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2011 AGWMR

8/16/2012

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August 16, 2012

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

RE: El Paso CGP Company Pit Groundwater Remediation Sites
2011 Annual Reports

Dear Mr. Von Gonten:

MWH Americas, Inc., on behalf of El Paso CGP Company (EPCGP), is submitting the enclosed 2011 Annual Reports for 21 of its remaining San Juan River Basin pit groundwater remediation sites (several other sites are handled as different projects with different activity and reporting schedules). The reports present the 2011 sampling and product recovery data and include recommendations for future activities at these sites.

The 2011 Annual Reports are divided into three volumes based on location type. The volumes are as follows:

Volume	Location Type
1	Federal Lands
2	Fee and State Lands
3	Navajo Nation Lands (1 Site Remains)

If you have any questions concerning the enclosed reports, please contact either Joe Wiley (representing EPCGP Company) at 713-420-3475 or me at 303-291-2276.

Sincerely,

Jed Smith
Project Manager

encl.

cc: Bill Freeman – NNEPA, Shiprock, NM (Volume 3 Only)
Bill Liese – BLM, Farmington, NM (Volume 1 Only)
Brandon Powell – NMOCD, Aztec, NM (Volumes 1, 2, and 3)
Joe Wiley – EPCGP Company (Volumes 1, 2, and 3 - Electronic)

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EL PASO CGP COMPANY

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2011 ANNUAL REPORT
PIT GROUNDWATER REMEDIATION
VOLUME 1: SITES ON FEDERAL LANDS

AUGUST 2012

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1801 California Street
Suite 2900
Denver, Colorado 80202
303 291 2222

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LEGEND

- Sites on Federal Land
- Sites on Navajo Nation Land
- Sites on State/Fee "Non-Federal" Lands

*Closure Request Pending with the NMOCD.

0 2 4 6 8 Miles

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PROJECT:	SAN JUAN RIVER BASIN
TITLE:	Site Locations
FIGURE:	1

LIST OF ACRONYMS

AMSL	above mean sea level
BTEX	benzene, toluene, ethylbenzene, xylenes
btoc	below top of casing
EPCGP	El Paso CGP Company
ft	foot/feet
GWEL	groundwater elevation
ID	identification
MW	monitoring well
NMWQCC	New Mexico Water Quality Control Commission
TOC	top of casing
NA	not applicable
NMOCD	New Mexico Oil Conservation Division
NS	not sampled
ORC	oxygen-releasing compound
µg/L	micrograms per liter

2011 ANNUAL GROUNDWATER REPORT
FEDERAL SITES VOLUME I

EL PASO CGP COMPANY

TABLE OF CONTENTS

METER or LINE ID	NMOCD CASE NO.	SITE NAME	TOWNSHIP	RANGE	SECTION	UNIT
87640	3RP-155-0	Canada Mesa #2	24N	06W	24	I
89961	3RP-170-0	Fields A#7A	32N	11W	34	E
73220	3RP-068-0	Fogelson 4-1 Com. #14	29N	11W	4	P
89894	3RP-186-0	Hammond #41A	27N	08W	25	O
97213	3RP-190-0	Hamner #9	29N	09W	20	A
94715	3RP-196-0	James F. Bell #1E	30N	13W	10	P
89232	3RP-202-0	Johnston Fed #6A	31N	09W	35	F
LD072	3RP-204-0	K27 LD072	25N	06W	4	E
LD174	3RP-212-0	LAT L 40	28N	04W	13	H
LD151	3RP-213-0	Lat 0-21 Line Drip	30N	09W	12	O
94810	3RP-223-0	Miles Fed 1A	26N	07W	5	F
89620	3RP-235-0	Sandoval GC A #1A	30N	09W	35	C

* The Hamner #9 site was submitted for closure in January 2009 and is pending approval from NMOCD. There were no monitoring activities for this site in 2011.

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EPCGP GROUNDWATER SITES
2011 ANNUAL GROUNDWATER REPORT

Sandoval GC A #1A
Meter Code: 89620

SITE DETAILS

Legal Description:	**Town:**	30N	**Range:**	9W	**Sec:** 35	**Unit:**	C
NMOCD Haz Ranking:	10	**Land Type:**	Federal	**Operator:**	BP / America Production Company		

PREVIOUS ACTIVITIES

Site Assessment:	5/94	**Excavation:**	9/94 (50 cy)	**Soil Boring:**	5/95
Monitor Well:	5/95	**Geoprobe:**	NA*	**Additional MWs:**	NA*
Downgradient MWs:	NA	**Replace MW:**	8/97	**Quarterly Initiated:**	4/96
ORC Nutrient Injection:	10/01	**Re-Excavation:**	7/97 (504cy)	**PSH Removal Initiated:**	NA
Annual Initiated:	4/99	**Quarterly Resumed:**	NA	**PSH Removal in 2011?**	No

*Downgradient monitoring wells were attempted in 1995, but met with drilling refusal. In 1997, geoprobe borings were attempted, but were again met with drilling refusal.

SUMMARY OF 2011 ACTIVITIES

MW-1: Annual groundwater sampling (November) and annual dissolved oxygen measurements (November) were performed during 2011. Three fresh ORC socks were placed in the well following the annual sampling event.

Site-Wide Activities: No other activities were performed at this Site during 2011.

SITE MAP

A Site map (November) is attached as Figure 1.

SUMMARY TABLES AND GRAPHS

- Historic analytical and water level data are summarized in Table 1 and presented graphically on Figure 2.
- The 2011 laboratory report is presented in Attachment 1 (included on CD).
- The 2011 field documentation is presented in Attachment 2 (included on CD).

GEOLOGIC LOGS AND WELL COMPLETION DIAGRAMS

No subsurface activities were performed at this Site during 2011.

DISPOSITION OF GENERATED WASTES

All purge water was taken to the El Paso Natural Gas Rio Vista Compressor Station. The spent oxygen-releasing socks were managed as non-hazardous solid waste.

ISOCONCENTRATION MAPS

No isoconcentration maps were prepared for this Site; however, the attached Site map presents the analytical data collected during 2011.

RESULTS

- Regional groundwater flow is estimated to be toward the south, toward the San Juan River (approximately 1 mile away).

- The benzene concentration in MW-1 decreased in 2011 to 31.3 µg/L, from a previous year result of 54.0 µg/L in 2010. As a long-term trend, the benzene concentrations continue to decrease from the historic high concentration of 10,400 µg/L in 1996.

- The dissolved oxygen level in MW-1 was approximately 7.44 mg/L on November 1, 2011, when the ORC® socks were removed for the upcoming sampling event. The dissolved oxygen results indicated that sufficient oxygen was present year-round for natural aerobic biodegradation to proceed unimpeded.

- Previous attempts to install downgradient monitoring wells in December 1995 resulted in drilling refusal. Therefore, additional wells are not considered to be feasible at this Site.

REMAINING CLOSURE REQUIREMENTS

- This site is being managed per the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (El Paso Natural Gas Company / El Paso Field Services Company, 1995). This remediation plan was conditionally approved by the New Mexico Oil Conservation Division (OCD) in correspondence dated November 30, 1995; and the OCD approval conditions were adopted into El Paso's program methods.

- In order to meet the remaining closure requirements at this site, the following condition must be achieved: groundwater contaminant concentrations in the monitoring well must meet the NMWQCC standards for at least 4 consecutive quarters. Alternatively, concentrations must be reduced to below background levels; however, there are no established background concentrations for the remaining constituents of concern. Currently, MW-1 requires additional monitoring. The remaining applicable standards are:

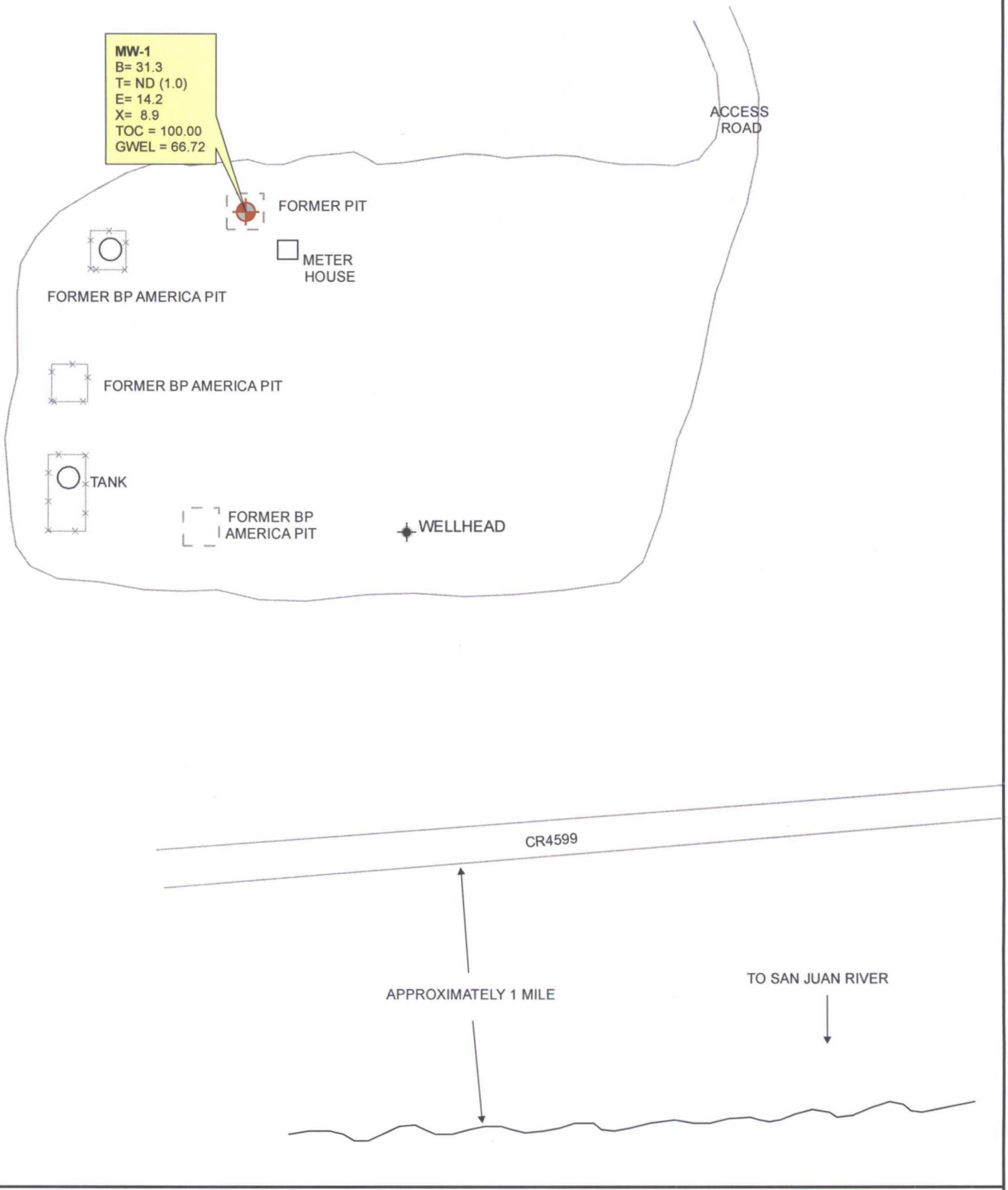
Constituent	NMWQCC GW Standard (µg/L)
Benzene	10
Toluene	750
Ethylbenzene	750
Total Xylenes	620

RECOMMENDATIONS

- EPCGP will continue annual groundwater sampling and dissolved oxygen measurements at MW-1. Once benzene concentrations meet the NMWQCC benzene standard of 10 µg/L, sampling will be conducted on a quarterly basis.

- EPCGP will continue to inspect the ORC socks installed in MW-1 and will replace them annually.

- In 2007, the operator closed three production pits onsite which were documented to be buried in place. It was reported that no groundwater was encountered and the soil was classified as sand, silty sand, and clay. A soil sample collected from the blowdown pit indicated elevated concentrations of BTEX and TPH. EPCGP will evaluate potential operator sources as well as remedial alternatives for the site in 2012. EPCGP will present its findings in the 2012 annual report.



LEGEND

MW-1	Existing Monitoring / Observation Well	B	Benzene (ug/L)
		T	Toluene (ug/L)
		E	Ethylbenzene (ug/L)
ND	Not Detected; Reporting Limit Shown in Parenthesis	X	Total Xylenes (ug/L)
		TOC	Top of Casing (ft.*)
* = Elevations in feet relative to a 100 ft benchmark.		GWEL	Groundwater Elevation (ft. *)

Not To Scale

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PROJECT: SANDOVAL GC A#1A

TITLE: Groundwater Potentiometric Surface Map, and BTEX Concentrations - November 16, 2011

FIGURE: 1

TABLE 1

SUMMARY OF BTEX COMPOUNDS IN GROUNDWATER
SANDOVAL GC A #1A (METER #89620)

Monitor Well	Sample Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes	Depth to Water (ft BTOC)	Corr. GW Elevation (Feet*)
NMWQCC GW Std.:		10	750	750	620		
MW-1	5/30/1995	**5500**	**3980**	579	**4780**	34.49	65.51
MW-1	4/12/1996	**10400**	**8960**	**925**	**10100**	35.39	64.61
MW-1	7/26/1996	**8980**	**7980**	**1000**	**9430**	35.61	64.39
MW-1	10/18/1996	**11050**	**9960**	**900**	**10700**	35.79	64.21
MW-1	1/21/1997	**7700**	**7210**	**787**	**8430**	35.80	64.20
MW-1	4/16/1997	**8900**	**8680**	**996**	**9250**	35.99	64.01
MW-1	7/11/1997	**8240**	**7850**	709	**8230**	36.05	63.95
MW-1	9/4/1997	**4420**	**2370**	**850**	**9660**	35.18	64.82
MW-1	10/22/1997	**3460**	39.6	714	**7690**	35.14	64.86
MW-1	1/6/1998	**3850**	194	**795**	**8570**	35.10	64.90
MW-1	4/23/1998	**4330**	406	**783**	**7220**	35.15	64.85
MW-1	4/19/1999	**4300**	**1260**	629	**7440**	35.10	64.90
MW-1	4/13/2000	**2300**	**1500**	590	**5900**	34.70	65.30
MW-1	5/30/2001	**2800**	710	560	**5200**	34.97	65.03
MW-1	5/16/2002	**3000**	**1500**	440	**5300**	35.11	64.89
MW-1	5/21/2003	**3850**	601	443	**6360**	35.26	64.74
MW-1	11/16/2004	**2490**	30.9	346	**2860**	34.84	65.16
MW-1	11/8/2005	**338**	8.5	80.1	**757**	33.87	66.13
MW-1	11/8/2006	**198**	3.4	14.9	83.6	34.02	65.98
MW-1	11/29/2007	**441**	3.8	52.2	72.2	33.29	66.71
MW-1	11/18/2008	**120**	<2.0	17.9	8.3	33.41	66.59
MW-1	11/4/2009	**88.4**	<1.0	14.8	4.3	33.64	66.36
MW-1	11/9/2010	**54.0**	<2.0	8.7	12.7	32.94	67.06
MW-1	11/16/2011	**31.3**	<1.0	14.2	8.9	33.28	66.72

Notes:

Results shown in bold typeface exceed their respective New Mexico Water Quality Control Commission standards.

"J" = result is qualified as estimated. See laboratory report and/or supplemental data validation report for further detail.

"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit)..

Static groundwater elevations have been corrected for product thickness where applicable. Specific gravity of 0.8 used.

*This site has a benchmark elevation of 100 feet rather than mean sea level.