

2014 ANNUAL GROUNDWATER REPORT

Lateral O-21 Line Drip
Meter Code: LD151
T30N, R9W, Sec12, Unit O

SITE DETAILS

Site Location: Latitude: 36.818600 N, Longitude: -107.730400 W
Land Type: Federal
Operator: Enterprise

SITE BACKGROUND

- **Site Assessment:** 1/95
- **Excavation:** 1/95

Lateral O-21 Line Drip (Site) is being managed pursuant to the procedures set forth in the document entitled, "Remediation Plan for Groundwater Encountered during Pit Closure Activities" (Remediation Plan, 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 CGP Company, LLC's (EPCGP's) program methods. Currently, the Site is operated by Enterprise and is not active.

The Site is located on Federal land. Several site investigations were conducted from 1995 to 2000. Monitoring wells were installed in 1995 (MW-1) and 2000 (MW-2 and MW-3). Temporary piezometers were installed in 1997 (PZ-1 and PZ-2). Free product recovery has been periodically conducted at the Site. Currently, groundwater sampling is conducted on a semi-annual basis. Free product was observed in 2014.

SUMMARY OF 2014 ACTIVITIES

On April 2 and October 23, 2014, water levels were gauged at MW-1, MW-2, and MW-3. For each sampling event in 2014, monitoring wells MW-2 and MW-3 were dry. Groundwater samples and additional field parameters were not collected from MW-1 during the April and October 2014 sampling event due to the presence of free product.

SUMMARY TABLES

Historic analytical and water level data are summarized in Table 1. When free product was present, static water level elevations were corrected for measurable thicknesses of free product (specific gravity of 0.75).

SITE MAPS

Groundwater analytical and groundwater elevation contour maps from each sampling event are included as Figures 1 through 4.

ANALYTICAL LAB REPORTS

No groundwater samples were collected during 2014.

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RESULTS

- The groundwater flow direction cannot be determined based on observations. MW-1 is the only monitoring well where groundwater elevation data is presented, due to the other wells on site being dry (see Figures 2 and 4).
- Groundwater samples were not collected from MW-1 during the April and October 2014 monitoring events due to the presence of free product.
- Monitoring wells MW-2 and MW-3 were dry during each sampling event in 2014.

PLANNED FUTURE ACTIVITIES

Installation of additional monitoring wells is planned, after establishment of a right-of-way with the United States Bureau of Land Management. The wells will be installed to further assess the extent of dissolved-phase hydrocarbons and to confirm and/or further define the groundwater gradient at the Site. MW-1 and the newly-installed monitoring well will be sampled on a semi-annual basis. Monitoring wells MW-2 and MW-3 will be plugged and abandoned in accordance with New Mexico Environmental Department, Ground Water Quality Bureau, Monitoring Well Construction and Abandonment Guidelines, dated March 2011.

TABLES

TABLE 1 – GROUNDWATER ANALYTICAL AND WATER LEVEL RESULTS

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

LAT 0-21 Line Drip								
Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-1	11/06/95	935	2700	168	1890	34.45	-	-
MW-1	11/12/96	741	1620	99	1100	34.75	-	-
MW-1	02/11/97	202	313	15.6	230	33.82	-	-
MW-1	05/08/97	1050	1220	50.8	764	33.54	-	-
MW-1	08/05/97	99.5	179	8.42	160	34.20	-	-
MW-1	11/04/97	1370	3040	174	2530	35.42	-	-
MW-1	02/03/98	3000	3600	138	2180	35.08	-	-
MW-1	05/07/98	5380	7500	247	3500	34.83	-	-
MW-1	05/18/99	4860	6810	183	3450	34.64	-	-
MW-1	05/26/00	620	900	49	580	34.76	-	-
MW-1	06/18/01	1400	2000	37	2500	35.60	-	-
MW-1	06/04/02	270	170	12	1900	35.98	-	-
MW-1	09/10/02					37.15	36.85	0.30
MW-1	12/30/02					36.39	36.08	0.31
MW-1	03/27/03					35.96	-	-
MW-1	06/18/03	137	<10	<10	1730	36.26	-	-
MW-1	09/16/03					37.06	-	-
MW-1	12/17/03					36.72	-	-
MW-1	03/16/04					36.22	-	-
MW-1	06/22/04					36.38	-	-
MW-1	06/23/04	59.9	11.8	23.8	44.1	36.38	-	-
MW-1	09/21/04					37.43	-	-
MW-1	12/21/04					36.98	-	-
MW-1	04/18/05	66.6	9.3	21.5	56.5	35.93	-	-
MW-1	10/22/05	8.9	1.4	5.6	9.1	36.99	-	-
MW-1	01/19/06	37.6	3.6	17.4	42	36.18	-	-
MW-1	04/24/06	81.4	24.5	21.8	152	35.71	-	-
MW-1	10/24/06	9.4	1.7	2.3	8.2	36.81	-	-
MW-1	01/19/07	28.7	5.5	7.3	19.8	36.14	-	-
MW-1	04/24/07	104	82.1	41	244	35.73	-	-
MW-1	05/29/07					36.90	-	-
MW-1	10/25/07	3.8	4	4.4	8.8	37.39	-	-
MW-1	04/21/08	11.6	1.6 J	5.7	15.1	35.97	-	-
MW-1	07/23/08	11.2	1.4	3.2	9.3	36.55	-	-
MW-1	10/08/08	7.6	0.61 J	1.6 J	5.8 J	36.88	-	-
MW-1	01/07/09	3.1	<1	1	2.6	36.52	-	-
MW-1	04/06/09	6	2.2	1.6	6.2	36.03	-	-
MW-1	07/27/09	6.8	0.86 J	1.6	4.8	36.83	-	-
MW-1	06/06/13	<0.42	<0.90	69	1000	39.98	39.91	0.07
MW-1	09/09/13					40.04	39.77	0.27
MW-1	12/12/13					39.39	39.32	0.07
MW-1	04/02/14					39.01	38.99	0.02
MW-1	10/23/14					40.09	40.07	0.02

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Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-2	08/30/00	1.3	<0.5	<0.5	9.5	33.62	-	-
MW-2	06/18/01	<0.5	<0.5	<0.5	2	33.16	-	-
MW-2	06/04/02	<0.5	<0.5	<0.5	<1	33.42	-	-
MW-2	09/10/02					41.48	-	-
MW-2	12/30/02					33.91	-	-
MW-2	03/27/03					33.45	-	-
MW-2	06/18/03	<1	<1	<1	<3	33.80	-	-
MW-2	06/18/03					34.61	-	-
MW-2	09/16/03					34.23	-	-
MW-2	12/17/03					33.70	-	-
MW-2	03/16/04					33.92	-	-
MW-2	06/22/04					33.92	-	-
MW-2	06/23/04	<0.5	<0.5	<0.5	<1	34.99	-	-
MW-2	09/21/04					34.49	-	-
MW-2	12/21/04					33.40	-	-
MW-2	04/18/05					34.49	-	-
MW-2	10/22/05					33.68	-	-
MW-2	01/19/06					33.21	-	-
MW-2	04/24/06					34.31	-	-
MW-2	10/24/06					33.66	-	-
MW-2	01/18/07					32.70	-	-
MW-2	04/24/07					33.44	-	-
MW-2	05/29/07					34.78	-	-
MW-2	10/25/07					33.45	-	-
MW-2	04/21/08					34.10	-	-
MW-2	07/23/08					34.45	-	-
MW-2	10/08/08					34.03	-	-
MW-2	01/07/09	<1	<1	<1	<2	33.53	-	-
MW-2	07/27/09	<1	<1	<1	<2	34.42	-	-
MW-2	06/06/13					DRY	-	-
MW-2	09/09/13					DRY	-	-
MW-2	12/12/13					DRY	-	-
MW-2	04/02/14					DRY	-	-
MW-2	10/23/14					DRY	-	-

TABLE 1 - GROUNDWATER ANALYTICAL RESULTS

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Location	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Depth to Water (ft.)	Depth to LNAPL (ft.)	LNAPL Thickness (ft.)
NMWQCC Standards:		10	750	750	620	NA	NA	NA
MW-3	08/30/00	190	20	37	460	34.56	-	-
MW-3	06/18/01	34	4.7	68	130	34.14	-	-
MW-3	06/04/02	5.7	0.52	19	30	34.42	-	-
MW-3	09/10/02					35.92	35.29	0.64
MW-3	12/30/02					34.97	34.42	0.55
MW-3	03/27/03					34.49	-	-
MW-3	06/18/03	<50	<50	540	6490	34.80	-	-
MW-3	09/16/03					35.64	35.62	0.02
MW-3	12/17/03					35.24	-	-
MW-3	03/16/04					34.75	-	-
MW-3	06/22/04					34.95	-	-
MW-3	06/23/04	3.3	28.9	34	48.4	34.95	-	-
MW-3	09/21/04					35.95	-	-
MW-3	12/21/04					35.51	-	-
MW-3	04/18/05	<1	<1	5.3	<2	34.48	-	-
MW-3	10/22/05	<1	<1	<1	1.1	35.52	-	-
MW-3	01/19/06	<1	<1	<1	<2	34.71	-	-
MW-3	04/24/06	<1	<1	<1	<2	34.23	-	-
MW-3	10/24/06	<1	<1	<1	1.2 J	35.33	-	-
MW-3	01/19/07	<1	<1	<1	<2	34.66	-	-
MW-3	04/24/07	<1	<1	<1	<2	33.25	-	-
MW-3	05/29/07					34.42	-	-
MW-3	10/25/07	<1	<1	<1	<2	35.88	-	-
MW-3	04/21/08	<2	<2	<2	<6	34.50	-	-
MW-3	07/23/08	<1	<1	<1	2.3	35.06	-	-
MW-3	10/08/08	<2	<2	<2	<6	35.41	-	-
MW-3	01/07/09	<1	<1	0.44 J	2.2	35.05	-	-
MW-3	04/06/09					34.53	-	-
MW-3	07/27/09					DRY	-	-
MW-3	06/06/13					DRY	-	-
MW-3	09/09/13					DRY	-	-
MW-3	12/12/13					DRY	-	-
MW-3	04/02/14					DRY	-	-
MW-3	10/23/14					DRY	-	-
Notes:								
Results highlighted yellow exceed their respective New Mexico Water Quality Control Commission standards.								
"J" = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value..								
"<" = analyte was not detected at the indicated reporting limit (some historic data were reported at the detection limit).								

FIGURES

FIGURE 1: APRIL 2, 2014 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 2: APRIL 2, 2014 GROUNDWATER ELEVATION MAP

FIGURE 3: OCTOBER 23, 2014 GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE 4: OCTOBER 23, 2014 GROUNDWATER ELEVATION MAP



5846
APPROXIMATE GROUND SURFACE
CONTOUR AND ELEVATION, FEET

— O V H D — OVERHEAD ELECTRIC LINE

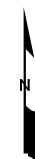
— G A S — NATURAL GAS LINE

MONITORING WELL

SMA BENCHMARK

EXPLANATION OF ANALYTES AND APPLICABLE STANDARDS:
RESULTS IN **BOLDFACE** TYPE INDICATE CONCENTRATION IN EXCESS OF THE STANDARD FOR THAT ANALYTE.
NS = NOT SAMPLED
µg/L = MICROGRAMS PER LITER
<0.30 = BELOW METHOD DETECTION LIMIT
J = RESULT IS LESS THAN THE RL, BUT GREATER THAN OR EQUAL TO THE MDL AND THE CONCENTRATION IS AN APPROXIMATE VALUE.
MDL = METHOD DETECTION LIMIT
RL = REPORTING LIMIT OR REQUESTED LIMIT (RADIOCHEMISTRY)

ANALYTE	NMWQCC STANDARDS
B = Benzene	10 µg/L
T = Toluene	750 µg/L
E = Ethylbenzene	750 µg/L
X = Total Xylenes	620 µg/L



SCALE IN FEET



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/15/2014	CCL	CCL	DCW

TITLE:

LAT 0-21
GROUNDWATER ANALYTICAL RESULTS
GAUGED APRIL 2, 2014

PROJECT:

**T: SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO**



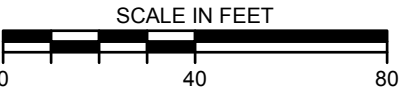
Figure No.:



AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

LEGEND:

- APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
- OVERHEAD ELECTRIC LINE
- NATURAL GAS LINE
- MONITORING WELL
- SMA BENCHMARK



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	10/15/2014	CCL	CCL	DCW

TITLE:
**LAT 0-21
GROUNDWATER ELEVATION MAP
GAUGED APRIL 2, 2014**

PROJECT: **SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:

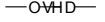
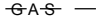
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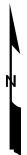




AERIAL IMAGERY FROM GOOGLE EARTH, DATED 5/2/2013

LEGEND:

-  APPROXIMATE GROUND SURFACE CONTOUR AND ELEVATION, FEET
-  OVERHEAD ELECTRIC LINE
-  NATURAL GAS LINE
-  MONITORING WELL
-  SMA BENCHMARK



REVISION	DATE	DESIGN BY	DRAWN BY	REVIEWED BY
A	11/17/2014	CCL	CCL	DCW

TITLE:
**LAT 0-21
GROUNDWATER ELEVATION MAP
GAUGED OCTOBER 23, 2014**

PROJECT: **SAN JUAN RIVER BASIN
MONITORING AND REMEDIATION
SAN JUAN COUNTY, NEW MEXICO**



Figure No.:
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