AP-069

Annual Report

DATE:
Mar 30, 2009

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

RE: 2008 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 *Final 2008 Annual Report* for the San Juan River Plant project. The report presents the 2008 monitoring data and includes recommendations for 2009 activities at the Site.

If you have any questions or comments concerning the enclosed report, please call either Doug Stavinoha of EPNG (713-420-5150) or Jed Smith of MWH (303-291-2276).

Sincerely,

Jed Smith
Project Manager

cc: Brandon Powell – NMOCD, Aztec, NM
Doug Stavinoha – EPNG
MWH Project File

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El Paso Natural Gas Company

San Juan Basin Program
San Juan River Plant

Final 2008 Annual Report

March 2009

MWH
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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 from 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 Water Quality Control Commission (NMWQCC) 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. MW-8 benzene concentrations during 2008 ranged from <1.0 ug/L to 6.0 ug/L. The air sparging system at MW-9 was shut down in February 2004 and has remained off throughout 2008 in order to assess groundwater conditions. During this shut-down period, benzene concentrations in MW-9 have slowly increased. In 2008, concentrations of benzene ranged from 71.8 ug/L to 95.3 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 New Mexico Oil Conservation Division (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, and sulfate 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 SJRP during 2008. 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 area of MW-8 and MW-9.

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 from 1992 through 1995. Groundwater has been monitored at this site since 1995.

Report Organization. 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 2008, 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**.

2.0 PROJECT HISTORY

The SJRP was previously owned by EPNG, but was sold to 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, low-permeability 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 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.

- During the May 2008 sampling event, field personnel noted that monitoring well MW-5 had been destroyed by heavy construction equipment. Destruction of the well is believed to have occurred between February and May 2008.

- Site activities for 2008 included quarterly sampling of MW-8 and MW-9, site-wide annual groundwater monitoring, and annual ORC sock replacement in MW-8.

3.0 SUMMARY OF 2008 ACTIVITIES

The current environmental program at the SJRP consists of dissolved-phase hydrocarbon remediation (oxygen enhancement) and site-wide groundwater monitoring. The following section details site activities conducted at the SJRP during 2008.

3.1 GROUNDWATER MONITORING PROGRAM

The groundwater monitoring program included the following components during 2008:

- Remediation monitoring wells MW-8 and MW-9 were sampled quarterly in February, May, August, and December 2008 and analyzed for BTEX compounds to evaluate the effectiveness of hydrocarbon remediation activities.

- On August 27, 2008, Site monitoring wells MW-4, MW-8, and MW-9 were sampled for BTEX compounds, NMWQCC trace metals, total dissolved solids (TDS), alkalinity, chloride, and sulfate. Monitoring wells W-2 and MW-6 were sampled for BTEX compounds, TDS, alkalinity, chloride, and sulfate. W-2 and MW-6 were not analyzed for NMWQCC trace metals due to an oversight by field personnel.

- Site-wide groundwater elevation measurements were collected quarterly at each well.

All groundwater monitoring activities during 2008 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 remediation activities performed in 2008.

ORC Enhancement. The ORC socks in MW-8 were replaced November 18, 2008. Dissolved oxygen was measured in MW-8 on April 15, 2008. The dissolved oxygen concentration was 8.08 mg/L, indicating that sufficient oxygen was available for biodegradation. In addition, BTEX concentrations in MW-8 were below their respective NMWQCC standards throughout 2008. ORC socks will generally be replaced annually, or as-needed, based on periodic monitoring of dissolved oxygen and BTEX concentrations in this well.

Air Sparging System. 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 remain off.

4.0 DISCUSSION OF 2008 RESULTS

This section describes the results of activities conducted at the SJRP during 2008.

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**.

BTEX Sampling Results. **Figures 9, 10,** and **11** depict long-term trends in the three wells with detectable BTEX concentrations (i.e., MW-5, MW-8, and MW-9). BTEX results from annual samples collected during August 2008 are presented in **Table 1** and on **Figure 5**. During the annual sampling event, BTEX concentrations in monitoring wells W-2, MW-4, and MW-6, were below analytical detection limits. These results are consistent with the results from 2002 through 2007. Results from MW-8 and MW-9 are discussed in **Section 4.2**, along with the other quarterly sampling results. Documentation of 2008 field activities is included in **Appendix A**, and the analytical laboratory reports are included in **Appendix B**.

Inorganic Sampling Results. Results for inorganic samples collected during 2008 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 2008 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. Documentation of field activities and laboratory reports are presented in **Appendix A** and **Appendix B**, respectively.

4.2 QUARTERLY SAMPLING RESULTS

Quarterly groundwater sampling results are shown on **Table 1** and on **Figures 3** through **6**. During the February 2008 quarterly sampling event, MW-8 benzene concentrations were detected below the NMWQCC standard at a concentration of 6.0 µg/L. Benzene concentrations fell below detection limits during the second, third and fourth quarters.

Benzene concentrations in MW-9 have remained above standards (84.4 µg/L, 71.8 µg/L, 87.9 µg/L, and 95.3 µg/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 area near MW-9.

- Consistent with historic monitoring, inorganic constituents were measured above NMWQCC standards during the August 2008 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.

- Monitoring well MW-5 was destroyed during the spring of 2008. Due to its location down gradient of MW-8 and MW-9, replacement of this well is recommended, once ground shifting due to underground mining activity has ceased. BTEX concentrations in this well have historically been below the NMWQCC standards.

- 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 second, third, and fourth quarters of 2008.

- EPNG recommends continuation of quarterly monitoring at MW-8 and MW-9 for BTEX concentrations.

- ORC socks will be replaced in MW-8, as needed, based on periodic 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.

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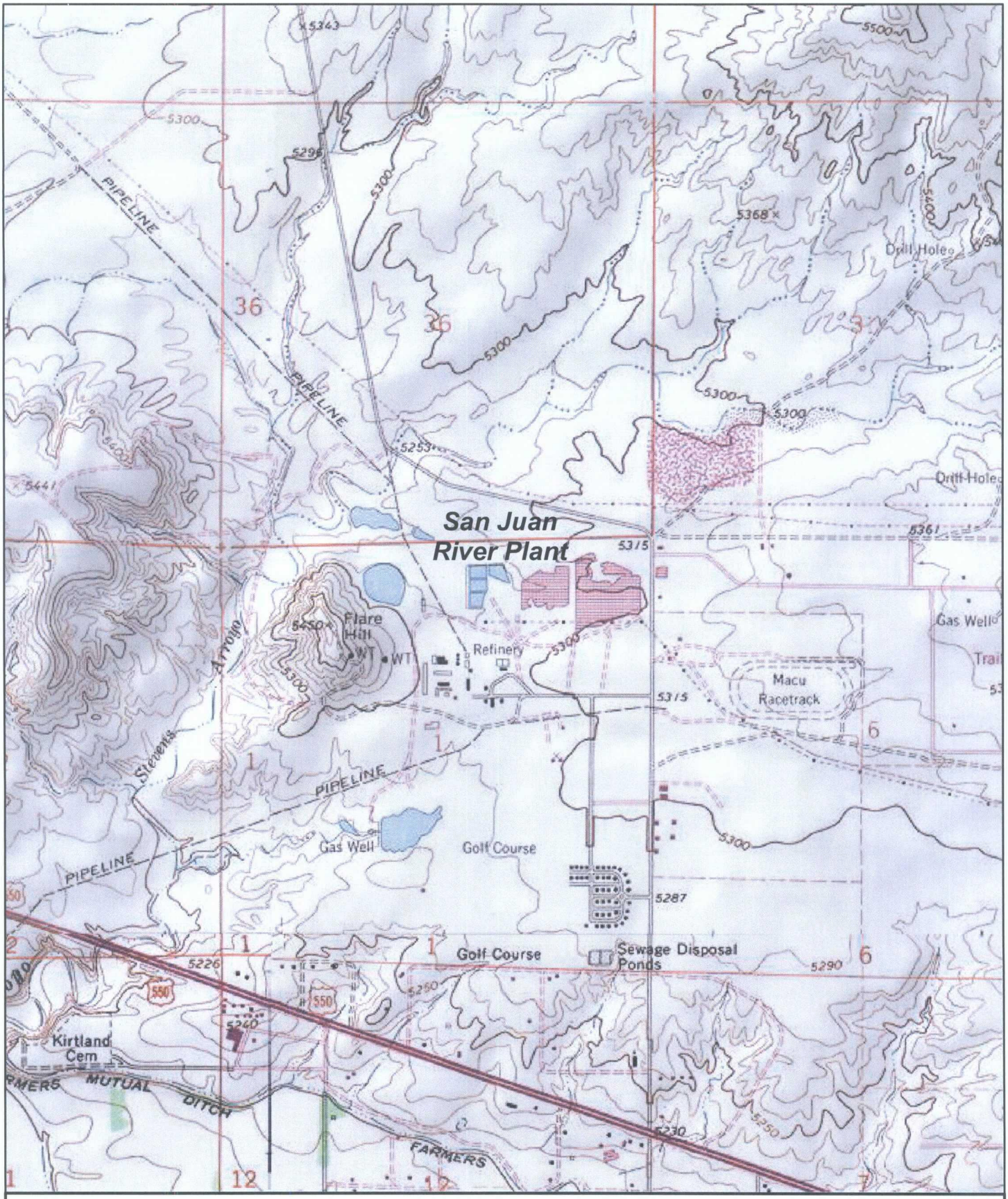
FIGURES

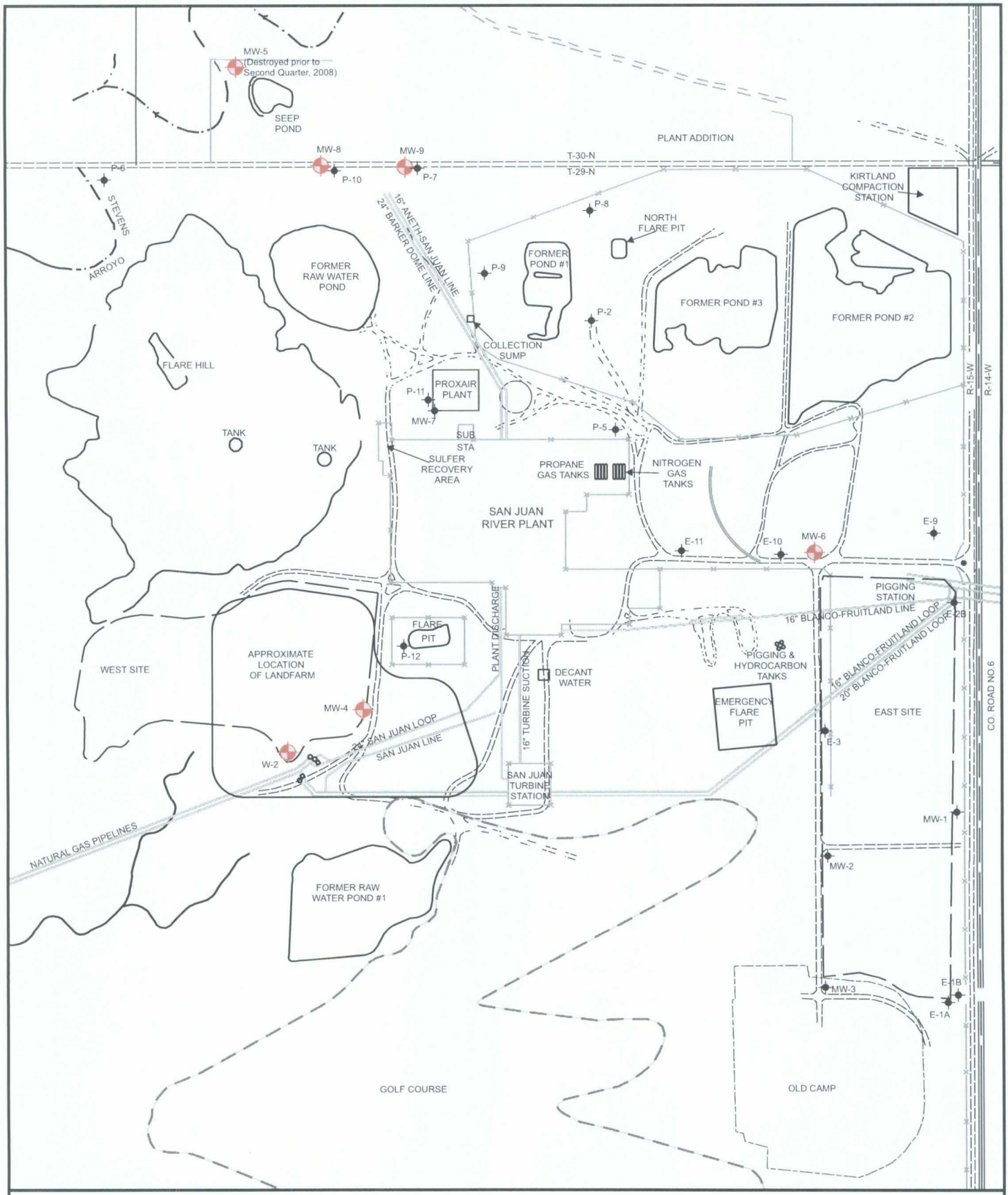


SOURCE

National Geographic TOPO!, 2003, National Geographic Holdings, Inc.,
USGS Topographic maps, Youngs Lake NM Quad

Not To Scale

MWH / elpaso	PROJECT: SAN JUAN RIVER PLANT		FIGURE: 1
	TITLE: Site Location Map		



LEGEND

MW-4 Existing Monitoring / Observation Well

PZ-01 Abandoned Monitoring Well

Not To Scale

MWH

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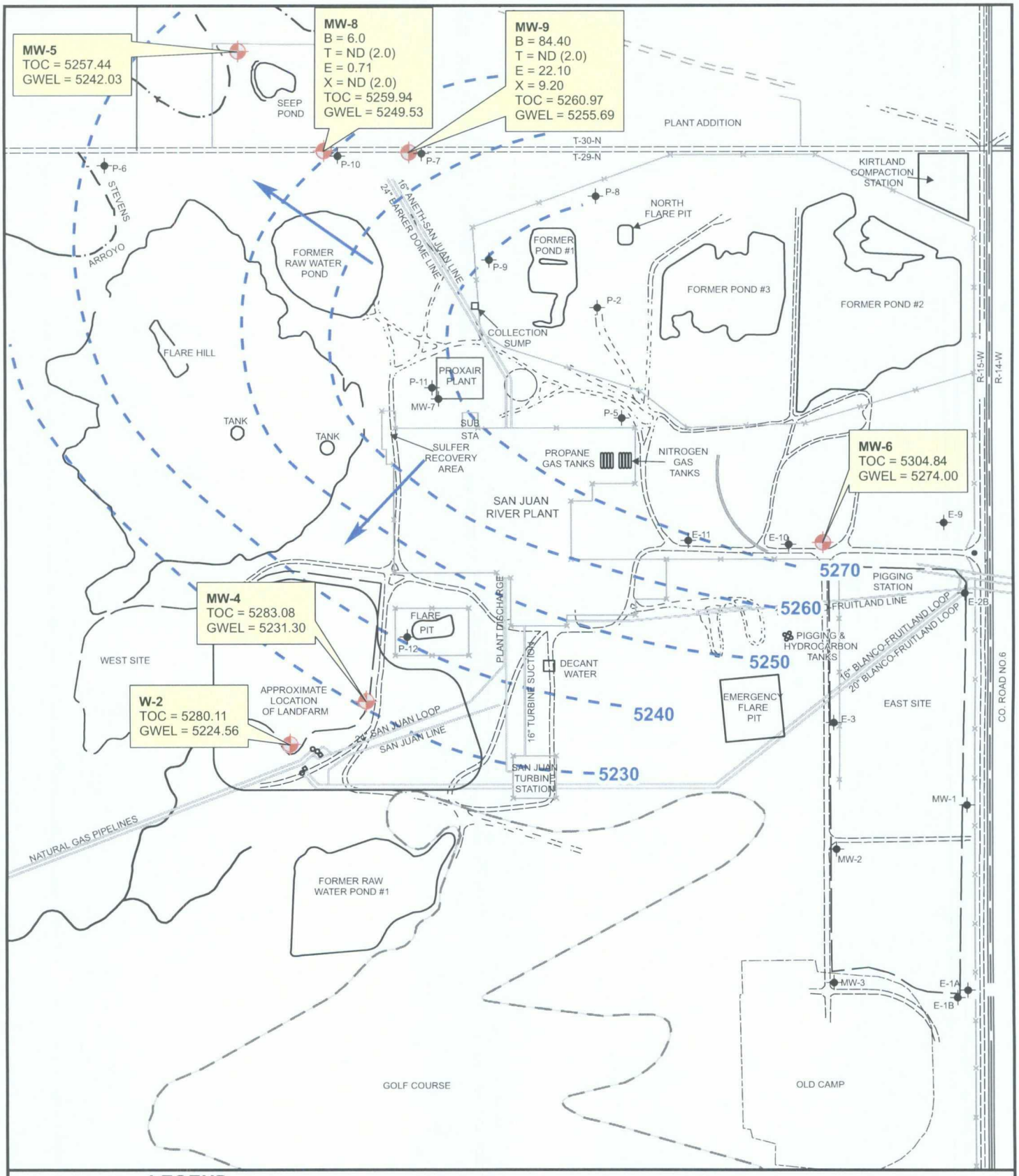
PROJECT:	SAN JUAN RIVER PLANT
TITLE:	Site Layout Map
FIGURE:	2



LEGEND

MW-4	Existing Monitoring / Observation Well
PZ-01	Abandoned Monitoring Well
→	Groundwater Flow Direction
—1275—	Potentiometric Surface Contour (Inferred Where Dashed)
ND	Not Detected; Reporting Limit Shown In Parenthesis

B	Benzene (ug/L)
T	Toluene (ug/L)
E	Ethylbenzene (ug/L)
X	Total Xylenes (ug/L)
TOC	Top of Casing (ft. AMSL)
GWEL	Groundwater Elevation (ft. AMSL)

Not To Scale

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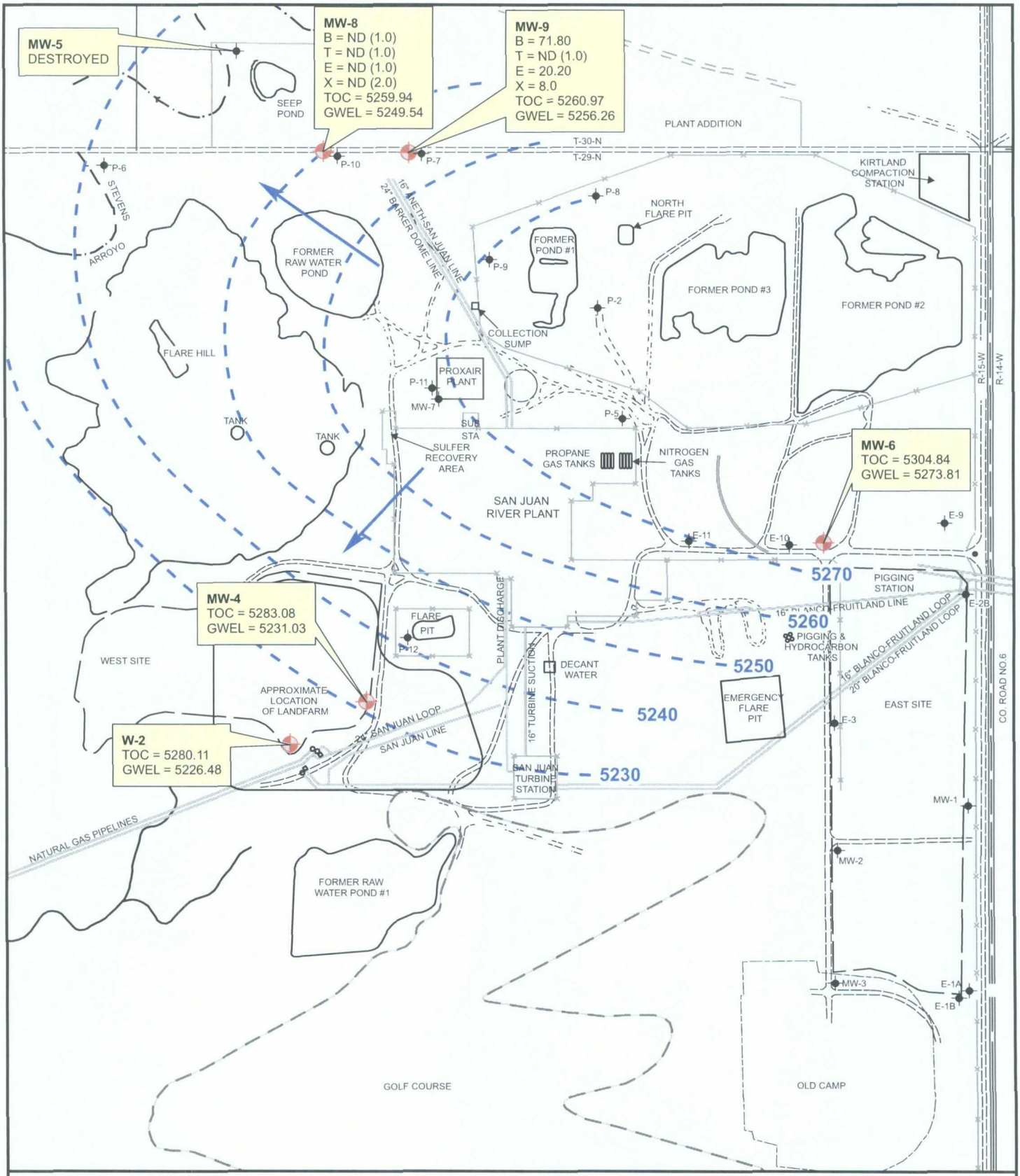
PROJECT: SAN JUAN RIVER PLANT

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - February 13, 2008

FIGURE: 3



LEGEND

MW-4	Existing Monitoring / Observation Well
PZ-01	Abandoned Monitoring Well
→	Groundwater Flow Direction
—1275—	Potentiometric Surface Contour (Inferred Where Dashed)
ND	Not Detected; Reporting Limit Shown In Parenthesis

B	Benzene (ug/L)
T	Toluene (ug/L)
E	Ethylbenzene (ug/L)
X	Total Xylenes (ug/L)
TOC	Top of Casing (ft. AMSL)
GWEL	Groundwater Elevation (ft. AMSL)

Not To Scale

MWH

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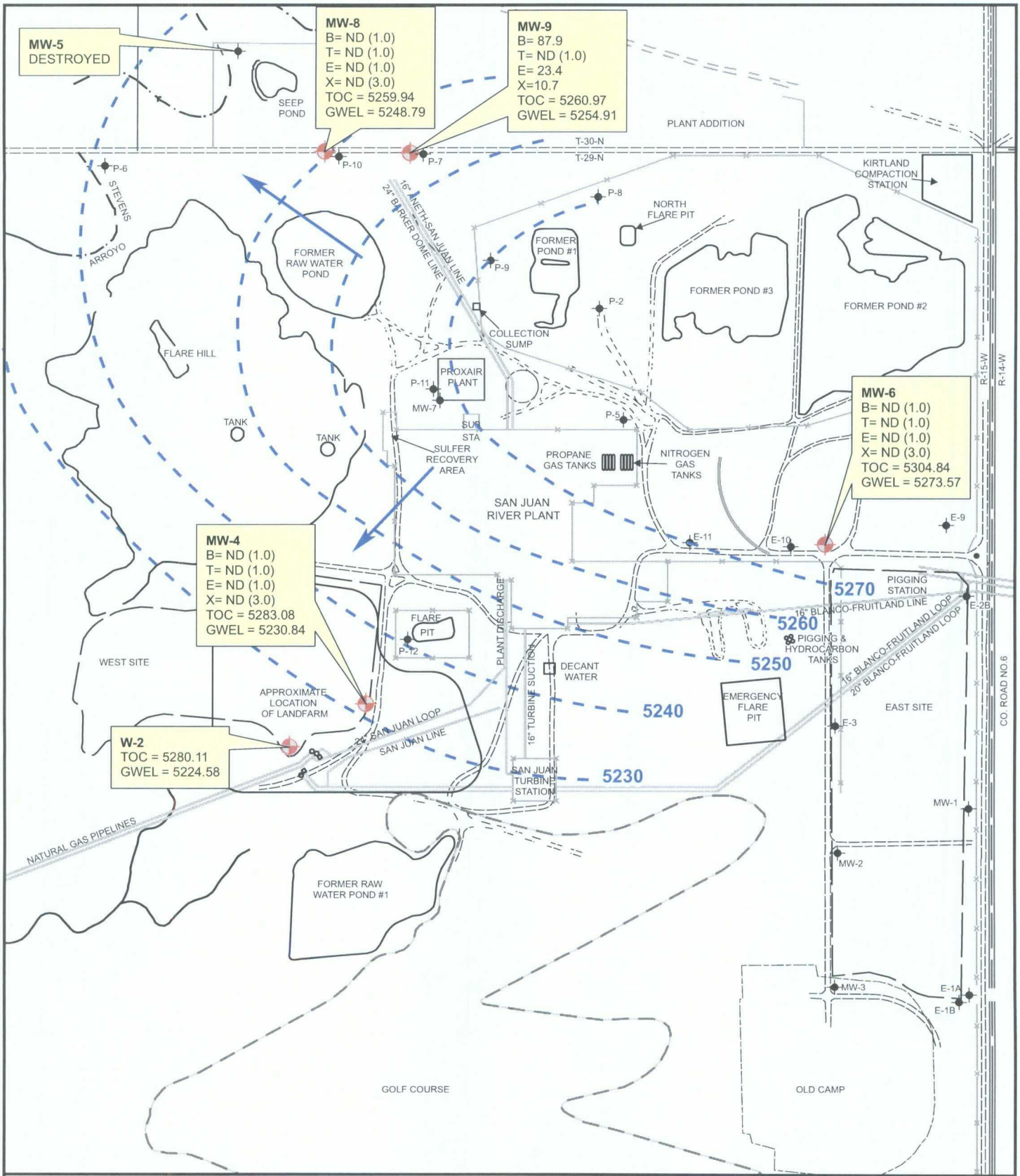
PROJECT: SAN JUAN RIVER PLANT

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - May 8, 2008

FIGURE: 4



LEGEND

MW-4	Existing Monitoring / Observation Well
PZ-01	Abandoned Monitoring Well
→	Groundwater Flow Direction
—1275—	Potentiometric Surface Contour (Inferred Where Dashed)
ND	Not Detected; Reporting Limit Shown In Parenthesis

B	Benzene (ug/L)
T	Toluene (ug/L)
E	Ethylbenzene (ug/L)
X	Total Xylenes (ug/L)
TOC	Top of Casing (ft. AMSL)
GWEL	Groundwater Elevation (ft. AMSL)

Not To Scale

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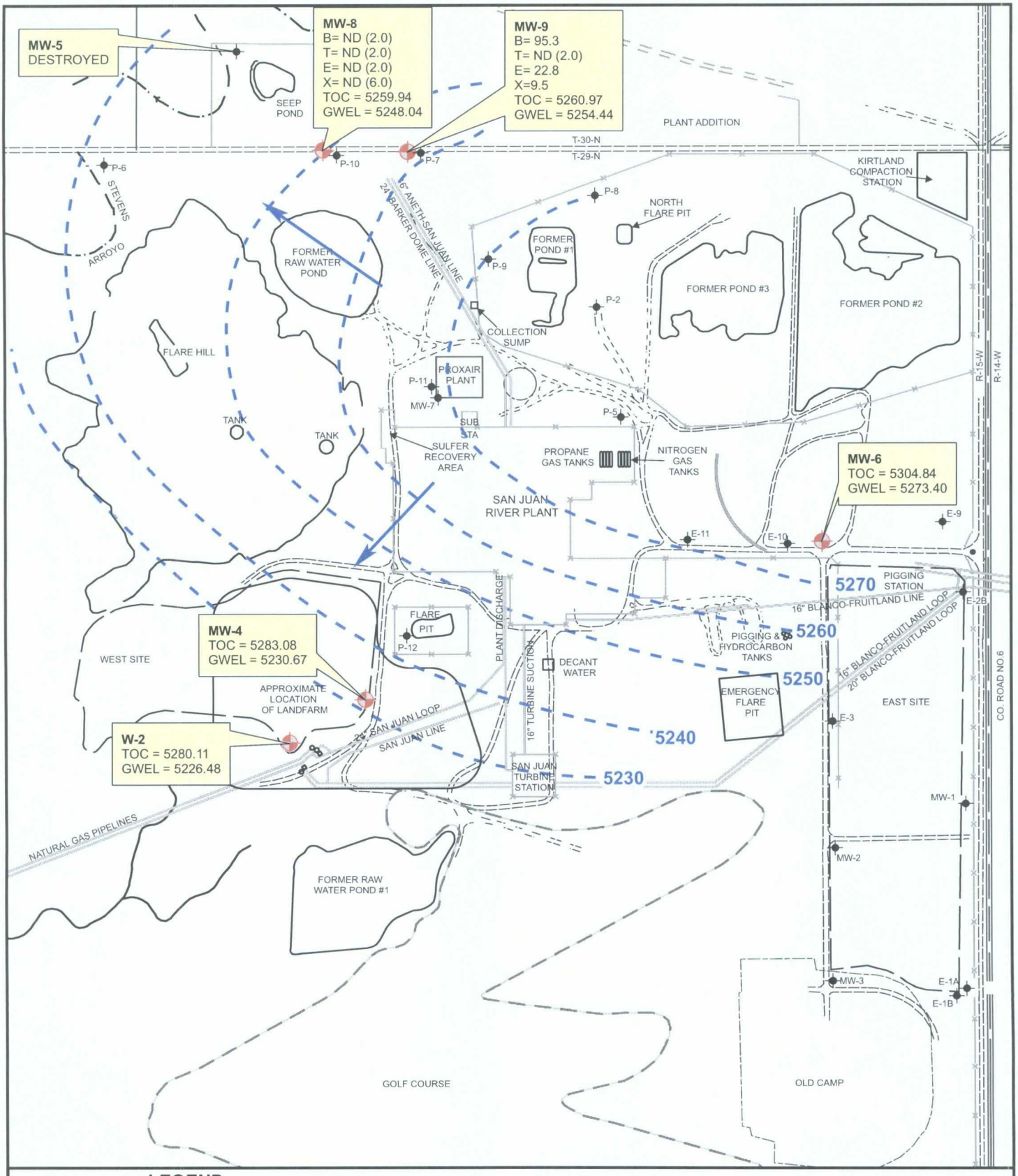
PROJECT: SAN JUAN RIVER PLANT

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - August 27, 2008

FIGURE: 5



LEGEND

MW-4	Existing Monitoring / Observation Well
PZ-01	Abandoned Monitoring Well
→	Groundwater Flow Direction
—1275—	Potentiometric Surface Contour (Inferred Where Dashed)
ND	Not Detected; Reporting Limit Shown In Parenthesis

B	Benzene (ug/L)
T	Toluene (ug/L)
E	Ethylbenzene (ug/L)
X	Total Xylenes (ug/L)
TOC	Top of Casing (ft. AMSL)
GWEL	Groundwater Elevation (ft. AMSL)

Not To Scale

MWH

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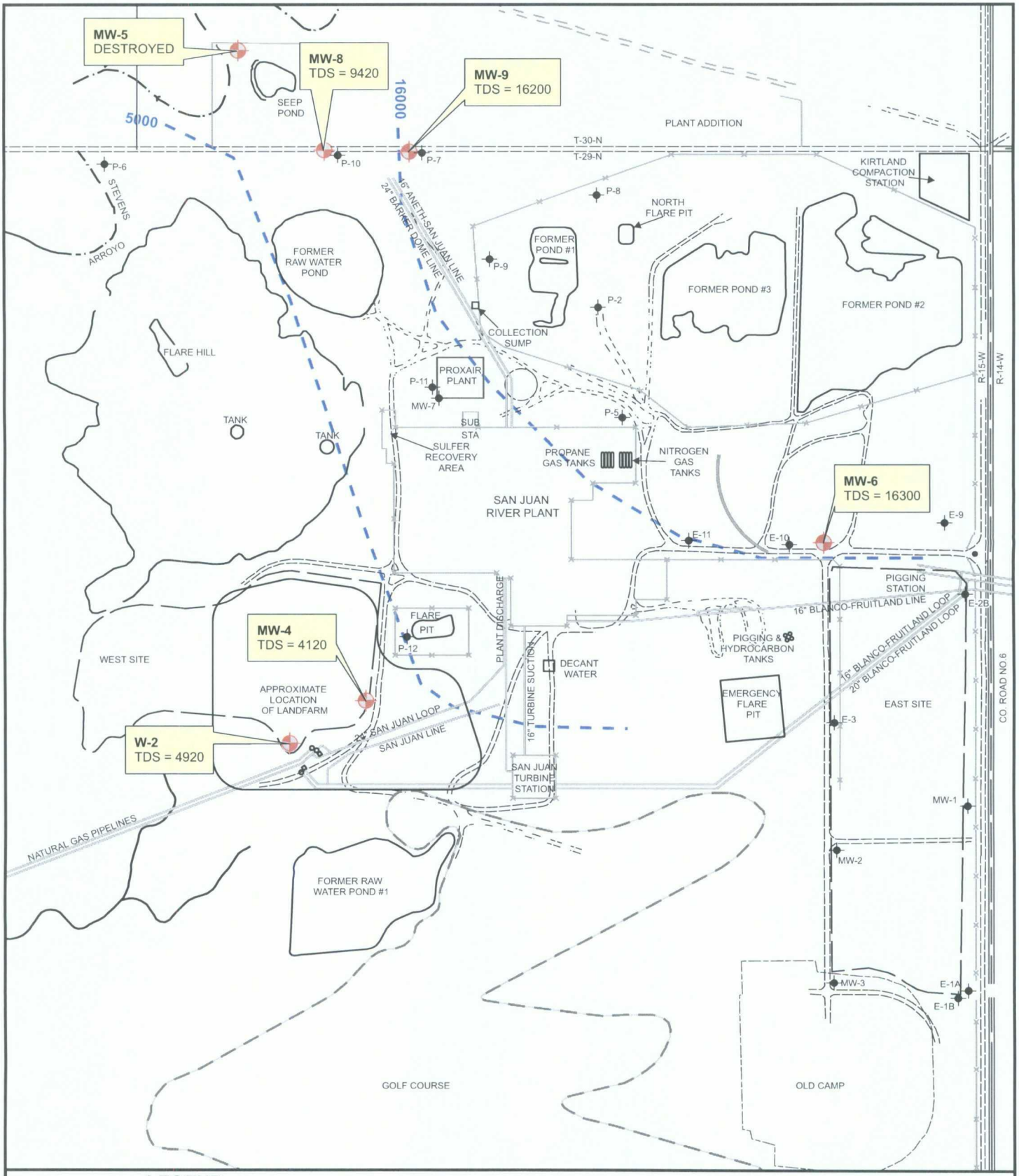
PROJECT: SAN JUAN RIVER PLANT

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - November 18, 2008

FIGURE: 6



LEGEND

MW-4	Existing Monitoring / Observation Well
PZ-01	Abandoned Monitoring Well
TDS	Total Dissolved Solids
—1275—	Total Dissolved Solids Isoconcentrations (Inferred Where Dashed)
3600	Total Dissolved Solids Concentration in ppm

Not To Scale

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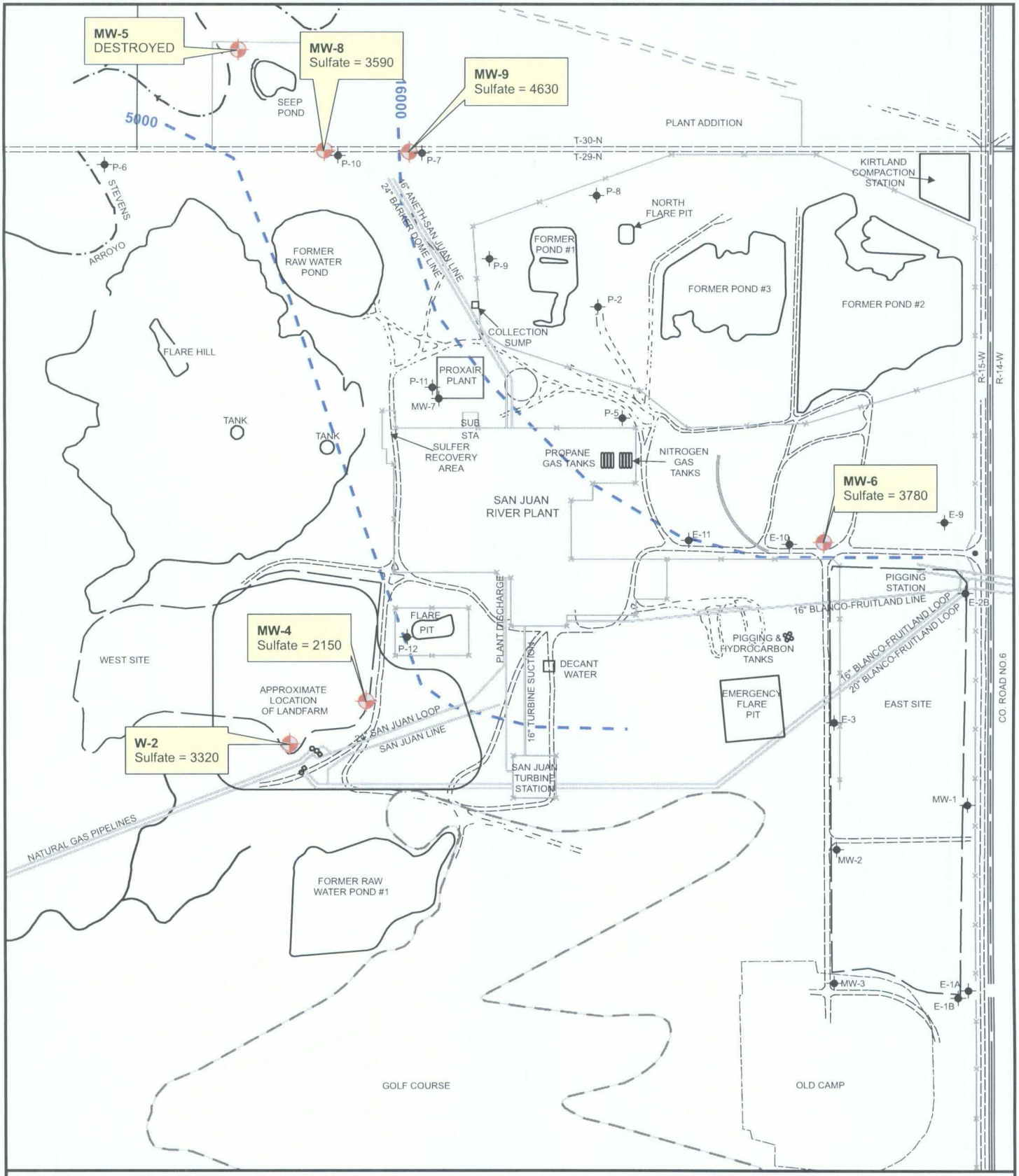
PROJECT: SAN JUAN RIVER PLANT

TITLE: TDS Isoconcentration Map - August 27, 2008

FIGURE: 7



LEGEND

MW-4	Existing Monitoring / Observation Well
PZ-01	Abandoned Monitoring Well
TDS	Total Dissolved Solids
—1275—	Total Dissolved Solids Isoconcentrations (Inferred Where Dashed)
3600	Sulfate Concentration in ppm

Not To Scale

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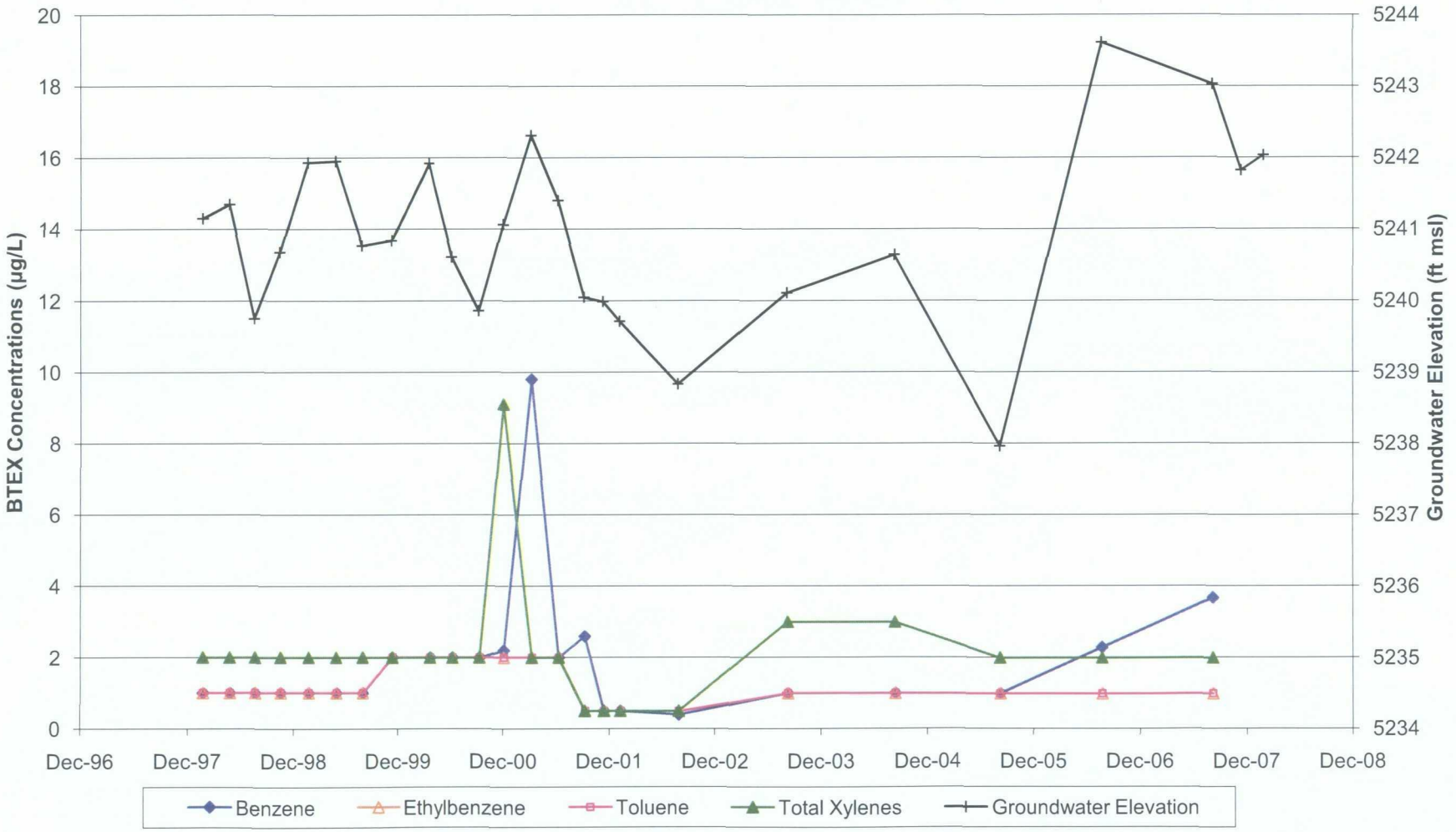
PROJECT: SAN JUAN RIVER PLANT

TITLE: Sulfate Isoconcentration Map, - August 27, 2008

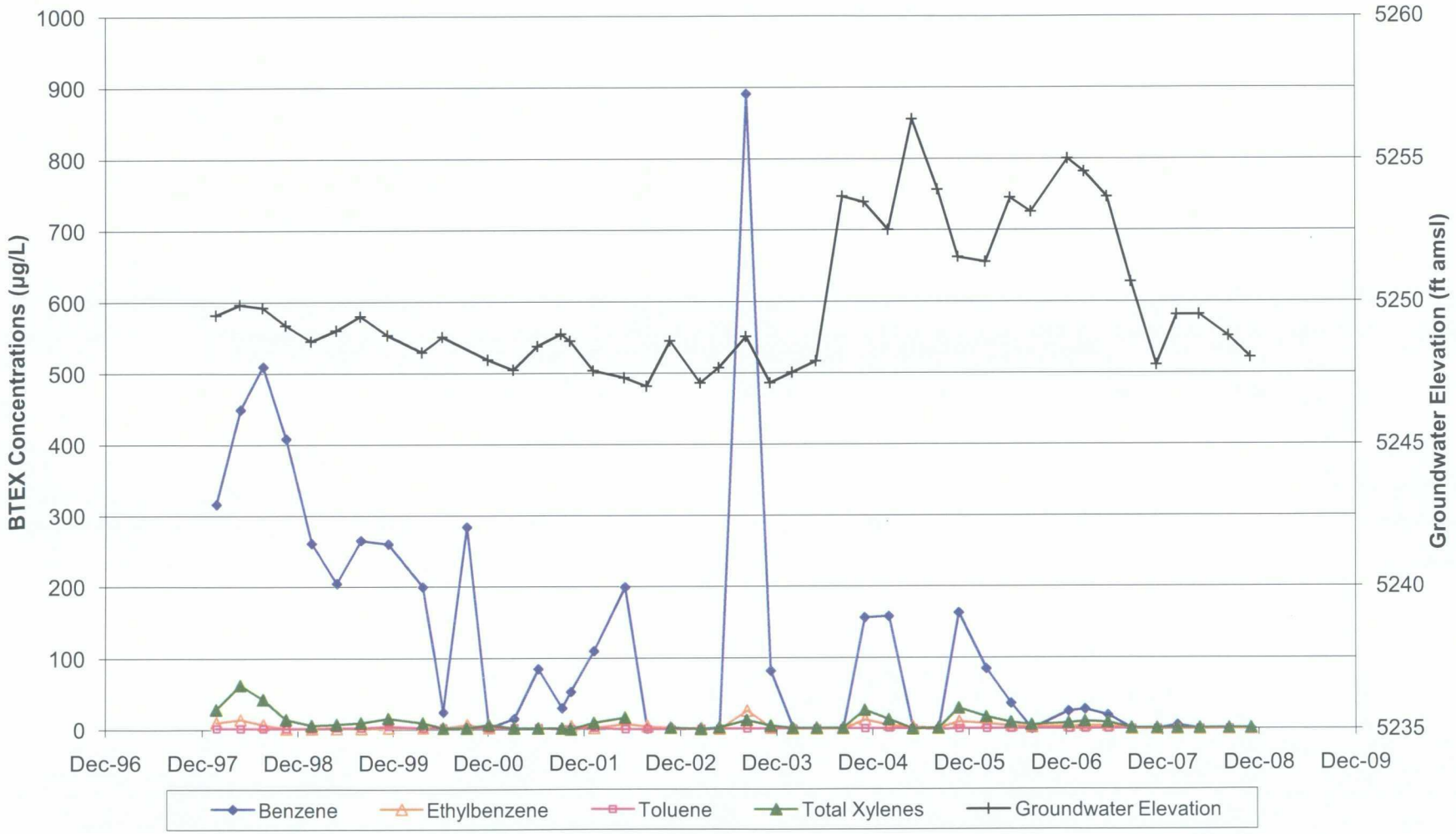
FIGURE: 8

FIGURE 9
Historic MW-5 BTEX Concentrations and Groundwater Elevations
San Juan River Plant Site



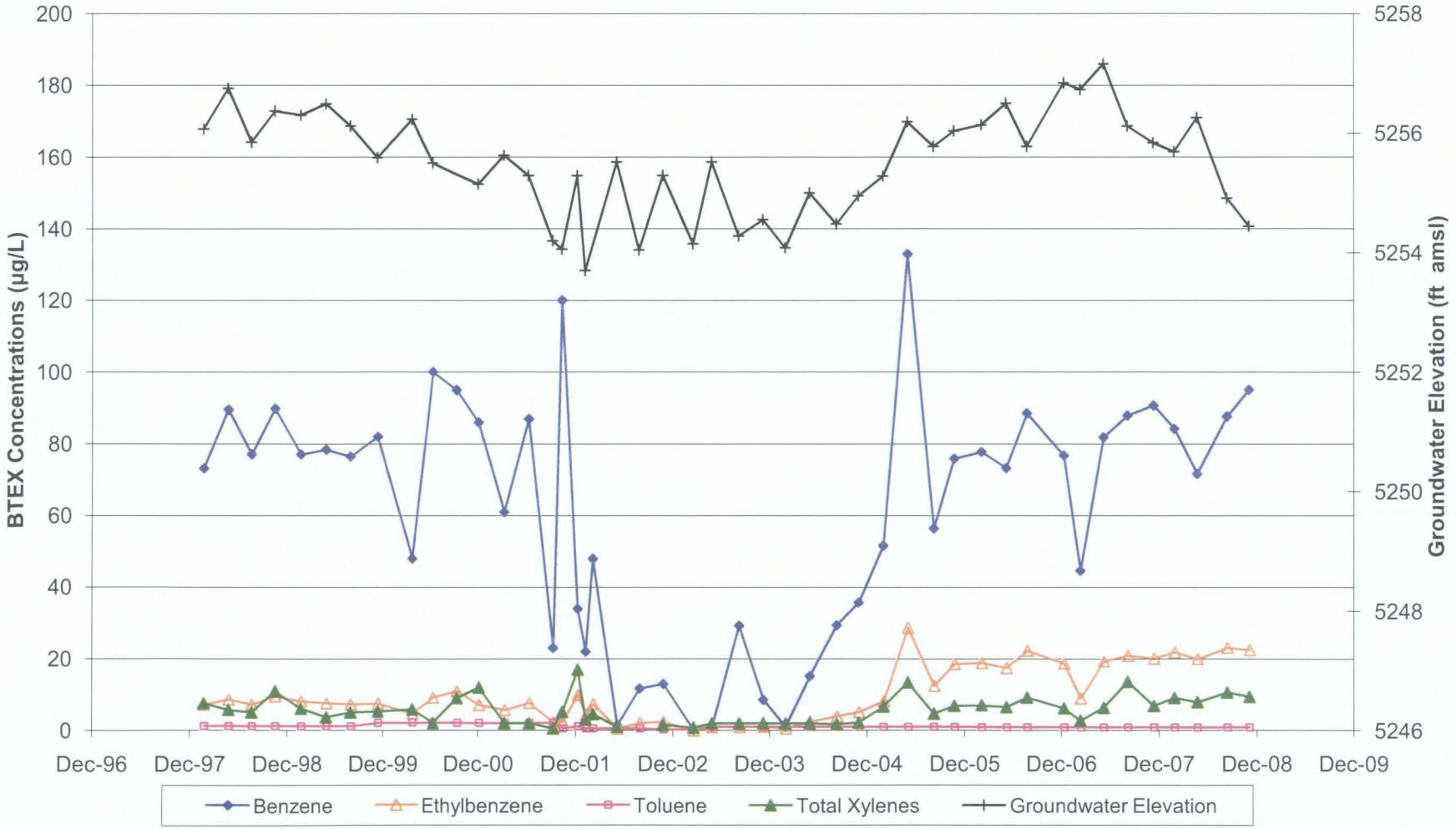
Note: A concentration of 1 µg/L for benzene, toluene, or ethylbenzene and a concentration of 2 µg/L for total xylenes indicates parameter not detected.

FIGURE 10
Historic MW-8 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 xylenes 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 xylenes indicates parameter not detected.

TABLES

TABLE 1

SUMMARY OF 2008 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	8/27/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	6.52	74.0	2,660	55.53
MW-4	8/27/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	6.11	66.8	2,270	52.24
MW-6	8/27/2008	<1.0	<1.0	<1.0	<2.0	<1.0	<3.0	7.34	63.3	6,420	31.27
MW-8	2/13/2008	6.0	<2.0	0.71J	<4.0	<2.0	<6.0	7.62	54.0	11,740	10.41
MW-8	5/8/2008	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	7.22	56.8	6,970	10.40
MW-8	8/27/2008	<1.0J	<1.0J	<1.0J	<2.0J	<1.0J	<3.0J	7.90	63.9	4,220	11.15
MW-8	11/18/2008	<2.0	<2.0	<2.0	<4.0	<2.0	<6.0	7.19	54.0	7,310	11.90
MW-9	2/13/2008	**84.4**	<2.0	22.1	9.2	<2.0	9.2	NR	54.5	14,800	5.28
MW-9	5/8/2008	**71.8**	<1.0	20.2	8.0	<1.0	8.0	4.64	57.7	11,200	4.71
MW-9	8/27/2008	**87.9**	<1.0	23.4	10.7	<1.0	10.7	5.86	62.1	6,140	6.06
MW-9	11/18/2008	**95.3**	<2.0	22.8	9.5	<2.0	9.5	6.38	56.2	11,260	6.53

J = Estimated value or reporting limit.

NR = Not Recorded

TABLE 2
SUMMARY OF 2008 INORGANIC ANALYTICAL DATA
SAN JUAN RIVER PLANT SITE

Parameter	NMWQCC Standard	W-2 8/27/2008	MW-4 8/27/2008	MW-6 8/27/2008	MW-8 8/27/2008	MW-9 8/27/2008
Metals						
Aluminum (µg/L)	5,000	NA	**9,810**	NA	3,260	**14,500**
Arsenic (µg/L)	100	NA	34.2	NA	5.5	<5.0
Barium (µg/L)	1,000	NA	<200	NA	<200	<200
Cadmium (µg/L)	10	NA	<4.0	NA	<4.0	8.5
Calcium (µg/L)	NE	NA	267,000	NA	101,000	361,000
Chromium (µg/L)	50	NA	<10	NA	<10	<10
Cobalt (µg/L)	50	NA	**94**	NA	<50	**197**
Copper (µg/L)	1,000	NA	150	NA	<25	62.9
Iron (µg/L)	1,000	NA	**17,700**	NA	**1,970**	**3,660**
Lead (µg/L)	50	NA	**51.2**	NA	4.3	5.1
Magnesium (µg/L)	NE	NA	113,000	NA	264,000	276,000
Manganese (µg/L)	200	NA	**7,190**	NA	**557**	**7,770**
Mercury (µg/L)	2	NA	<0.2	NA	<0.2	<0.2
Molybdenum (µg/L)	1,000	NA	<10	NA	<10	<10
Nickel (µg/L)	200	NA	**229**	NA	<40	**316**
Potassium (µg/L)	NE	NA	13,100	NA	89,000	28,000
Selenium (µg/L)	50	NA	<5.0	NA	<5.0	<5.0
Silver (µg/L)	50	NA	<10	NA	<10	<10
Sodium (µg/L)	NE	NA	1,020,000	NA	2,790,000	3,760,000
Zinc (µg/L)	10,000	NA	50	NA	20.7	650
Inorganics						
Alkalinity as CaCO3 (mg/L)	NE	178	916	17	3,380	18
Chloride (mg/L)	250	**308**	16.9	**1150**	4	**606**
Nitrate+Nitrite (mg/L)	10	**17.2**	0.39	**140**	0.36	<0.1
Sulfate (mg/L)	600	**3,320**	**2,150**	**3,780**	**3,590**	**4,630**
Total Dissolved Solids (mg/L)	1,000	**4,920**	**4,120**	**16,300**	**9,420**	**16,200**

NE = Not established

NA = Not analyzed due to sampling error

APPENDICES

(Included electronically on attached CD)