-00-4	4-Bromofluorobenzene	69%	61-12	25%	

103%

50-139%



5.1

# Blank Spike Summary

Project:	San Juan R	iver Plant	(SJRP)				
Sample	File ID	<b>DF</b>	<b>Analyzed</b> 09/05/07	By	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch
GKK1177-BS	KK022466.	.D1 .		LJ	n/a	n/a	GKK1177

## The QC reported here applies to the following samples:

T18606-1, T18606-2, T18606-3, T18606-4

CAS No.	Compound	. Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	20	18.8	94	79-122
100-41-4	Ethylbenzene	20	17.8	89	80-118
108-88-3	Toluene	20	19.0	95	78-120
1330-20-7	Xylenes (total)	60	55.9	93	80-120
95-47-6	o-Xylene	20	19.1	96	80-121
	m,p-Xylene	40	36.8	92	79-120
CAS No.	Surrogate Recoveries	BSP	Liı	nits	
460-00-4	4-Bromofluorobenzene	92%	61-	125%	
98-08-8	aaa-Trifluorotoluene	107%	50-	139%	





5.2



#### Blank Spike Summary Job Number: T18606

Job Numbe Account: Project:	r: T18606 MWHSLCUT Montgo San Juan River Plant (						
Sample GKK1178-I	<b>File ID DF</b> 3S KK022476.D 1	<b>Analyzed</b> 09/05/07	<b>By</b> LJ	P: n/	rep Date ′a	<b>Prep Batch</b> n/a	Analytical Batch GKK1178
<b>The QC re</b> T18606-5, 7	ported here applies to the T18606-6	following san	aples:			Method: SW	/846 8021B
CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits		
71-43-2	Benzene	20	19.0	95	79-122		
100-41-4	Ethylbenzene	20	17.9	90	80-118		
108-88-3	Toluene	20	19.0	95	78-120		
1330-20-7	Xylenes (total)	60	55.1	92	80-120		
95-47-6	o-Xylene	20	18.3	92	80-121		
	m,p-Xylene	40	36.8	92	79-120		
CAS No.	Surrogate Recoveries	BSP	Li	mits			
460-00-4	4-Bromofluorobenzene	88%	61	-125%			
98-08-8	aaa-Trifluorotoluene	102%		-139%			

Page 1 of 1

5.2

ଭ



# Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	T18606
Account:	MWHSLCUT Montgomery Watson
Project:	San Juan River Plant (SJRP)

T T	a <b>mple</b> [18613-5MS [18613-5MSD [18613-5	File ID KK022447.I KK022448.I KK022446.I	) 100 ) 100	Analyzed 09/05/07 09/05/07 09/05/07	By LJ LJ LJ	Prep Date n/a n/a n/a	n/a n/a	Analytical Batch GKK1177 GKK1177 GKK1177
--------	--	---	----------------	--	----------------------	--------------------------------	------------	---

#### The QC reported here applies to the following samples:

Method: SW846 8021B

T18606-1, T18606-2, T18606-3, T18606-4

CAS No.	Compound	T18613-5 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	5990 2310 9410 8020 2280 5750	2000 2000 2000 6000 2000 4000	8180 4510 12000 14700 4480 10300	110 110 130* a 111 110 114	8020 4510 12000 14600 4460 10100	130* <sup>a</sup> 110	2 0 1 0 2	63-140/20 74-130/20 76-129/20 75-130/20 78-128/20 75-129/20
CAS No.	Surrogate Recoveries	MS	MSD		3613-5	Limits		·	
460-00-4 98-08-8	4-Bromofluorobenzene aaa-Trifluorotoluene	113% 128%	113% 116%	104 115		61-125% 50-139%	-		

(a) Outside control limits due to high level in sample relative to spike amount.



5.3

ග



Page 1 of 1

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	T18606
Account:	MWHSLCUT Montgomery Watson
Project:	San Juan River Plant (SJRP)

Sample T18708-2MS	File ID KK022480.	DF	<b>Analyzed</b> 09/05/07	<b>By</b> LI	<b>Prep Date</b> n/a	Prep Batch n/a	Analytical Batch GKK1178
T18708-2MSD			09/05/07	LJ	n/a	n/a	GKK1178
T18708-2	KK022479.	D1	09/05/07	LJ	n/a	n/a	GKK1178

## The QC reported here applies to the following samples:

Method: SW846 8021B

T18606-5, T18606-6

CAS No.	Compound	T18708-2 ug/1 (	Sp Qu	oike g/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	0.64 J ND ND ND ND ND	20 20 20 60 20 40	) ) )	20.9 19.3 21.3 58.9 19.2 39.7	101 97 107 98 96 99	20.9 19.3 21.0 59.7 19.9 39.9	101 97 105 100 100 100	0 0 1 1 4 1	63-140/20 74-130/20 76-129/20 75-130/20 78-128/20 75-129/20
CAS No. 460-00-4 98-08-8	Surrogate Recoveries 4-Bromofluorobenzene aaa-Trifluorotoluene	MS 94% 108%	. 92	[SD 2% )6%	T1 72 86		Limits 61-125 <sup>4</sup> 50-139 <sup>4</sup>			

5.3

ଭା

Page 1 of 1





## Section 6

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: T18606 Account: MWHSLCUT - Montgomery Watson Project: San Juan River Plant (SJRP)

QC Batch ID: MP6503 Matrix Type: AQUEOUS Methods: SW846 7470A Units: ug/l

Prep Date:				08/28/07	
Metal	RL	IDL	MB raw	final	•
Mercury	0.20	.049	0.0010	<0.20	 

Associated samples MP6503: T18606-1, T18606-2, T18606-3, T18606-4, T18606-5, T18606-6

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (anr) Analyte not requested



6.1.1



QC Batch ID: MP6503 Matrix Type: AQUEOUS Methods: SW846 7470A Units: ug/l

Prep Date:	08/28/	0 <sup>7</sup>		08/28/0	08/28/07					
Metal	T18606-5 Original		RPD	QC Limits	T18606- Origina		Spike HGTXA	lot 240 % Rec	QC Limits	
Mercury	0.0	0.0	NC	0-6.6	0.0	3.2	3.2	100.0	78-118	

Associated samples MP6503: T18606-1, T18606-2, T18606-3, T18606-4, T18606-5, T18606-6

Results < IDL are shown as zero for calculation purposes
(\*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested</pre>





QC Batch ID: MP6503 Matrix Type: AQUEOUS Methods: SW846 7470A Units: ug/l

Prep Date:					08/28/07					
Metal	T18606 Origin		Spikel HGTXAÇ	.ot 240 % Rec	MSD RPD	QC Limit				
Mercury	0.0	3.1	3.2	96.9	3.2		5 5			

Associated samples MP6503: T18606-1, T18606-2, T18606-3, T18606-4, T18606-5, T18606-6

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested





QC Batch ID: MP6503 Matrix Type: AQUEOUS Methods: SW846 7470A Units: ug/l

Prep Date:			08/28/0	7		
Metal	BSP Result	Spikelot HGTXAQ40		QC Limits		
Mercury	3.0	3.2	93.8	80-120		

Associated samples MP6503: T18606-1, T18606-2, T18606-3, T18606-4, T18606-5, T18606-6

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (anr) Analyte not requested



6.1.3

QC Batch ID: MP6507 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:				08/28/07
Metal	RL	IDL	MB raw	final
Aluminum	200	51	9.1	<200
Antimony	5.0	1.8		
Arsenic	5.0	1.4	-0.19	<5.0
Barium	200	.1	0.0	<200
Beryllium	5.0	.06		
Boron	100	1.4	anr	
Cadmium	4.0	.5	-0.020	<4.0
Calcium	5000	8	4.0	<5000
Chromium	10	.9	-2.8	<10
Cobalt	50	.99	-0.33	<50
Copper	25	1.4	-0.21	<25
Iron	100	16	-1.4	<100
Lead	3.0	.7	0.27	<3.0
Magnesium	5000	8	2.7	<5000
Manganese	15	.2	-0.020	<15
Molybdenum	10	.45	0.43	<10
Nickel	40	1	-2.0	. <40
Potassium	5000	80	-31	<5000 ·
Selenium	5.0	1.7	2.1	<5.0
Silver	10	.5	-0.54	<10
Sodium	5000	160	12.0	<5000
Strontium	20	.5		
Thallium	10	1.5		
Tin	20	1.5	anr	
Titanium	20	.5		
Vanadium	50	.4		
Zinc	20	.8	2.4	<20

Results < IDL are shown as zero for calculation purposes (\*) Outside of QC limits (anr) Analyte not requested



6.2.1



QC Batch ID: MP6507 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:			08/28/07		08/28/07				
Metal	T18606-6 Original	DUP	RPD	QC Limits	T18606-6 Original	MS	Spikelot MPTW3	% Rec	QC Limits
luminum	1300	1260	17.4	0-20	1300	57300	50000	111.6	75-125
Intimony									
rsenic	4.9	4.4	200.0(a)	0-20	4.9	403	400	100.8	75-125
Barium	28.9	26.6	5.5	0-20	28.9	434	400	101.5	75-125
Beryllium			•						
oron	anr								
admium	0.0	0.0	NC	0-20	0.0	392	400	98.0	75-125
alcium	69500	65800	7.3	0-20	69500	119000	50000	96.4	75-125
hromium	2.1	1.7	200.0(a)	0-20	2.1	406	400	101.5	75-125
obalt	5.0	4.9	200.0(a)	0-20	5.0	413	400	103.3	75-125
Copper	8.6	11.9	200.0(a)	0-20	8.6	438	400	109.5	75-125
ron	855	829	7.3	0-20	855	50700	50000	99.6	75-125
ead	4.8	6.5	200.0(a)	0-20	4.8	413	400	103.3	75-125
lagnesium	288000	272000	3.6	0-20	288000	334000	50000	104.0	75-125
anganese	590	555	3.5	0-20	590	983	400	102.0	75-125
olybdenum	16.5	16.1	13.9	0-20	16.5	403	400	96.1	75-125
ickel	6.6	7.6	200.0(a)	0-20	6.6	399	400	99.8	75-125
otassium	87400	80500	31.7 (a)	0-20	87400	153000(b	50000	189.0N(c	75-125
elenium	3.2	0.0	0.0	0-20	3.2	419	400	104.8	75-125
ilver	0.0	0.0	NC	0-20	0.0	424	400	106.0	75-125
odium	2060000	2170000	2.3	0-20	2060000	2260000	50000	80.0	75-125
trontium									
hallium									
in	anr								
itanium									. •
anadium									
inc	132	40.8	99.8 (a)	0-20	132	523	400	100.3	75-125
ssociated sam	ples MP65	07: T1860	6-1, T186	06-2, T18	606-3, T1	8606-4, T	18606-5,	T18606-6	
tesults < IDL *) Outside of N) Matrix Spi anr) Analyte a) RPD accept b) Spike reco c) Spike reco	QC limit ke Rec. o not reque able due very is o	s utside of sted to low du utside co	QC limit plicate a ntrol lim	s nd sample it due to	concentra high cond		n of samp	le.	

6.2.2





QC Batch ID: MP6507 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:					08/28/0	7
Metal	T18606-6 Original	MSD	Spikelot MPTW3	% Rec	MSD RPD	QC Limit
Aluminum	1300	57200	50000	111.4	6.1	
Antimony				:		
Arsenic	4.9	400	400	100.0	0.3	
Barium	28.9	434	400	101.5	1.6	
Beryllium						
Boron	anr					
Cadmium	0.0	392	400 .	98.0	5.9	
Calcium	69500	116000	50000	90.4	6.7	
Chromium	2.1	405	400	101.3	5.1	
Cobalt	5.0	413	400	103.3	1.7	
Copper	8.6	437	400	109.3	10.1	s
Iron	855	50600	50000	99.4	4.3	
Lead	4.8	411	400	102.8	0.7	
Magnesium	288000	324000	50000	84.0	3.9	
Manganese	590	966	400	97.8	3.0	
Molybdenum	16.5	404	400	96.4	3.9	
Nickel	6.6	398	400	99.5	1.2	
Potassium	87400	149000(a	50000	181.0N(b	23.2	
Selenium	3.2	417	400	104.3	0.7	
Silver	0.0	424	400	106.0 -	8.4	
Sodium	2060000	2170000	50000	-100.0(c	4.1	
Strontium						
Thallium						
ſin						
litanium						
Vanadium						
Zinc	132	452	400	82.5	15.7	
Associated sam	ples MP65	07: T1860	6-1, T186	D6-2, T18	506-3, T	18606-4, T18606-5, T18606-6
(b) Spike reco	QC limit: ke Rec. of not reque: very is o very indi- nt low re	s utside of sted utside co cates pos	QC limit: ntrol lim sible mat:	s it due to rix inter	high co ference.	ncentration of sample. to lab control or spike blank for recovery

6.2.2

QC Batch ID: MP6507 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:			08/28/0	<u></u>
Metal	BSP Result	Spikelot MPTW3	% Rec	QC . Limits
Aluminum	49200	50000	98.4	80-120
Antimony				1
Arsenic	378	400	94.5	80-120
Barium	403	400	100.8	80-120
Beryllium				
Boron	anr			
Cadmium	387	400	96.8	80-120
Calcium	50800	50000	101.6	80-120
Chromium	393	400	98.3	80-120
Cobalt	395	400	98.8	80-120 /
Copper	403	400	100.8	80-120
Iron	49100	50000	98.2	80-120
Lead	392	400	98.0	80-120
Magnesium	53600	50000	107.2	80-120
Manganese	398	400	99.5	80-120
Molybdenum	392	400	98.0	80-120
Nickel	386	400	96.5	80-120
Potassium	50700	50000	101.4	80-120
Selenium	379	400	94.8	80-120
Silver	391	400	97.8	80-120
Sodium	50200	50000	100.4	80-120
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	445	400	111.3	80-120
Associated sa	mples MP6	507: T1860	6-1, T18	606-2, T18606-3, T18606-4, T18606-5, T18606-6



6.2.3

QC Batch ID: MP6507 Matrix Type: AQUEOUS

,

Methods: SW846 6010B Units: ug/l

Prep Date:			08/28/07	i,
Metal	T18606-6 Original	SDL 1:5	RPD	QC Limits
Aluminum	1300	1320	11.8 (a)	. 0-10
Antimony				
Arsenic	4.94	0.00		0-10
Barium	28.9	28.4	1.4	0-10
Beryllium				
Boron	anr			
Cadmium	0.00	0.00	NC	0-10
Calcium	69500	68600	3.2	0-10
Chromium	2.10	0.00		0-10
Cobalt	5.01	0.00		0-10
Copper	8.62	0.00		0~10
Iron	855	867	2.8	0-10
Lead	4.83	7.84		0~10 .
Magnesium	288000	281000	0.2	. 0-10
Manganese	590	572	0.6	0-10
Molybdenum	16.5	18.4	0.3	0-10
Nickel	6.63	0.00		0-10
Potassium	87400	65300	11.7*(b)	0-10
Selenium	3.23	13.5		0-10
Silver	0.00	0.00	NC	0-10
Sodium	2060000	2430000	9.6	0-10
Strontium				
Thallium				
Tin	anr		· .	
Titanium				
Vanadium				
Zinc	132	128	5.3	0-10

Results < IDL are shown as zero for calculation purposes

(\*) Outside of QC limits

(a) Parcent difference acceptable due to low initial sample concentration (< 50 times IDL).</li>
(b) Serial dilution indicates possible matrix interference.



## Section 7

# 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: T18606 Account: MWHSLCUT - Montgomery Watson Project: San Juan River Plant (SJRP)

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Total as CaCO3	GN12319	5.Ò	<5.0	mg/l	2500	2300	92.0	80-120%
Chloride	GN12320	1.0	<1.0	mg/l	1000	1040	104.0	92-107%
Nitrogen, Nitrate + Nitrite	GN12314	0.050	<0.050	mg/l	0.50	0.53	106.0	89-112%
Solids, Total Dissolved	GN12322	10	<10	mg/l				
Sulfate	GN12321	10	<10	. mg/l	100	81.1	81.0	80-120%
Sulfate .	GN12364	10	<10'	mg/l	100	102	102.0	80-120%
Associated Samples: Batch GN12314: T18606-1, T18 Batch GN12319: T18606-1, T18 Batch GN12320: T18606-1, T18 Batch GN12321: T18606-1, T18 Batch GN12322: T18606-1, T18 Batch GN12364: T18606-4, T18 (*) Outside of QC limits	506-2, T18606-3, 506-2, T18606-3, 506-2, T18606-3, 506-2, T18606-3,	T18606-4, T18606-4, T18606-6	T18606-5, T186 T18606-5, T186	506-6 506-6				

7.1



,

#### DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: T18606 Account: MWHSLCUT - Montgomery Watson Project: San Juan River Plant (SJRP)

Batch ID	Sample	Units	Original Result	DUP Result	RPD	QC Limits	
GN12319	T18606-1	mg/l	30.0	2640	2.3	. 0-10%	
GN12320	T18606-3	mg/l	303	303	0.0	0-5%	
GN12314	T18539-1	mg/l	0.30	0.30	0.0	0-10%	
GN12322	T18606-1	mg/l	15500	16000	3.2	0-15%	
GN12321	T18606-6	mg/l	3980	4020	1.0	0-20%	
GN12364	T18606-5	mg/l	10900	11000	1.0	0-20%	
5-2, T18606-3, T 5-2, T18606-3, T 5-2, T18606-3, T 5-2, T18606-3, T 5-2, T18606-3, T	18606-4, T1860 18606-4, T1860 18606-6	6-5, T1860 6-5, T1860	6-6 6-6				
	5-2, T18606-3, T 5-2, T18606-3, T 5-2, T18606-3, T	GN12320         T18606-3           GN12314         T18539-1           GN12322         T18606-1           GN12321         T18606-6           GN12364         T18606-5           G-2, T18606-3, T18606-4, T1860           G-2, T18606-3, T18606-4, T1860	GN12320         T18606-3         mg/l           GN12314         T18539-1         mg/l           GN12322         T18606-1         mg/l           GN12321         T18606-6         mg/l           GN12324         T18606-6         mg/l           GN12364         T18606-5         mg/l           G-2, T18606-3, T18606-4, T18606-5, T1860         F18606-5, T1860           G-2, T18606-3, T18606-4, T18606-5, T1860         F18606-5, T1860           G-2, T18606-3, T18606-4, T18606-5, T1860         F18606-5, T1860           G-2, T18606-3, T18606-4, T18606-5, T1860         F18606-5, T1860	GN12320       T18606-3       mg/l       303         GN12314       T18539-1       mg/l       0.30         GN12322       T18606-1       mg/l       15500         GN12321       T18606-6       mg/l       3980         GN12364       T18606-5       mg/l       10900         G-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-6         G-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-6       5-2, T18606-3, T18606-6	GN12320       T18606-3       mg/l       303       303         GN12314       T18539-1       mg/l       0.30       0.30         GN12322       T18606-1       mg/l       15500       16000         GN12321       T18606-6       mg/l       3980       4020         GN12364       T18606-5       mg/l       10900       11000         G-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-6         G-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-6       5-2, T18606-6         G-2, T18606-3, T18606-4, T18606-5, T18606-6       5-2, T18606-3, T18606-6       5-2, T18606-6	GN12320       T18606-3       mg/l       303       303       0.0         GN12314       T18539-1       mg/l       0.30       0.30       0.0         GN12322       T18606-1       mg/l       15500       16000       3.2         GN12321       T18606-6       mg/l       3980       4020       1.0         GN12364       T18606-5       mg/l       10900       11000       1.0         G-2       T18606-4       T18606-5       T18606-6	GN12320       T18606-3       mg/l       303       303       0.0       0-5%         GN12314       T18539-1       mg/l       0.30       0.30       0.0       0-10%         GN12322       T18606-1       mg/l       15500       16000       3.2       0-15%         GN12321       T18606-6       mg/l       3980       4020       1.0       0-20%         GN12364       T18606-5       mg/l       10900       11000       1.0       0-20%         G-2, T18606-3, T18606-4, T18606-5, T18606-6       -       -       -       -         G-2, T18606-3, T18606-4, T18606-5, T18606-6       -       -       -       -         G-2, T18606-3, T18606-4, T18606-5, T18606-6       -       -       -       -         G-2, T18606-3, T18606-4, T18606-5, T18606-6       -       -       -       -         G-2, T18606-3, T18606-6       -       -       -       -       -         G-2, T18606-3, T18606-6

.

7.2



#### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

# Login Number: T18606 Account: MWHSLCUT - Montgomery Watson Project: San Juan River Plant (SJRP)

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3 Chloride Nitrogen, Nitrate + Nitrite Sulfate Sulfate	GN12319 GN12320 GN12314 GN12321 GN12321 GN12364	T18606-1 T18606-3 T18539-1 T18606-6 T18606-5	mg/l mg/l mg/l mg/l mg/l	30.0 303 0.30 3980 10900	100 100 0.1 25 2500	2720 403 0.40 4190 12900	140.0 100.0 100.0 836.0(a) 81.0	79-122% 81-119% 80-119% 75-125% 75-125%
Associated Samples: Batch GN12314: T18606-1, T186 Batch GN12319: T18606-1, T186 Batch GN12320: T18606-1, T186 Batch GN12321: T18606-1, T186 Batch GN12364: T18606-4, T186 (*) Outside of QC limits (N) Matrix Spike Rec. outside (a) Spike amount low relative	06-2, T18606-3, T 06-2, T18606-3, T 06-2, T18606-3, T 06-5 e of QC limits	18606-4, T1860 18606-4, T1860 18606-6	6-5, T18606 6-5, T18606	5-6 5-6 .	e blank fo	or recovery	informatio	n <i>.</i>







#### **DATA VERIFICATION WORKSHEET** (Page 1 of 2)

				(Tuge Tor 2	,			
Analy	tical Metho	d/Analytes: _	SW-846	8260B (BTEX	() Sam	ple Collectio	n Date(s):	11/28/07
Laboratory:		Accutest T19919			MWH Job	SJRB		
Batch Identification:						Matrix:	Water None	
	Verification <u>Graig Poore</u> -03/27/08 (Date/Signature)							
Foot Notes	Site ID	Samp	le ID	Lab. ID	Hits (Y/N)	Quals.	C	omments
1,2	SJRP	MW-8		T19919-1	Y	נט נט נט -נ נט נט	Benzene @ <2. Toluene @ <2. Ethylbenzene @ Xylenes (total) o-Xylene @ <2 m,p-Xylene @	0 µg/kg @ <2.0 µg/kg @ 0.45 µg/kg 0 µg/kg
2	SJRP	MW-9		T19919-2	Y	None		
2	SJRP	MW-52		T19919-3	N	None		
		112807TB0	1	T19920-6	<u>Y</u>	None		
								<u></u>
						······································		
	<u> </u>	<u> </u>		<u> </u>		·		
			<u> </u>			<u> </u>		
	Ì			,				
	<u> </u>							
	<u> </u>	· · · · · · · · · · · · · · · · · · ·	<u></u>					
		+						
				-			<u> </u>	
		+						



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

Analytical Method:	SW-846 8021B (BTEX)	MWH Job Number:	SJRB
Laboratory:	Accutest	Batch Identification:	T19919

Verification Criteria					
Sample ID	MW-8	MW-9	MW-52	ТВ	
Lab ID	T19919-1	T19919-2	T19919-3	T19920-6	
Holding Time	A <sup>1</sup>	A	A	A	
Analyte List	A	A	A	А	
Reporting Limits	A	A	A	Â	
Surrogate Spike Recovery	A	A	A	А	
Trip Blank	A <sup>2</sup>	A <sup>2</sup>	A <sup>2</sup>	N/A	
Equipment Rinseate Blanks	N/A	N/A	N/A	N/A ,	· · · · · · · · · · · · · · · · · · ·
Field Duplicate/Replicate	N/A	N/A	N/A.	N/A	
Initial Calibration	N	N	N	N	
Initial Calibration Verification (ICV)	N	N	N	N	
Continuing Calibration Verification (CCV)	N	N	N	N	
Method Blank	A	A	А	A	
Laboratory Control Sample (LCS)	A	A	A	A	
Laboratory Control Sample Duplicate (LCSD)	N	N	N	N	
Matrix Spike/Matrix Spike Dup. (MS/MSD)	N/A	N/A	N/A ·	N/A	
Retention Time Window	N	N	N	N	
Injection Time(s)	N	N	N	N	
Hardcopy vs. Chain-of-Custody	A	A	А	A	
EDD vs. Hardcopy	N	N	N	N	
EDD vs. Chain of Custody	N	N	N	N	

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

A indicates verification criteria were met

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

X indicates verification criteria were not met

 ${\bf N}$  indicates data review were not a project specific requirement

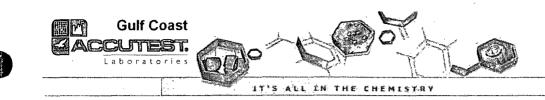
N/A indicates criteria are not applicable for the specified analytical method or sample

N/R indicates data not available for review

#### NOTES:

Sample pH at time of analysis was greater than two, thus reducing the holding time from 14 days to seven. Sample analyzed nine days after sample collection or two days outside of holding time, introducing a possible low bias. Qualify associated positive sample results with "J-" flags, indicating the data are estimated and 1) possibly biased low. Qualify associated non-detect sample results with "UJ" flags, indicating possible false negatives. Trip blank contains toluene @ 1.7 µg/l. Analyte not detected in associated samples, no qualification.

2)



#### 03/04/08

**Technical Report for** 

Montgomery Watson

San Juan River Plant (SJRP)

TWO D-ALAB SANJUAN 006

Accutest Job Number: T19919

Sampling Date: 11/28/07

Report to:

Daniel.a.wade@mwhglobal.com

ATTN: Daniel Wade

Total number of pages in report: 19





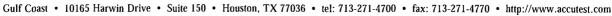
Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Ron Martino Laboratory Manager

Client Service contact: Agnes Vicknair 713-271-4700

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.









# **Table of Contents**

N

ෂ

4

5

-1-

Section 1: Sample Summary	3
Section 2: Case Narrative/Conformance Summary	
Section 3: Sample Results	5
<b>3.1:</b> T19919-1: MW-8	6
<b>3.2:</b> T19919-2: MW-9	7
<b>3.3:</b> T19919-3: MW-52	8
Section 4: Misc. Forms	9
4.1: Chain of Custody	10
Section 5: GC/MS Volatiles - QC Data Summaries	13
5.1: Method Blank Summary	14
5.2: Blank Spike Summary	16
5.3: Matrix Spike/Matrix Spike Duplicate Summary	18



# Sample Summary

### **Montgomery Watson**

Job No: T19919

San Juan River Plant (SJRP) Project No: TWO D-ALAB SANJUAN 006

Sample Number	Collected Date	l Time By	Received	Matr Code		Client Sample ID	
T19919-1	11/28/07	13:31 MN	11/30/07	AQ	Ground Water	MW-8	
T19919-2	11/28/07	13:57 MN	11/30/07	AQ	Ground Water	<b>MW-9</b>	
T19919-3	11/28/07	15:31 MN	11/30/07	AQ	Ground Water	MW-52	





### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client:	Montgomery Watson	Job No	T19919
Site:	EPFS San Juan Basin Groundwater Site	Report Date	12/10/2007 4:19:56 PM

3 Samples were collected on 11/28/2007 and were received at Accutest on 11/30/2007 properly preserved, at 2.3 Deg. C and intact. These Samples received an Accutest job number of T19919. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

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

#### Volatiles by GCMS By Method SW846 8260B

Matrix AQ	Batch ID:	VB1552
All samples were analyzed within t	he recommended method	d holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) T19925-32MS, T19925-32MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for m,p-Xylene are outside control limits. Outside control limits due to matrix interference.

■ T19919-1: Sample was not preserved to a pH < 2; reported results are considered minimum values.

Matr	ix A	Q		Batch ID:	VF2798
 		1	<b>1</b> 1.1 1 1.1	1 1 1	

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

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







## Section 3

ළ

Sample Results

**Report of Analysis** 

.





#### **Accutest Laboratories**

460-00-4

		Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:				Date l	Sampled: Received nt Solids	: 11/30/07	
Run #1 <sup>a</sup> Run #2	File ID         DF           B0130886.D         1	<b>Analyzed</b> 12/07/07	<b>By</b> ZLH	Prep D n/a	Date	Prep Batch n/a	<b>Analytical Batch</b> VB1552
Run #1 Run #2	<b>Purge Volume</b> 5.0 ml						
Purgeable	Aromatics						
CAS No.	Compound	Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene	ND ND ND	2.0 2.0 2.0	0.46 0.48 0.45	ug/l ug/l ug/l		
1330-20-7 95-47-6	Xylene (total) o-Xylene m,p-Xylene	0.45 ND ND	6.0 2.0 4.0	0.42 0.94	ug/l ug/l ug/l	J	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	-		
1868-53-7 17060-07-0 2037-26-5	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	105% 121% 98%		69-1	125% 128% 121%		

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

96%



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

4-Bromofluorobenzene

J = Indicates an estimated value

69-142%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



ω

ලු

#### **Accutest Laboratories**

460-00-4

		Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Sampl Matrix: Method: Project:				Date	Sampled: Received nt Solids	: 11/30/07	······································
Run #1 Run #2	File ID         DF           B0130887.D         1	Analyzed 12/07/07	By ZLH	Prep D n/a	Date	<b>Prep Batch</b> n/a	Analytical Batch VB1552
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 Xylene (total) o-Xylene m,p-Xylene	90.9 ND 20.4 7.0 ND 7.0	2.0 2.0 2.0 6.0 2.0 4.0	0.46 0.48 0.45 0.42 0.94	ug/l ug/l ug/l ug/l ug/l ug/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	nits		
1868-53-7 17060-07-0 2037-26-5	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	105% 118% 98%		<b>69</b> -1	125% 128% 121%		

**99**%

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

4-Bromofluorobenzene

J = Indicates an estimated value

69-142%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



# 3.2

ക്ര)

#### Accutest Laboratories

	Report of Analysis												
Client Sam Lab Samp Matrix: Method: Project:	le ID: T1991 AQ - ( SW84	9-3 Ground Wa 6 8260B	iter lant (SJRP)		Date 1	Sampled Received nt Solids	: 11/30/07						
Run #1 Run #2	<b>File ID</b> F0088687.D	<b>DF</b> 1	<b>Analyzed</b> 12/10/07	<b>By</b> ZLH	<b>Prep D</b> n/a	Date	Prep Batch n/a	<b>Analytical Batch</b> VF2798					
Run #1 Run #2	Purge Volume 5.0 ml	l											
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 Xylene (total) o-Xylene m,p-Xylene		ND ND ND ND ND	2.0 2.0 2.0 6.0 2.0 4.0	0.46 0.48 0.45 0.42 0.94	ug/l ug/l ug/l ug/l ug/l ug/l							
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Lim	its							

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	100% 105% 102% 111%	t	76-125% 69-128% 80-121% 69-142%	
100 00 1				00 112/0	

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



ω. 3

ල



Section 4

۰.

Misc.	Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



	л Д(		C	U	T	E	51	Γ.						1010	5 Harv TEL.	713-27	1-470	)0 F	λХ;	713-2			۴ED گ	EX Trai 23	cking # 72	:56	333	317		Order (				
							rie	_								w	ww.a	iccuti	est.co	m			Acci	test Qu	ote #				Accut	est job	# ا	<u>[[</u>	<u> 19</u>	19
ompany Na				∰¢i	ent / R	eportin	ig Inform	ation	i .		8/X	Designat	Name		•	roject Inf		_	2000					<u> </u>		Ϋ́́	9	Requ	lested A	nalysis	T	P		Matrix Co DW - Drinking
MWH		M	ER	16	<u>A</u> <	s .		_					SAN	TUA	B	ASI	N	P	A٨	21									1			i		GW - Ground
ddress							STR	<b>.</b>			,	Street																						ww - wa
1 <u>1</u> 1	<u> </u>	421	-0	50	Sta					Z		City	<u> </u>			Stat	•						-											SW - Surface
		16	R		C	O		8	_			Project												,					1					SO - So SL - Siud
JE		9	MI	Τ	н				E-1	nau		Project	#																i i		ľ			01-00
hone# 303	e –	<u> </u>	31	5	5	71						Fax #											18			Ļ	Ł			[				tiQ - Other L
ampler's Na	me.			~		10						Chient F	Purchase Or	der#									-	1	1									AIR - Ai
Accutest	2	£		4 10	Dalas								Collection	-AI	<u>.AB</u>	<u></u>	AL		ber of p				- X											SOL - Other
Accutest Sample #			rR		ront	of Colk	8000			SUM MEOH				Samplex	Matrix	# o! botiles	ę	E I	~~	_	1 .	H HO	14				1			1				WP - Wij
	M	Ś	-9	2						MEOP	Via A	Date	Time 1331	By	WB-		ř.	-	<u>•   £</u>	3	2	2 9	X		+	+	+	+	1		$\vdash$			
ょ	M	W	ع ابب ا	<u>,</u>								112807	257	1	w		2	-†		+z			Îx	+		1	1	+						
3	w		-	5	2							112807	1221	mN		12	2	-+	╈	3			×	1	+	+		+-	1					
<u> </u>				5.	_						_	mar	וככו	mir	PO	12	$\vdash$	+	╋	Ť		+	1	+	+	+		╞─			-	┟──┥		··
• • • • • • • • • • • • • • • • • • • •																		+	+	┼─	$\vdash$	+	+	┢	+	+						$\vdash$		
							<u> </u>								-		÷		+	+			+	+	+		<u>+</u>		+	<del> </del> —		-		
	-		••••••											-			-+	+				-+-	+	┢╌	+	+			┣──		<u> </u>	┢──┤		
	-								_	┣					+			-+		+-			+	┢	+	+		–	<b> </b> -			┢──┦		
		····					·			<u> </u>				-					+	+		-	+	┢	+	-		┣─				┢──┦		
									_	<u> </u>								$\rightarrow$						+	┿─		┢	–	-		<u> </u>	┢──┤		
	-		Turna	ound	Time (	Busine	ss Days)			Elevent			Carlos and a state	Manan		Data D	liverat	ble (nfi	ormatic			19.8.00			1	1	L		Comme		marks			
10 Day 3	STAN	DARD				_	proved B	y: / Da	le:				Comme	rcial *A*	mo		_	-	Format					Т					<u></u>		tont Ka	Popper de la constante		
] 5 Day Ri ] 3 Day Ei						_						_	Comme Reduce											┢										
] 2 Day El						_						_	🗆 Full Tier	1										F										
] 1 Day El	MERG	ENCY	,			_						_  '	TRRP1	3										L										
Other						_						- 1	Corre	uorcint "	- Res	ulte Ce								Γ										
mergency	/ & R	ush 1	[/A da	a av	ailabh		LabLini	(				-	Com	iciual 7	√ = rtes	uits UN	y							۲										
													Custody mu	st be doc	imenled	below ea	ch time				ssess	ion, incl	uding co	urier de	ivery 👔									
aknouished W	Samp	o'er:				117	907		an Tir Qol	6	<b>R</b> <sup>4</sup>	sceived by						Relino	uished	Cy						Da	le Time		Receive	d by.				
elinguished b	>	~				116	<u></u> '	-+*	ate Tire	•	R	ceived by,						∡ RenK	uished	by:						Da	e Time:		4 Receive	id by				
alinguished b									an 2n	107	3 R	coved b		<i>Ð</i> -			┉┤	4 Cirsto	dy Seal	ħ				Pre	served w	/here acco	cable		4 On to				Cooler Ter	
								$-\mu$	ЧP	$\psi$	)[.	- TA		Kor	W	$\mathbf{X}$	ł		.,										°∎ ¢	-			2.	5

T19919: Chain of Custody Page 1 of 3

.



4.1

4

	nge. ters. tody.	H	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA	U, <2, >12, NA		RP: KIP: B/D6, QAO	
	nation): hin temp. rai oper contain chain of cus	PRESERV.	(1)2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6	1,2,3,4,5,6		2 1 5 COOLER TEMP: COOLER TEMP: Form: SM012, Rev.07/28/06, QAO	
10:00 AK	see variance for explanation). Samples received within temp. range. Sample received in proper containers. Sample received with chain of custody. rs.	LOCATION	VKEF	$\overline{\langle}$																	
РТ LOG  ⊰₀∫∂}   [0] INITIALS:	circled, see variance for explanation): ACN N Samples received within tem ACN N Sample received in proper co ACN N Sample received with chain c containers.		4Onl.	W HCK		X									2			- Freezer		COOLER TEMP.	
SAMPLE RECEIPT LOG ME RECEIVED: <u>(((30)/07</u> )		MATRIX	Ø	M		N.07	<i>.</i> ۷											L EF: Encore Freezer	Comments:	• -	
ATE/	Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, se Sample received in undamaged condition. A. N. S. Sample received with proper pH. 4. N. S. Sample volume sufficient for analysis. 6. N. N. S. Chain of Custody matches <b>sample IDs and analysis</b> on containers. Samples Headspace acceptable A. Custody seal received intact and tamper not evident on cooler.	DATE SAMPLED	Sc/11	the only	0	4	K 117	- 4			$\times$							SUB: Subcontra 4: H2SO4 5: NAO	0 1 1		
EST. America	Variance (Circle "Y" for yes and "N" for no Sample received in undamaged condition. Sample received with proper pH. Sample volume sufficient for analysis. Chain of Custody matches <b>sample IDs ar</b> ApCustody seal received intact and tamp. NA Custody seal received intact and tamp.	BOTTLE #	(-3	(#2 is			Q											VR: Volatile Refrig. 22: HCL 3: HNO3	ding volatiles	14	
ACCUT JOB# 71991	<ul> <li>Indition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" N. Sample received with proper pH.</li> <li>N. Sample received with proper pH.</li> <li>N. Sample volume sufficient for analysis.</li> <li>N. Chain of Custody matches sample IDs and analysis of N. Samples received intact and tamper not evident Y. N. (NA. Custody seal received intact and tamper not evident Y. N. (NA. Custody seal received intact and tamper not evident Y. N. (NA. Custody seal received intact and tamper not evident Y. N. (NA. Custody seal received intact and tamper not evident Y. N. (NA. Custody seal received intact and tamper not evident of the seamer of the se</li></ul>	SAMPLE or FIELD ID	1-3															LOCATION: WI: Walk-In V PRESERVATIVES: 1: None	pH of waters checked excluding volatiles pH of soits NA	Delivery method: Courier;	

T19919: Chain of Custody Page 2 of 3



TLEEBZTUM RAMAN WINNER RELEASED AND AND AND AND AND AND AND AND AND AN		4.1 4
	l.	

1

۰.

T19919: Chain of Custody Page 3 of 3

.





GC/MS Volatiles

### Section 5

OC Data Suma			
QC Data Summ	naries		

Includes the following where applicable:

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



#### Method Blank Summary Job Number: T19919

Account:	MWHSLCUT Montgomery Watson								
Project:	San Juan River Plant (SJRP)								
Sample	<b>File ID</b>	<b>DF</b>	<b>Analyzed</b> 12/06/07	By	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch		
VB1552-MB	B0130869.D	1		ZLH	n/a	n/a	VB1552		

The QC reported here applies to the following samples:

Method: SW846 8260B

T19919-1, T19919-2

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.46	ug/l
100-41-4 108-88-3	Ethylbenzene Toluene	ND ND	2.0 2.0	0.45 0.48	ug/l ug/l
1330-20-7	Xylene (total) m,p-Xylene	ND ND	6.0 4.0	0.94	ug/l ug/l
95-47-6	o-Xylene	ND	2.0	0.42	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	

1868-53-7	Dibromofluoromethane	104%	76-125%
17060-07-0	1,2-Dichloroethane-D4	116%	69-128%
2037-26-5	Toluene-D8	<b>96</b> %	80-121%
460-00-4	4-Bromofluorobenzene	<b>99</b> %	69-142%



<u>თ</u>.1

ගා

#### Method Blank Summary Job Number: T19919

Ethylbenzene

Xylene (total)

m,p-Xylene

Toluene

o-Xylene

100-41-4

108-88-3

1330-20-7

95-47-6

Account: Project:	MWHSLCUT Montgomery Watson San Juan River Plant (SJRP)								
<b>Sample</b> VF2798-MB	<b>File ID</b> F0088682.D	<b>DF</b> 1	Analyzed 12/10/07	<b>By</b> ZLH	<b>Prep Date</b> n/a	Prep Batch n/a	n Analytical Batch VF2798		
•	orted here appli	es to the	following sam	ples:		Method: S	SW846 8260B		
T19919-3	orted here appli Compound	es to the	following samj Result	ples: RL	MDL U	Method: S nits Q	SW846 8260B		

2.0

2.0

6.0

4.0

2.0

0.45

0.48

0.94

0.42

ug/l

ug/l

uğ/l

ug/l

ug/l

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	76-125%
17060-07-0	1,2-Dichloroethane-D4	104%	` <b>69-128%</b>
2037-26-5	Toluene-D8	103%	<b>80-121%</b>
460-00-4	4-Bromofluorobenzene	112%	69-142%

ND

ND

ND

ND

ND



Page 1 of 1

### Blank Spike Summary Job Number: T19919

Sample VB1552-BS		<b>DF</b> 1	<b>Analyzed</b> 12/06/07	<b>By</b> ZLH		<b>Prep Date</b> /a	Prep Batch n/a	<b>Analytical Batch</b> VB1552
<b>The QC re</b> T19919-1,	ported here applie T19919-2	s to the fol	lowing san	aples:			Method: SW	/846 8260B
CAS No.	Compound		Spike ug/l	BSP ug/l	BSP %	Limits		
	<b>Compound</b> Benzene		ug/1	ug/l	%			
CAS No. 71-43-2 100-41-4	Benzene					<b>Limits</b> 73-121 75-117		
71-43-2			ug/1 25	ug/l 26.3	% 105	73-121		
71-43-2 100-41-4	Benzene Ethylbenzene		ug/1 25 25	ug/l 26.3 26.4	% 105 106	73-121 75-117		
71-43-2 100-41-4 108-88-3	Benzene Ethylbenzene Toluene Xylene (total)		ug/1 25 25 25 25	ug/l 26.3 26.4 25.6	% 105 106 102	73-121 75-117 75-119		
71-43-2 100-41-4 108-88-3	Benzene Ethylbenzene Toluene		ug/1 25 25 25 75	ug/l 26.3 26.4 25.6 78.2	% 105 106 102 104	73-121 75-117 75-119 75-118		

1868-53-7	Dibromofluoromethane	100%	76-125%
17060-07-0	1,2-Dichloroethane-D4	105%	69-128%
2037-26-5	Toluene-D8	<b>96</b> %	<sup>•</sup> 80-121%
460-00-4	4-Bromofluorobenzene	101%	<b>69-142%</b>



5.2 ලැ



# Blank Spike Summary Job Number: T19919

Job Numbe Account: Project:	MWHSLCU	T Montgomer ver Plant (SJR)						
Sample VF2798-BS	<b>File ID</b> 5 F0088680.D		Analyzed 2/10/07	By ZLH	Pı n/	a Date	Prep Batch n/a	Analytical Batch VF2798
The QC re	ported here appli	es to the follo	wing san	nples:			Method: SW	7846 8260B
T19919-3								
T19919-3 CAS No.	Compound		Spike ug/l	BSP ug/1	BSP %	Limits		•
	<b>Compound</b> Benzene		ug/1 25		% 96	<b>Limits</b> 73-121		• •
CAS No.	-		ug/l	ug/l	%			
CAS No. 71-43-2	Benzene		ug/1 25	ug/1 24.0	% 96	73-121		
CAS No. 71-43-2 100-41-4	Benzene Ethylbenzene		ug/1 25 25	ug/1 24.0 23.2	% 96 93	73-121 75-117		
CAS No. 71-43-2 100-41-4 108-88-3	Benzene Ethylbenzene Toluene		ug/1 25 25 25	ug/1 24.0 23.2 23.4	% 96 93 94	73-121 75-117 75-119		

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	<b>76</b> -125%
17060-07-0	1,2-Dichloroethane-D4	108%	69-128%
2037-26-5	Toluene-D8	102%	<b>80-12</b> 1%
460-00-4	4-Bromofluorobenzene	105%	69-142%



Page 1 of 1

### Matrix Spike/Matrix Spike Duplicate Summary Job Number: T19919

Account: Project:	r: 119919 MWHSLCUT Mon San Juan River Play								
Sample	File ID DF		By	Prep I		Prep Bat		Analytical	Batch
T19925-32N		12/07/07	ZLH	n/a		n/a		/B1552	
	ASD B0130885.D 1	12/07/07	ZLH ZLH	n/a		n/a		/B1552	
T19925-32	B0130871.D 1	12/06/07	ΖLΠ	n/a		n/a	,	/B1552 \	
The QC rep	oorted here applies to t	he following sampl	es:			Method:	SW84	6 8260B	J
Т19919-1, Т	F19919-2								
CAS No.	Compound	T19925-32 ug/l Q	<b>I</b>	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2.0 U	25	30.3	121	28.6	114	6	74-125/1
100-41-4	Ethylbenzene	2.0 U	25	29.1	116	28.6	114	2	77-119/2
108-88-3	Toluene	2.0 U	25	28.5	114	27.7	÷111	3	79-119/2
1330-20-7	Xylene (total)	6.0 U	75	86.4	115	84.3	112	÷ 2	78-119/2
	m,p-Xylene	4.0 U	50	61.1	122* a		119	2	79-119/2
95-47-6	o-Xylene	2.0 U	25	25.3	101	24.8	-99	2	76-118/2
CAS No.	Surrogate Recoveries	MS	MSD	T	9925-32	Limits			
1868-53-7	Dibromofluoromethane	103%	101%	10	1%	76-125	%		
17060-07-0	1,2-Dichloroethane-D4	118%	113%		4%	69-128	%		
2037-26-5	Toluene-D8	<b>97</b> %	97%	96	%	80-121	%		
460-00-4	4-Bromofluorobenzene	<b>98</b> %	<b>98%</b>	96	%	69-142	%		

.

(a) Outside control limits due to matrix interference.



Page 1 of 1

5.3

ଦ୍ଧ

9

### Matrix Spike/Matrix Spike Duplicate Summary Job Number: T19919

Account:       MWHSLCUT Montgomery Watson         Project:       San Juan River Plant (SJRP)									
Sample	File ID DF	Analyzed	Ву	Prep I	Date	Prep Bate	h A	nalytical	Batch
T20012-5M	IS F0088699.D 1	12/10/07	ZLH	n/a		n/a	V	/F2798	
T20012-5M	ISD F0088700.D 1	12/10/07	ZLH	n/a		n/a	ν	/F2798	
T20012-5	F0088696.D 1	12/10/07	ZLH	n/a		n/a	V	/F2798	
The QC re	ported here applies to the	following samp	oles:	Ŧ	<u></u>	Method:	SW846	6 8260B	J
T19919-3									
CAS No.	Compound	T20012-5 ug/1	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2.0 U	25	25.7	103	25.3	101	2	74-125/1
100-41-4	Ethylbenzene	2.0 U	25	24.4	98	24.1	96	· 1	77-119/2
108-88-3	Toluene	2.0 U	25	24.9	100	24.7	99	', <b>1</b>	79-119/2
1330-20-7	Xylene (total)	6.0 U	75	74.0	99	72.2	96	2	78-119/20
	m,p-Xylene	4.0 U	50	49.5	99	48.6	97	2	79-119/20
95-47-6	o-Xylene	2.0 U	25	24.5	98	23.6	94	4	76-118/2
CAS No.	Surrogate Recoveries	MS	MSD	Т2	20012-5	Limits	-		
1969 52 7	Dibromofluoromothano	000/	000/	00	ŐZ	76 1250/	,		

CAS No.	Surrogate Recoveries	MS	MSD	T20012-5	Limits	
1868-53-7	Dibromofluoromethane	98%	99%	99%	76-125%	
17060-07-0	1,2-Dichloroethane-D4	106%	106%	103%	<b>69-128%</b>	
2037-26-5	Toluene-D8	102%	103%	104%	` <b>80-12</b> 1%	
460-00-4	4-Bromofluorobenzene	106%	105%	113%	69-142%	



Page 1 of 1

5. ა

ଭ