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**REPORTS**

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370 17<sup>th</sup> Street, Suite 2500  
Denver, Colorado 80202  
303-595-3331 – main  
303-605-1957 – fax

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March 4, 2008

Mr. Wayne Price  
Remediation Bureau Chief  
New Mexico Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

**RE: 2007 Fourth Quarter Groundwater Monitoring Report for the  
PCA Junction Compressor Station  
Eddy County, New Mexico  
SW ¼ Section 11, Township 20 South, Range 30 East (NM Meridian)**

Dear Mr. Price:

DCP Midstream, LP (DCP) is submitting the fourth quarter 2007 groundwater monitoring report for the referenced site.

Groundwater monitoring activities were completed December 12, 2007. Phase-separated hydrocarbons are present in MW01. MWA01 was dry, and therefore not sampled. The next groundwater monitoring event is scheduled for the first quarter of 2008.

On a separate note – it came to my attention that the Q3 2007 Groundwater Monitoring Report did not include updated data tables. Corrected tables are enclosed as an Arcadis letter that may be inserted into the previous report. I apologize for this oversight.

If you have any questions regarding this report, please call me at 303-605-1893.

Sincerely,

DCP Midstream, LP

Daniel Dick  
Environmental Engineer

Enclosure

cc: Larry Johnson, OCD District I, Hobbs  
Kelly Ruder, Arcadis  
Environmental Files



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**Q4 2007 GROUNDWATER  
MONITORING REPORT**

PCA Junction  
Eddy County, New Mexico

February 2008

ARCADIS



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Paul A. Schwarzweller  
Environmental Scientist



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Kelly Ruder, PE  
Senior Engineer

**Q4 2007 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
DCP Midstream

Prepared by:  
ARCADIS U.S., Inc.  
630 Plaza Drive  
Suite 100  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
26 February 2008

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## 1. Site Location and Background

ARCADIS U.S., Inc. (ARCADIS) is submitting to DCP Midstream (DCP) the results of groundwater monitoring activities and phase-separated hydrocarbon (PSH) recovery efforts that were performed during the fourth quarter of 2007 (Q4 2007) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The Site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of the pigging station. The Site occupies approximately 4 acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the Site in September 2000. Benzene was discovered in the soil and groundwater below the on-site tank battery. PSH was observed in a groundwater monitoring well in 2002.

The ownership of the PCA Junction was transferred from COP to Duke Energy Field Services (DEFS) on March 10, 2004. In November 2004, DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD). DEFS changed its name to DCP in January 2007.

## 2. Groundwater Monitoring

ARCADIS conducted quarterly groundwater monitoring activities at the Site on December 12, 2007. Monitoring consisted of the measurement of water levels from eight groundwater monitoring wells. Groundwater samples were collected from six of the wells for water quality analysis. Well MW01 contained PSH and was not sampled. Well MWA01 was dry; therefore, no sample was collected. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260.

### 2.1 Water Level Gauging

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from 24.04 to 29.88 feet below ground surface. Groundwater elevation contours constructed using the December 12, 2007 measurements are provided on Figure 3. The groundwater gradient is consistent with previous gauging events and varies from 0.003 to 0.009 foot/foot (ft/ft) across the Site.

## 2.2 Groundwater Quality Monitoring

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers, and packed and shipped in accordance with accepted practices to Environmental Science Corporation in Mt. Juliet, Tennessee for analyses.

Table 2 summarizes BTEX concentrations in the groundwater collected during the Q4 2007 sampling event, and the laboratory analytical reports are included in Appendix A. Table 3 summarizes field collected groundwater parameters. The groundwater sample results are also posted on Figure 4, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q4 2007 analytical results can be summarized as follows:

- Benzene was detected in one groundwater sample from monitoring well MWA01 with a concentration of 7.2 micrograms per liter (ug/L). This is below the regulatory standard of 10 ug/L.
- Toluene, ethylbenzene, and xylenes were not detected above the regulatory standards of 1,000 ug/L, 700 ug/L, and 10,000 ug/L, respectively.

## 2.3 PSH Recovery Efforts

PSH is being actively recovered through hand bailing at the Site on a monthly basis. PSH is bailed from all wells with a practically recoverable amount. During the Q4 2007 Site visits, a PSH and water mix was recovered from well MW01.

## 3. Closing Remarks

ARCADIS will continue to perform Site visits and PSH recovery when practical. Results of first quarter 2008 (Q1 2008) sampling and PSH recovery efforts will be reported in the Q1 2008 Groundwater Monitoring Report.

ARCADIS

Tables

**Table 1. Summary of Groundwater Elevations  
PCA Junction  
DCP Midstream**

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW01	659755.9	577763.7	3219.46	28.1	12/12/2007	27.32	25.54	1.78	3193.60	Bailed 2 gal
	-	-	-	-	11/15/2007	26.96	25.89	1.07	3193.38	Bailed 1 gal
	-	-	-	-	9/17/2007	27.29	25.4	1.89	3193.72	Bailed 1 gal
	-	-	-	-	8/16/2007	27.03	25.28	1.75	3193.87	Bailed 1 gal
	-	-	-	-	7/19/2007	26.76	25.13	1.63	3194.04	Bailed 1 gal
	-	-	-	-	6/18/2007	26.23	24.85	1.38	3194.36	
	-	-	-	-	5/24/2007	26.21	24.87	1.34	3194.35	Bailed 1 gal
	-	-	-	-	3/27/2007	26.84	25.22	1.62	3193.95	
	-	-	-	-	2/26/2007	26.80	25.2	1.60	3193.97	Bailed 2 gal
	-	-	-	-	12/12/2006	26.86	25.13	1.73	3194.02	
	-	-	-	-	11/13/2006	26.82	25.11	1.71	3194.04	
	-	-	-	-	10/17/2006	26.30	25.14	26.3	3214.73	Bailed 1.0 gal PSH/water mix
	-	-	-	-	9/11/2006	26.75	25.14	1.61	3194.03	Bailed 1.0 gal
	-	-	-	-	8/16/2006	26.42	25.41	1.01	3193.87	Bailed 1.25 gal
	-	-	-	-	7/18/2006	26.43	25.00	1.43	3194.20	Bailed 2.5 gal
	-	-	-	-	6/19/2006	27.05	25.19	1.86	3193.94	Bailed 2.5 gal
	-	-	-	-	3/27/2006	26.40	24.92	1.48	3194.27	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	3194.39	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	3194.21	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	3194.12	Bailed 2 gal 30% product
	-	-	-	-	7/27/2005	26.80	25.08	1.72	3194.07	Purged 1 gal
	-	-	-	-	5/23/2005	25.92	24.62	1.30	3194.61	320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	3194.44	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	3194.55	Bailed 2.5 gal
-	-	-	-	2/25/2005	25.85	25.34	0.51	3194.03	Bailed 0.25 gal	
-	-	-	-	2/24/2005	26.14	24.85	1.29	3194.38	Bailed 0.5 gal	
MW02	659829.9	577640	3218.32	28.0	12/12/2007	24.58	-	-	3193.74	
	-	-	-	-	11/15/2007	24.71	-	-	3193.61	
	-	-	-	-	9/17/2007	24.66	-	-	3193.66	
	-	-	-	-	8/16/2007	23.81	-	-	3194.51	
	-	-	-	-	7/19/2007	23.80	-	-	3194.52	
	-	-	-	-	6/18/2007	23.89	-	-	3194.43	
	-	-	-	-	5/24/2007	23.85	-	-	3194.47	
	-	-	-	-	3/27/2007	24.02	-	-	3194.30	
	-	-	-	-	2/26/2007	24.05	-	-	3194.27	
	-	-	-	-	12/12/2006	24.66	-	-	3193.66	
	-	-	-	-	11/13/2006	24.13	-	-	3194.19	
	-	-	-	-	10/17/2006	24.35	-	-	3193.97	
	-	-	-	-	9/11/2006	25.16	-	-	3193.16	
	-	-	-	-	8/16/2006	24.65	-	-	3193.67	
-	-	-	-	6/19/2006	24.40	-	-	3193.92		
-	-	-	-	3/27/2006	23.98	-	-	3194.34		
-	-	-	-	2/15/2006	24.19	-	-	3194.13		
-	-	-	-	1/24/2006	24.00	-	-	3194.32		
MW03	659790.2	577606.4	3217.8	27.9	12/12/2007	24.04	-	-	3193.76	
	-	-	-	-	11/15/2007	24.16	-	-	3193.64	
	-	-	-	-	9/17/2007	24.13	-	-	3193.67	
	-	-	-	-	8/16/2007	23.25	-	-	3194.55	
	-	-	-	-	7/19/2007	23.26	-	-	3194.54	
	-	-	-	-	6/18/2007	23.31	-	-	3194.49	
	-	-	-	-	5/24/2007	23.24	-	-	3194.56	
	-	-	-	-	3/27/2007	23.35	-	-	3194.45	
	-	-	-	-	2/26/2007	23.48	-	-	3194.32	
	-	-	-	-	12/12/2006	23.59	-	-	3194.21	
	-	-	-	-	11/13/2006	23.61	-	-	3194.19	
	-	-	-	-	10/17/2006	23.34	-	-	3194.46	
	-	-	-	-	9/11/2006	23.54	-	-	3194.26	
	-	-	-	-	8/16/2006	24.10	-	-	3193.70	
-	-	-	-	7/18/2006	24.03	-	-	3193.77		
-	-	-	-	6/19/2006	23.85	-	-	3193.95		
-	-	-	-	3/27/2006	23.41	-	-	3194.39		
-	-	-	-	2/15/2006	23.64	-	-	3194.16		
-	-	-	-	1/24/2006	23.46	-	-	3194.34		

**Table 1. Summary of Groundwater Elevations  
PCA Junction  
DCP Midstream**

Well ID	Survey Data (feet)				Depth to Water Data (feet)					Comments
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	
MW04	659585	577712.5	3221.26	37.5	12/12/2007	27.80	-	-	3193.46	
	-	-	-	-	11/15/2007	27.89	-	-	3193.37	
	-	-	-	-	9/17/2007	27.86	-	-	3193.40	
	-	-	-	-	8/16/2007	27.15	-	-	3194.11	
	-	-	-	-	7/19/2007	27.15	-	-	3194.11	
	-	-	-	-	6/18/2007	27.15	-	-	3194.11	
	-	-	-	-	5/24/2007	27.18	-	-	3194.08	
	-	-	-	-	3/27/2007	27.37	-	-	3193.89	
	-	-	-	-	2/26/2007	27.31	-	-	3193.95	
	-	-	-	-	12/12/2006	27.44	-	-	3193.82	
	-	-	-	-	11/13/2006	27.51	-	-	3193.75	
	-	-	-	-	10/17/2006	28.53	-	-	3192.73	
	-	-	-	-	9/11/2006	27.48	-	-	3193.78	
	-	-	-	-	8/16/2006	27.84	-	-	3193.42	
	-	-	-	-	7/18/2006	27.26	-	-	3194.00	
	MW05	659936.9	577766.4	3223.55	38.6	12/12/2007	29.88	-	-	3193.67
-		-	-	-	11/15/2007	29.98	-	-	3193.57	
-		-	-	-	9/17/2007	29.89	-	-	3193.66	
-		-	-	-	8/16/2007	29.23	-	-	3194.32	
-		-	-	-	7/19/2007	29.21	-	-	3194.34	
-		-	-	-	6/18/2007	29.21	-	-	3194.34	
-		-	-	-	5/24/2007	29.24	-	-	3194.31	
-		-	-	-	3/27/2007	29.39	-	-	3194.16	
-		-	-	-	2/26/2007	29.39	-	-	3194.16	
-		-	-	-	12/12/2006	29.51	-	-	3194.04	
-		-	-	-	11/13/2006	29.50	-	-	3194.05	
-		-	-	-	10/17/2006	29.58	-	-	3193.97	
-		-	-	-	9/11/2006	29.59	-	-	3193.96	
-		-	-	-	8/16/2006	29.94	-	-	3193.61	
-		-	-	-	7/18/2006	29.33	-	-	3194.22	
MW06		659576.9	577833	3221.56	38.8	12/12/2007	28.31	-	-	3193.25
	-	-	-	-	11/15/2007	28.37	-	-	3193.19	
	-	-	-	-	9/17/2007	28.29	-	-	3193.27	
	-	-	-	-	8/16/2007	27.68	-	-	3193.88	
	-	-	-	-	7/19/2007	27.70	-	-	3193.86	
	-	-	-	-	6/18/2007	27.66	-	-	3193.90	
	-	-	-	-	5/24/2007	27.73	-	-	3193.83	
	-	-	-	-	3/27/2007	27.85	-	-	3193.71	
	-	-	-	-	2/26/2007	27.83	-	-	3193.73	
	-	-	-	-	12/12/2006	27.96	-	-	3193.60	
	-	-	-	-	11/13/2006	27.91	-	-	3193.65	
	-	-	-	-	10/17/2006	28.05	-	-	3193.51	
	-	-	-	-	9/11/2006	28.05	-	-	3193.51	
	-	-	-	-	8/16/2006	28.31	-	-	3193.25	
	-	-	-	-	7/18/2006	27.77	-	-	3193.79	
	-	-	-	-	6/19/2006	28.01	-	-	3193.55	
-	-	-	-	3/27/2006	27.70	-	-	3193.86		
-	-	-	-	2/15/2006	27.78	-	-	3193.78		
-	-	-	-	1/24/2006	27.78	-	-	3193.78		

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MWA1	659670.9	577785.4	3218.72	33.5	12/12/2007	25.19	-	-	3193.53	
	-	-	-	-	11/15/2007	25.24	-	-	3193.48	
	-	-	-	-	9/17/2007	25.20	-	-	3193.52	
	-	-	-	-	8/16/2007	24.51	-	-	3194.21	
	-	-	-	-	7/19/2007	24.50	-	-	3194.22	
	-	-	-	-	6/18/2007	24.54	-	-	3194.18	
	-	-	-	-	5/24/2007	25.90	-	-	3192.82	
	-	-	-	-	3/27/2007	25.06	-	-	3193.66	
	-	-	-	-	2/26/2007	24.72	-	-	3194.00	
	-	-	-	-	12/12/2006	24.84	-	-	3193.88	
	-	-	-	-	11/13/2006	24.84	-	-	3193.88	
	-	-	-	-	10/17/2006	24.91	-	-	3193.81	
	-	-	-	-	9/11/2006	24.90	-	-	3193.82	
	-	-	-	-	8/16/2006	25.25	-	-	3193.47	
	-	-	-	-	7/17/2006	24.64	-	-	3194.08	
	-	-	-	-	6/19/2006	25.94	-	-	3192.78	
	-	-	-	-	3/27/2006	24.59	-	-	3194.13	
	-	-	-	-	2/15/2006	26.84	-	-	3191.88	
MWA2	659693.2	577818	3220.02	26.4	12/12/2007	Dry	-	-	Dry	
	-	-	-	-	11/15/2007	Dry	-	-	Dry	
	-	-	-	-	9/17/2007	Dry	-	-	Dry	
	-	-	-	-	8/16/2007	25.93	-	-	3194.09	
	-	-	-	-	7/19/2007	25.92	-	-	3194.10	
	-	-	-	-	6/18/2007	25.88	-	-	3194.14	
	-	-	-	-	5/24/2007	25.90	-	-	3194.12	
	-	-	-	-	3/27/2007	26.07	-	-	3193.95	
	-	-	-	-	2/26/2007	26.06	-	-	3193.96	
	-	-	-	-	12/12/2006	26.61	-	-	3193.41	
	-	-	-	-	11/13/2006	26.21	-	-	3193.81	
	-	-	-	-	10/17/2006	26.27	-	-	3193.75	
	-	-	-	-	9/11/2006	26.24	-	-	3193.78	
	-	-	-	-	8/16/2006	26.57	-	-	3193.45	
	-	-	-	-	7/17/2006	26.01	-	-	3194.01	
	-	-	-	-	6/19/2006	26.30	-	-	3193.72	
	-	-	-	-	3/27/2006	25.95	-	-	3194.07	
	-	-	-	-	2/15/2006	26.20	-	-	3193.82	
	-	-	-	-	1/24/2006	26.01	-	-	3194.01	
	-	-	-	-	1/24/2006	24.64	-	-	3195.38	

PSH: Phase-Separated Hydrocarbon

**Table 2. Summary of BTEX Concentrations in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	Benzene	Toluene	Ethyl		TPH-GRO
				benzene	Xylenes	
		-----ug/L-----				mg/L
MW02	12/12/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	9/17/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW03	12/12/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	9/17/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04	12/12/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	9/17/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW05	12/12/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	9/17/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW06	12/12/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	9/17/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 0.5	< 5.0	< 1.5	-
	3/27/2006	< 1.0	49	< 1.0	< 3.0	< 0.1
MWA01	12/12/2007	7.2	< 5.0	1.0	< 3.0	-
	9/17/2007	17	< 5.0	1.4	< 3.0	-
DUP	9/17/2007	12	< 5.0	< 1.0	< 3.0	-
	6/18/2007	18	< 5.0	3.8	< 3.0	-
	3/27/2007	21	< 5.0	5.2	< 3.0	-
DUP	11/14/2006	6.5	< 5.0	2.9	< 3.0	-
	8/16/2006	2.1	< 5.0	2.7	< 1.5	-
	8/16/2006	4.6	< 5.0	7.6	< 1.5	-
	3/27/2006	3.2	< 5.0	16	< 3.0	0.37
MWA02	12/12/2007	Well Dry, No Sample				
	9/17/2007	Well Dry, No Sample				
DUP	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	0.97	< 5.0	< 0.5	1.8	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	0.47

Notes:

MW: Monitoring well  
 TPH: Total Petroleum Hydrocarbons  
 ug/L: Micrograms per liter  
 mg/L: Milligrams per liter  
 GRO: Gasoline Range Organics  
 -: Not analyzed

**Table 3. Summary of Field Parameters in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	pH	Conductivity	Temperature	Dissolved Oxygen	ORP
		(s.u.)	(uS/cm)	(°C)	(g/L)	(mV)
MW02	12/12/2007	6.99	3.143	18.34	9.51	-9.8
	9/17/2007	6.91	3.187	20.03	4.02	76.0
	6/18/2007	7.20	3.541	20.94	4.29	48.1
	3/27/2007	7.10	3.209	19.92	5.81	181.0
	11/13/2006	7.10	3.661	19.04	5.81	198.3
	8/16/2006	7.15	3.432	19.99	5.38	184.6
	3/27/2006	7.35	2.600	20.60	3.58	-
MW03	12/12/2007	6.68	2.245	18.22	5.63	-3.4
	9/17/2007	6.87	2.116	19.75	3.66	62.3
	6/18/2007	6.91	2.512	19.92	2.51	48.1
	3/27/2007	6.83	2.493	19.50	3.93	136.6
	11/13/2006	6.77	2.481	18.97	3.56	188.2
	8/16/2006	6.89	2.380	19.77	3.98	123.0
	3/27/2006	7.04	1.831	20.60	2.88	-
MW04	12/12/2007	6.99	2.925	18.25	10.93	-14.3
	9/17/2007	6.95	2.707	19.86	5.01	66.1
	6/18/2007	7.01	3.175	19.63	4.78	90.4
	3/27/2007	6.99	3.059	19.45	5.63	153.4
	11/13/2006	6.87	3.217	19.32	6.10	211.2
	8/16/2006	7.04	2.895	19.46	6.43	137.4
	3/27/2006	7.05	2.200	21.40	4.35	-
MW05	12/12/2007	7.07	6.149	19.36	11.71	-9.8
	9/17/2007	7.21	5.833	20.22	6.31	77.7
	6/18/2007	7.08	6.969	19.83	4.28	42.3
	3/27/2007	7.15	6.744	19.94	4.74	164.3
	11/13/2006	7.03	6.910	19.57	6.20	222.2
	8/16/2006	7.19	6.388	19.80	6.03	141.8
	3/27/2006	7.39	4.280	21.20	4.33	-
MW06	12/12/2007	7.05	2.501	18.97	12.51	-3.1
	9/17/2007	7.08	2.401	20.32	6.32	5.2
	6/18/2007	7.30	2.749	19.89	6.52	118.9
	3/27/2007	7.17	2.714	19.64	6.25	125.6
	11/13/2006	6.89	2.852	19.25	4.13	173.1
	8/16/2006	7.22	2.618	19.93	6.63	110.4
	3/27/2006	7.24	1.800	20.40	4.69	-
MWA01	12/12/2007	6.72	2.703	19.55	6.33	-202.0
	9/17/2007	6.74	2.539	20.13	4.32	3.1
	6/18/2007	6.69	2.962	19.98	2.96	2.8
	3/27/2007	6.74	3.019	19.89	3.52	24.3
	11/13/2006	6.69	3.125	19.50	5.39	110.3
	8/16/2006	6.81	2.890	20.44	1.54	10.0
	3/27/2006	6.95	2.000	20.40	1.69	-
MWA02	12/12/2007			Well Dry, No Sample		
	9/17/2007			Well Dry, No Sample		
	6/18/2007	6.98	4.333	19.96	3.58	42.5
	3/27/2007	7.06	4.248	21.41	5.42	235.3
	11/13/2006	7.14	4.320	19.50	5.34	120.7
	8/16/2006	7.08	4.047	20.43	3.55	88.7
	3/27/2006	7.21	2.870	20.20	3.55	-

Notes:

ORP: Oxidation reduction potential

s.u.: Standard unit

uS/cm: microSiemens per centimeter

°C: Degree Celsius

g/L: Grams per liter

mV: Millivolts

ARCADIS

Figures

DRAFTER: PMW

APPROVED: GN

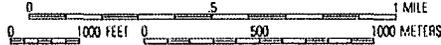
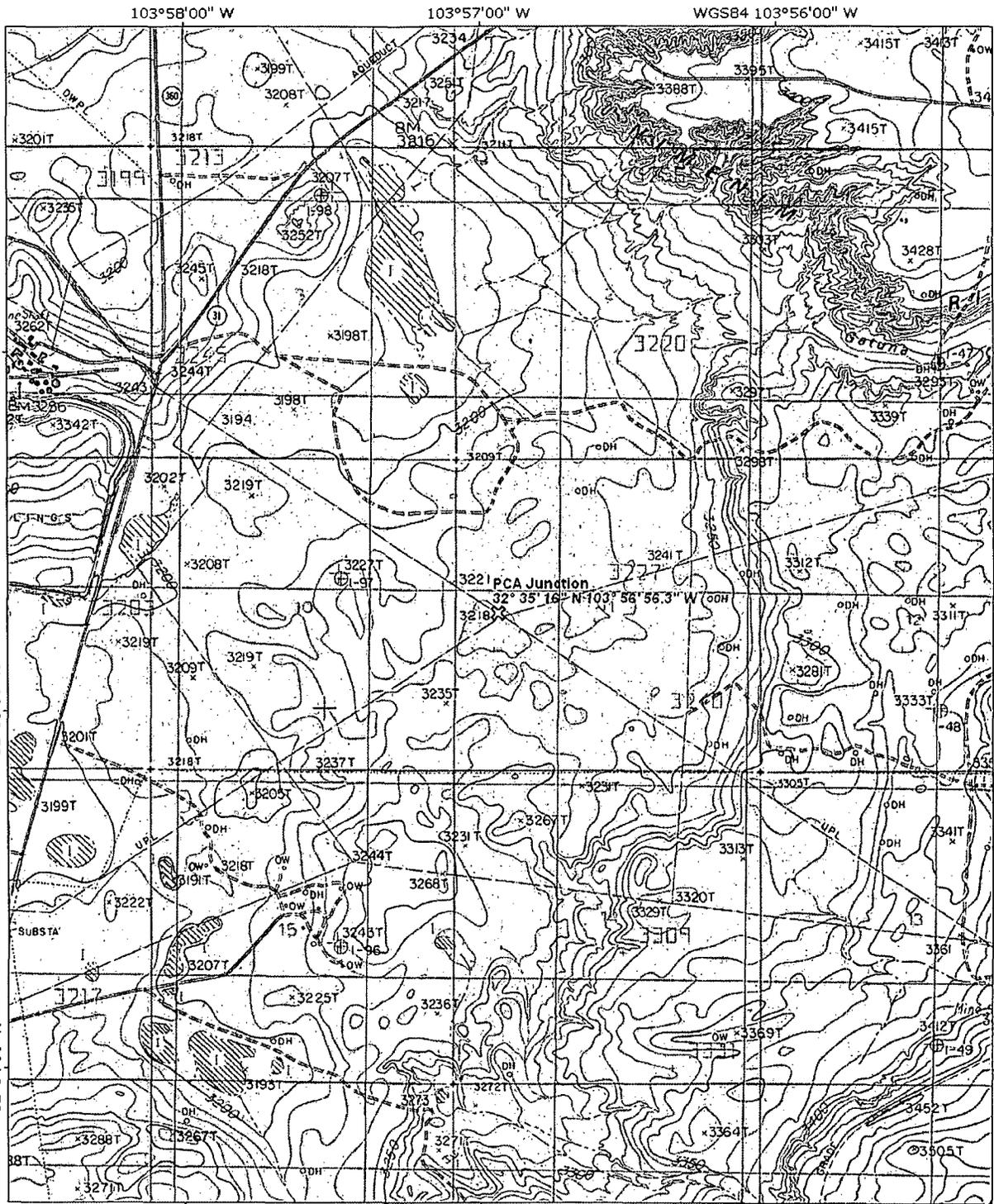
CHECKED: TE

DRAWING: COSLM-0051

HARD FILE:

PRJCT NO.: C0001042.0003

DWG DATE: 5/17/07



Map created with TOPO!® © 2003 National Geographic (www.nationalgeographic.com/topo)



### Site Location Map

PCA JUNCTION  
Eddy County, New Mexico

FIGURE

1

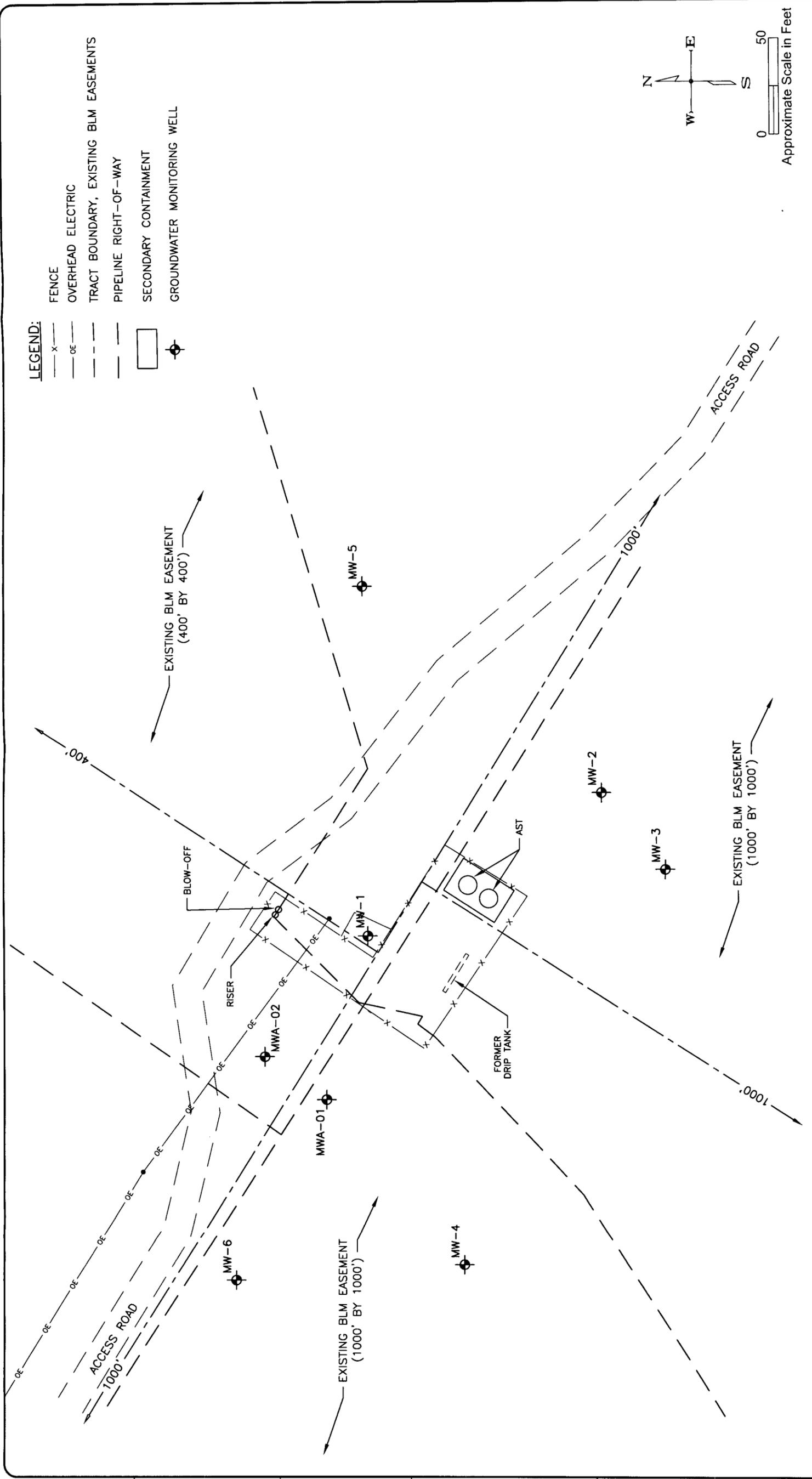
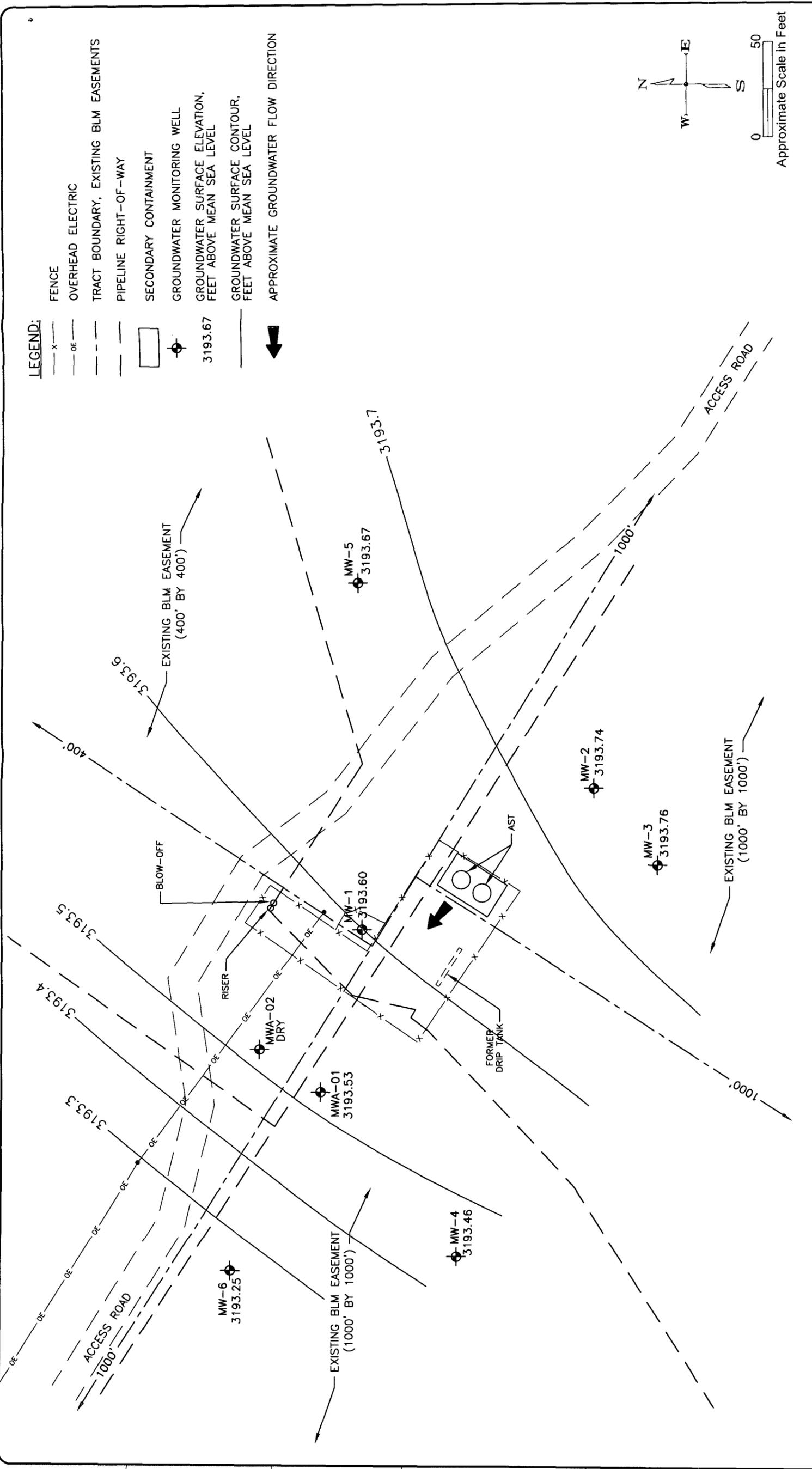
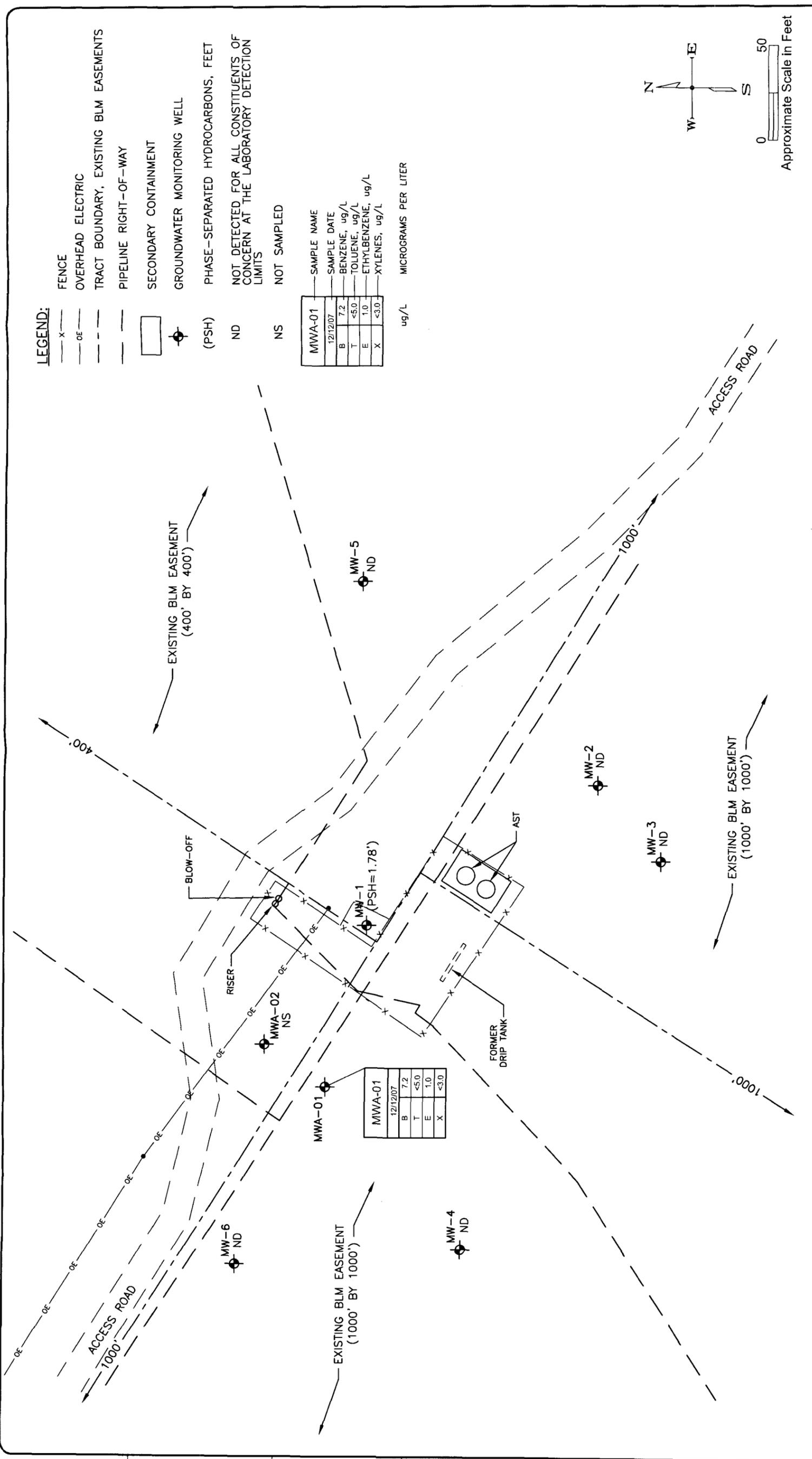


FIGURE 2  
 Site Map  
 PCA JUNCTION  
 Eddy County, New Mexico



Groundwater Potentiometric Surface Map  
December 12, 2007





Groundwater Sample Results  
December 2007



PCA JUNCTION  
Eddy County, New Mexico

ARCADIS

**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
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12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Paul Schwarzweller  
Arcadis-US, Inc. - Highlands Ranch CO  
630 Plaza Dr Ste 200

Highlands Ranch, CO 80129-2379

<p style="text-align: center;">Report Summary</p> <p style="text-align: center;">Tuesday December 18, 2007</p> <p style="text-align: center;">Report Number: L324005</p> <p style="text-align: center;">Samples Received: 12/14/07</p> <p style="text-align: center;">Client Project: CO001042.</p> <p style="text-align: center;">Description: PCA Junction</p>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John D. Blackman, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Paul Schwarzweiler  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

December 18, 2007

Date Received : December 14, 2007  
Description : PCA Junction

ESC Sample # : L324005-01

Sample ID : PCA-MW-2

Site ID :

Collected By :  
Collection Date : 12/12/07 16:50

Project # : CO001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0528	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0528	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0528	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0528	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0528	1
Dibromofluoromethane	113.		% Rec.		8260B	12/17/07 0528	1
4-Bromofluorobenzene	97.7		% Rec.		8260B	12/17/07 0528	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Paul Schwarzweller  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

December 18, 2007

Date Received : December 14, 2007  
Description : PCA Junction

ESC Sample # : L324005-02

Sample ID : PCA-MW-3

Site ID :

Collected By :  
Collection Date : 12/12/07 16:45

Project # : C0001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0548	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0548	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0548	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0548	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0548	1
Dibromofluoromethane	113.		% Rec.		8260B	12/17/07 0548	1
4-Bromofluorobenzene	97.2		% Rec.		8260B	12/17/07 0548	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:  
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

December 18, 2007

Date Received : December 14, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-4  
Collected By :  
Collection Date : 12/12/07 16:19

ESC Sample # : L324005-03

Site ID :

Project # : C0001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0607	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0607	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0607	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0607	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0607	1
Dibromofluoromethane	112.		% Rec.		8260B	12/17/07 0607	1
4-Bromofluorobenzene	98.7		% Rec.		8260B	12/17/07 0607	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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Highlands Ranch, CO 80129-2379

December 18, 2007

Date Received : December 14, 2007  
Description : PCA Junction

ESC Sample # : L324005-04

Sample ID : PCA-MW-5

Site ID :

Collected By :  
Collection Date : 12/12/07 17:25

Project # : CO001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0627	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0627	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0627	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0627	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0627	1
Dibromofluoromethane	112.		% Rec.		8260B	12/17/07 0627	1
4-Bromofluorobenzene	97.7		% Rec.		8260B	12/17/07 0627	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
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AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Highlands Ranch, CO 80129-2379

December 18, 2007

Date Received : December 14, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-6  
Collected By :  
Collection Date : 12/12/07 15:46

ESC Sample # : L324005-05

Site ID :

Project # : CO001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0647	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0647	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0647	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0647	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0647	1
Dibromofluoromethane	112.		% Rec.		8260B	12/17/07 0647	1
4-Bromofluorobenzene	97.1		% Rec.		8260B	12/17/07 0647	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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REPORT OF ANALYSIS

December 18, 2007

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : December 14, 2007  
Description : PCA Junction  
Sample ID : PCA-MWA-01  
Collected By :  
Collection Date : 12/12/07 15:14

ESC Sample # : L324005-06

Site ID :

Project # : C0001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.0072	0.0010	mg/l		8260B	12/17/07 0707	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0707	1
Ethylbenzene	0.0010	0.0010	mg/l		8260B	12/17/07 0707	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0707	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0707	1
Dibromofluoromethane	112.		% Rec.		8260B	12/17/07 0707	1
4-Bromofluorobenzene	98.3		% Rec.		8260B	12/17/07 0707	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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REPORT OF ANALYSIS

December 18, 2007

Paul Schwarzweller  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : December 14, 2007  
Description : PCA Junction  
Sample ID : PCA-DUP  
Collected By :  
Collection Date : 12/12/07 00:00

ESC Sample # : L324005-07

Site ID :

Project # : CO001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0727	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0727	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0727	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0727	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0727	1
Dibromofluoromethane	112.		% Rec.		8260B	12/17/07 0727	1
4-Bromofluorobenzene	99.3		% Rec.		8260B	12/17/07 0727	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Paul Schwarzweiler  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

December 18, 2007

Date Received : December 14, 2007  
Description : PCA Junction  
Sample ID : PCA-TRIP BLANK  
Collected By :  
Collection Date : 12/12/07 00:00

ESC Sample # : L324005-08

Site ID :

Project # : CO001042.

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	12/17/07 0746	1
Toluene	BDL	0.0050	mg/l		8260B	12/17/07 0746	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	12/17/07 0746	1
Total Xylenes	BDL	0.0030	mg/l		8260B	12/17/07 0746	1
Surrogate Recovery							
Toluene-d8	108.		% Rec.		8260B	12/17/07 0746	1
Dibromofluoromethane	111.		% Rec.		8260B	12/17/07 0746	1
4-Bromofluorobenzene	98.2		% Rec.		8260B	12/17/07 0746	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 12/18/07 11:43 Printed: 12/18/07 12:21

Summary of Remarks For Samples Printed  
12/18/07 at 12:21:32

TSR Signing Reports: 151  
R5 - Desired TAT

No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; ARCADIS EDD and QC2 on all; Prefix sample IDs with PCA-

Sample: L324005-01 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-02 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-03 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-04 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-05 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-06 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-07 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43  
Sample: L324005-08 Account: DUKARCAD Received: 12/14/07 09:00 Due Date: 12/21/07 00:00 RPT Date: 12/18/07 11:43

**Arcadis-US, Inc. - Highlands Ranch CO**  
 630 Plaza Dr Ste 200  
 Highlands Ranch, CO 80129-2379

Report to: **Paul Schwarzweiler**  
 Project Description: **PCA Junction**  
 Phone: (720) 344-3500  
 FAX: (720) 344-3535  
 Collected by (print):  
 Client Project #: **CO001042**  
 Lab Project #: **DUKARCAD-PCAJUNCTI**  
 City/State Collected: **indupre@arcadis-us.com, ps**  
 P.O.#:

**Rush? (Lab MUST Be Notified)**  
 Same Day ..... 200%  
 Next Day ..... 100%  
 Two Day ..... 50%  
 Three Day ..... 25%  
 Immediately Packed on ice N    Y    ✓

Sample ID	Comp/Grab	Matrix*	Depth	Date	Date Results Needed		No. of Cntrs
					Email? <u>  </u> No <u>  </u> Yes	FAX? <u>  </u> No <u>  </u> Yes	
PCA-MW-1		GW					3
PCA-MW-2		GW		12-12-07 16:50			3
PCA-MW-3		GW		16:45			3
PCA-MW-4		GW		16:19			3
PCA-MW-5		GW		17:25			3
PCA-MW-6		GW		15			3
PCA-MWA-01		GW		15			3
PCA-MWA-02		GW					3
PCA-DUP		GW					3

Alternate billing information:  
 Analysis/Container/Preservative  
 V8260BTEX 40mlamb-HCl  
 V8260BTEX 40mlamb-HCl-BIK

Chain of Custody  
 Page \_\_\_ of \_\_\_

Prepared by:  
**ENVIRONMENTAL SCIENCE CORP.**  
 12065 Lebanon Road  
 Mt. Juliet, TN 37122  
 Phone (800) 767-5859  
 FAX (615) 758-5859

Account: **DUKARCAD** (lab use only)  
 Template/Prelogin: **T34828/P229812**  
 Cooler #: **1216 NVO**  
 Shipped via: **FedEx Standard**

Remarks/Contaminant  
 Sample # (lab only)  
**6329005-01**  
**02**  
**03**  
**04**  
**05**  
**06**  
**07**

\*Matrix: **SS - Soil** GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other  
 Remarks: pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

9446 7874556

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
<i>Paul Schwarzweiler</i>			<i>[Signature]</i>		
Relinquished by: (Signature)			Received by: (Signature)		
Relinquished by: (Signature)			Received for lab by: (Signature)		

Sample returned via:  UPS  FedEx  Courier  
 Temp: **37.6** Bottles Received: **22**  
 Date: **12-14-07** Time: **09:00**

Condition: **ok** (lab use only)  
 COC Seal Intact: **Y** N NA  
 pH Checked: **NCF**





370 17<sup>th</sup> Street, Suite 2500  
Denver, Colorado 80202  
303-595-3331 – main  
303-605-1957 – fax

RECEIVED

2008 JAN 31 PM 1:38

January 25, 2008

Mr. Wayne Price  
Remediation Bureau Chief  
New Mexico Oil Conservation Division  
1220 S. St. Francis Dr.  
Santa Fe, NM 87505

**RE: 2007 Third Quarter Groundwater Monitoring Report for the  
PCA Junction Compressor Station  
Eddy County, New Mexico  
SW ¼ Section 11, Township 20 South, Range 30 East (NM Meridian)**

Dear Mr. Price:

DCP Midstream, LP (DCP) is submitting the third quarter 2007 groundwater monitoring report for the referenced site.

Groundwater monitoring activities were completed September 17, 2007. Phase-separated hydrocarbons are present in MW01. MWA01 was dry, and therefore not sampled. The next groundwater monitoring event was scheduled in the fourth quarter of 2007.

If you have any questions regarding this report, please call me at 303-605-1893.

Sincerely,

DCP Midstream, LP

A handwritten signature in black ink, appearing to read 'Daniel Dick', written over a horizontal line.

Daniel Dick  
Environmental Engineer

Enclosure

cc: Larry Johnson, OCD District I, Hobbs  
Kelly Ruder, Arcadis  
Environmental Files



RECEIVED  
2008 JAN 31 PM 1 38

**Q3 2007 GROUNDWATER  
MONITORING REPORT**

PCA Junction  
Eddy County, New Mexico

December 2007

ARCADIS



---

Paul A. Schwarzweller  
Environmental Scientist



---

Kelly Ruder, PE  
Senior Engineer

**Q3 2007 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
DCP Midstream

Prepared by:  
ARCADIS U.S., Inc.  
630 Plaza Drive  
Suite 100  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
7 December 2007

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3	Summary of Field Parameters in Groundwater

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2	Site Map
3	Groundwater Potentiometric Surface Map – September 17, 2007
4	Groundwater Sample Results – September 2007

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A	Laboratory Analytical Reports
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## 1. Site Location and Background

ARCADIS is submitting to DCP Midstream (DCP) the results of groundwater monitoring activities and phase-separated hydrocarbon (PSH) recovery efforts that were performed during the third quarter of 2007 (Q3 2007) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The Site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of pigging. The Site occupies approximately 4 acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the Site in September 2000. Benzene was discovered in the soil and groundwater below the on-site tank battery. PSH was observed in a groundwater monitoring well in 2002.

The ownership of the PCA Junction was transferred from COP to Duke Energy Field Services (DEFS) on March 10, 2004. In November 2004, DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD). DEFS changed its name to DCP in January 2007.

## 2. Groundwater Monitoring

ARCADIS conducted quarterly groundwater monitoring activities at the Site on September 17, 2007. Monitoring consisted of the measurement of water levels from eight groundwater monitoring wells. Groundwater samples were collected from six of the wells for water quality analysis. Well MW01 contained PSH and was not sampled. Well MWA01 was dry and therefore no sample was collected. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260.

### 2.1 Water Level Gauging

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from 24.13 to 29.89 feet below ground surface. Groundwater elevation contours constructed using the September 17, 2007 measurements are provided on Figure 3. The groundwater gradient is consistent with previous gauging events and varies from 0.003 to 0.009 foot/foot (ft/ft) across the Site.

## 2.2 Groundwater Quality Monitoring

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers, and packed and shipped in accordance with accepted practices to Environmental Science Corporation in Mt. Juliet, Tennessee for analyses.

Table 2 summarizes BTEX concentrations in the groundwater collected during the Q3 2007 sampling event, and the laboratory analytical reports are included in Appendix A. Table 3 summarized field collected groundwater parameters. The groundwater sample results are also posted on Figure 4, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q3 2007 analytical results can be summarized as follows:

- Benzene was detected in one groundwater sample from monitoring well MWA01 with a concentration of 17 micrograms per liter (ug/L), which is above the regulatory standard of 10 ug/L. Toluene, ethylbenzene, and xylenes were not detected above the regulatory standards of 1,000 ug/L, 700 ug/L, and 10,000 ug/L, respectively.

## 2.3 PSH Recovery Efforts

PSH is being actively recovered through hand bailing at the Site on a monthly basis. PSH is bailed from all wells with a practically recoverable amount. During the Q3 2007 site visits, PSH and water mix were recovered from well MW01.

## 3. Closing Remarks

ARCADIS will continue to perform Site visits and PSH recovery when practical. Results of fourth quarter 2007 (Q4 2007) sampling and PSH recovery efforts will be reported in the Q4 2007 Groundwater Monitoring Report.

ARCADIS

Tables

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW01	659755.9	577763.7	3219.46	-	6/18/2007	26.23	24.85	1.38	3194.36	
	-	-	-	-	5/24/2007	26.21	24.87	1.34	3194.35	Bailed 1 gal
	-	-	-	-	3/27/2007	26.84	25.22	1.62	3193.95	
	-	-	-	-	2/26/2007	26.80	25.2	1.60	3193.97	Bailed 2 gal
	-	-	-	-	12/12/2006	26.86	25.13	1.73	3194.02	
	-	-	-	-	11/13/2006	26.82	25.11	1.71	3194.04	
	-	-	-	-	10/17/2006	26.30	25.14	26.3	3214.73	Bailed 1.0 gal PSH/water mix
	-	-	-	-	9/11/2006	26.75	25.14	1.61	3194.03	Bailed 1.0 gal
	-	-	-	-	8/16/2006	26.42	25.41	1.01	3193.87	Bailed 1.25 gal
	-	-	-	-	7/18/2006	26.43	25.00	1.43	3194.20	Bailed 2.5 gal
	-	-	-	-	6/19/2006	27.05	25.19	1.86	3193.94	Bailed 2.5 gal
	-	-	-	-	3/27/2006	26.40	24.92	1.48	3194.27	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	3194.39	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	3194.21	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	3194.12	Bailed 2 gal 30% product
	-	-	-	-	7/27/2005	26.80	25.08	1.72	3194.07	Purged 1 gal
	-	-	-	-	5/23/2005	25.92	24.62	1.30	3194.61	320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	3194.44	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	3194.55	Bailed 2.5 gal
	-	-	-	-	2/25/2005	25.85	25.34	0.51	3194.03	Bailed 0.25 gal
-	-	-	-	2/24/2005	26.14	24.85	1.29	3194.38	Bailed 0.5 gal	
MW02	659829.9	577640	3218.32	28.1	6/18/2007	23.89	-	-	3194.43	
	-	-	-	-	5/24/2007	23.85	-	-	3194.47	
	-	-	-	-	3/27/2007	24.02	-	-	3194.30	
	-	-	-	-	2/26/2007	24.05	-	-	3194.27	
	-	-	-	-	12/12/2006	24.66	-	-	3193.66	
	-	-	-	-	11/13/2006	24.13	-	-	3194.19	
	-	-	-	-	10/17/2006	24.35	-	-	3193.97	
	-	-	-	-	9/11/2006	25.16	-	-	3193.16	
	-	-	-	-	8/16/2006	24.65	-	-	3193.67	
	-	-	-	-	6/19/2006	24.40	-	-	3193.92	
	-	-	-	-	3/27/2006	23.98	-	-	3194.34	
	-	-	-	-	2/15/2006	24.19	-	-	3194.13	
	-	-	-	-	1/24/2006	24.00	-	-	3194.32	
MW03	659790.2	577606.4	3217.8	36.4	6/18/2007	23.31	-	-	3194.49	
	-	-	-	-	5/24/2007	23.24	-	-	3194.56	
	-	-	-	-	3/27/2007	23.35	-	-	3194.45	
	-	-	-	-	2/26/2007	23.48	-	-	3194.32	
	-	-	-	-	12/12/2006	23.59	-	-	3194.21	
	-	-	-	-	11/13/2006	23.61	-	-	3194.19	
	-	-	-	-	10/17/2006	23.34	-	-	3194.46	
	-	-	-	-	9/11/2006	23.54	-	-	3194.26	
	-	-	-	-	8/16/2006	24.10	-	-	3193.70	
	-	-	-	-	7/18/2006	24.03	-	-	3193.77	
	-	-	-	-	6/19/2006	23.85	-	-	3193.95	
	-	-	-	-	3/27/2006	23.41	-	-	3194.39	
	-	-	-	-	2/15/2006	23.64	-	-	3194.16	
-	-	-	-	1/24/2006	23.46	-	-	3194.34		
MW04	659585	577712.5	3221.26	36.4	6/18/2007	27.15	-	-	3194.11	
	-	-	-	-	5/24/2007	27.18	-	-	3194.08	
	-	-	-	-	3/27/2007	27.37	-	-	3193.89	
	-	-	-	-	2/26/2007	27.31	-	-	3193.95	
	-	-	-	-	12/12/2006	27.44	-	-	3193.82	
	-	-	-	-	11/13/2006	27.51	-	-	3193.75	
	-	-	-	-	10/17/2006	28.53	-	-	3192.73	
	-	-	-	-	9/11/2006	27.48	-	-	3193.78	
	-	-	-	-	8/16/2006	27.84	-	-	3193.42	
	-	-	-	-	7/18/2006	27.26	-	-	3194.00	
	-	-	-	-	6/19/2006	27.58	-	-	3193.68	
-	-	-	-	3/27/2006	27.22	-	-	3194.04		
-	-	-	-	2/15/2006	27.06	-	-	3194.20		

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					Comments
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	
MW05	659936.9	577766.4	3223.55	37.86	6/18/2007	29.21	-	-	3194.34	
	-	-	-	-	5/24/2007	29.24	-	-	3194.31	
	-	-	-	-	3/27/2007	29.39	-	-	3194.16	
	-	-	-	-	2/26/2007	29.39	-	-	3194.16	
	-	-	-	-	12/12/2006	29.51	-	-	3194.04	
	-	-	-	-	11/13/2006	29.50	-	-	3194.05	
	-	-	-	-	10/17/2006	29.58	-	-	3193.97	
	-	-	-	-	9/11/2006	29.59	-	-	3193.96	
	-	-	-	-	8/16/2006	29.94	-	-	3193.61	
	-	-	-	-	7/18/2006	29.33	-	-	3194.22	
	-	-	-	-	6/19/2006	29.73	-	-	3193.82	
	-	-	-	-	3/27/2006	29.31	-	-	3194.24	
	-	-	-	-	2/15/2006	29.35	-	-	3194.20	
	-	-	-	-	1/24/2006	29.35	-	-	3194.20	
MW06	659576.9	577833	3221.56	39.4	6/18/2007	27.66	-	-	3193.90	
	-	-	-	-	5/24/2007	27.73	-	-	3193.83	
	-	-	-	-	3/27/2007	27.85	-	-	3193.71	
	-	-	-	-	2/26/2007	27.83	-	-	3193.73	
	-	-	-	-	12/12/2006	27.96	-	-	3193.60	
	-	-	-	-	11/13/2006	27.91	-	-	3193.65	
	-	-	-	-	10/17/2006	28.05	-	-	3193.51	
	-	-	-	-	9/11/2006	28.05	-	-	3193.51	
	-	-	-	-	8/16/2006	28.31	-	-	3193.25	
	-	-	-	-	7/18/2006	27.77	-	-	3193.79	
	-	-	-	-	6/19/2006	28.01	-	-	3193.55	
	-	-	-	-	3/27/2006	27.70	-	-	3193.86	
	-	-	-	-	2/15/2006	27.78	-	-	3193.78	
	-	-	-	-	1/24/2006	27.78	-	-	3193.78	
MWA1	659670.9	577785.4	3218.72	34.7	6/18/2007	24.54	-	-	3194.18	
	-	-	-	-	5/24/2007	25.90	-	-	3192.82	
	-	-	-	-	3/27/2007	25.06	-	-	3193.66	
	-	-	-	-	2/26/2007	24.72	-	-	3194.00	
	-	-	-	-	12/12/2006	24.84	-	-	3193.88	
	-	-	-	-	11/13/2006	24.84	-	-	3193.88	
	-	-	-	-	10/17/2006	24.91	-	-	3193.81	
	-	-	-	-	9/11/2006	24.90	-	-	3193.82	
	-	-	-	-	8/16/2006	25.25	-	-	3193.47	
	-	-	-	-	7/17/2006	24.64	-	-	3194.08	
	-	-	-	-	6/19/2006	25.94	-	-	3192.78	
	-	-	-	-	3/27/2006	24.59	-	-	3194.13	
	-	-	-	-	2/15/2006	26.84	-	-	3191.88	
	-	-	-	-	1/24/2006	26.84	-	-	3191.88	
MWA2	659693.2	577818	3220.02	28.7	6/18/2007	25.88	-	-	3194.14	
	-	-	-	-	5/24/2007	25.90	-	-	3194.12	
	-	-	-	-	3/27/2007	26.07	-	-	3193.95	
	-	-	-	-	2/26/2007	26.06	-	-	3193.96	
	-	-	-	-	12/12/2006	26.61	-	-	3193.41	
	-	-	-	-	11/13/2006	26.21	-	-	3193.81	
	-	-	-	-	10/17/2006	26.27	-	-	3193.75	
	-	-	-	-	9/11/2006	26.24	-	-	3193.78	
	-	-	-	-	8/16/2006	26.57	-	-	3193.45	
	-	-	-	-	7/17/2006	26.01	-	-	3194.01	
	-	-	-	-	6/19/2006	26.30	-	-	3193.72	
	-	-	-	-	3/27/2006	25.95	-	-	3194.07	
	-	-	-	-	2/15/2006	26.20	-	-	3193.82	
	-	-	-	-	1/24/2006	26.01	-	-	3194.01	
-	-	-	-	1/24/2006	24.64	-	-	3195.38		

PSH: Phase-Separated Hydrocarbon

Table 2. Summary of BTEX Concentrations in Groundwater  
 PCA Junction  
 DCP Midstream

Well ID	Sample Date	Benzene	Ethyl			TPH-GRO
			Toluene	benzene	Xylenes	
		-----ug/L-----				mg/L
MW02	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW03	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW05	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW06	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 0.5	< 5.0	< 1.5	-
	3/27/2006	< 1.0	49	< 1.0	< 3.0	< 0.1
MWA01	6/18/2007	18	< 5.0	3.8	< 3.0	-
	3/27/2007	21	< 5.0	5.2	< 3.0	-
	11/14/2006	6.5	< 5.0	2.9	< 3.0	-
	8/16/2006	2.1	< 5.0	2.7	< 1.5	-
	DUP	8/16/2006	4.6	< 5.0	7.6	< 1.5
	3/27/2006	3.2	< 5.0	16	< 3.0	0.37
MWA02	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	0.97	< 5.0	< 0.5	1.8	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	0.47

Notes:  
 MW: Monitoring well  
 TPH: Total Petroleum Hydrocarbons  
 ug/L: Micrograms per liter  
 mg/L: Milligrams per liter  
 GRO: Gasoline Range Organics  
 -: Not analyzed

Table 3. Summary of Field Parameters in Groundwater  
 PCA Junction  
 DCP Midstream

Well ID	Sample Date	pH (s.u.)	Conductivity (MS/cm)	Temperature (°C)	Dissolved Oxygen (g/L)	ORP (mV)
MW02	6/18/2007	7.20	3.541	20.94	4.29	48.1
	3/27/2007	7.10	3.209	19.92	5.81	181.0
	11/13/2006	7.10	3.661	19.04	5.81	198.3
	8/16/2006	7.15	3.432	19.99	5.38	184.6
	3/27/2006	7.35	2.600	20.60	3.58	-
MW03	6/18/2007	6.91	2.512	19.92	2.51	48.1
	3/27/2007	6.83	2.493	19.50	3.93	136.6
	11/13/2006	6.77	2.481	18.97	3.56	188.2
	8/16/2006	6.89	2.380	19.77	3.98	123.0
	3/27/2006	7.04	1.831	20.60	2.88	-
MW04	6/18/2007	7.01	3.175	19.63	4.78	90.4
	3/27/2007	6.99	3.059	19.45	5.63	153.4
	11/13/2006	6.87	3.217	19.32	6.10	211.2
	8/16/2006	7.04	2.895	19.46	6.43	137.4
	3/27/2006	7.05	2.200	21.40	4.35	-
MW05	6/18/2007	7.08	6.969	19.83	4.28	42.3
	3/27/2007	7.15	6.744	19.94	4.74	164.3
	11/13/2006	7.03	6.910	19.57	6.20	222.2
	8/16/2006	7.19	6.388	19.80	6.03	141.8
	3/27/2006	7.39	4.280	21.20	4.33	-
MW06	6/18/2007	7.30	2.749	19.89	6.52	118.9
	3/27/2007	7.17	2.714	19.64	6.25	125.6
	11/13/2006	6.89	2.852	19.25	4.13	173.1
	8/16/2006	7.22	2.618	19.93	6.63	110.4
	3/27/2006	7.24	1.800	20.40	4.69	-
MWA01	6/18/2007	6.69	2.962	19.98	2.96	2.8
	3/27/2007	6.74	3.019	19.89	3.52	24.3
	11/13/2006	6.69	3.125	19.50	5.39	110.3
	8/16/2006	6.81	2.890	20.44	1.54	10.0
	3/27/2006	6.95	2.000	20.40	1.69	-
MWA02	6/18/2007	6.98	4.333	19.96	3.58	42.5
	3/27/2007	7.06	4.248	21.41	5.42	235.3
	11/13/2006	7.14	4.320	19.50	5.34	120.7
	8/16/2006	7.08	4.047	20.43	3.55	88.7
	3/27/2006	7.21	2.870	20.20	3.55	-

Notes:

ORP: Oxidation reduction potential

s.u.: Standard unit

uS/cm: microSiemens per centimeter

°C: Degree Celsius

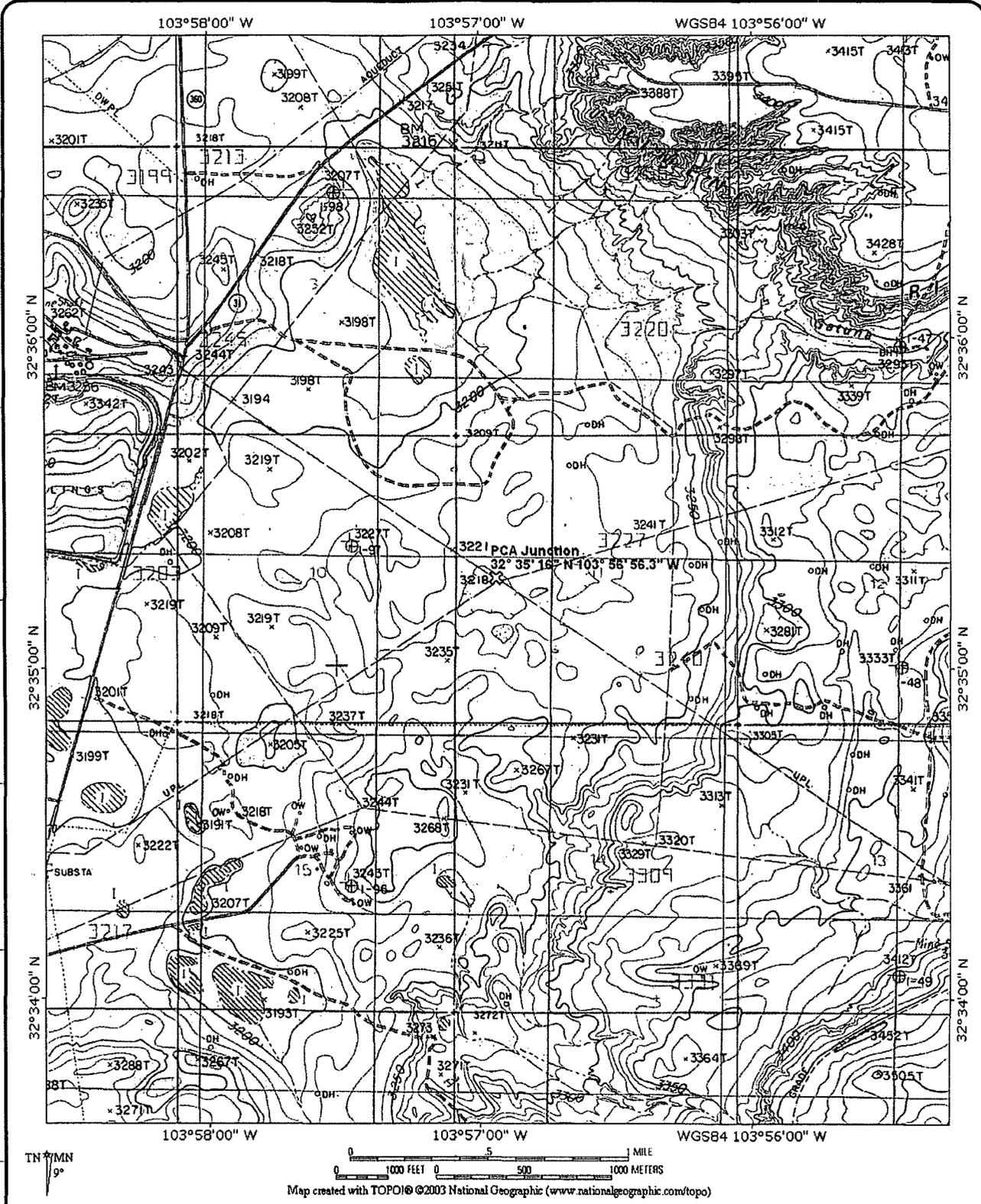
g/L: Grams per liter

mV: Millivolts

ARCADIS

Figures

DWG DATE: 5/17/07 | PRCT NO.: C0001042.0003 | HARD FILE: | DRAWING: COSLM-0051 | CHECKED: TE | APPROVED: GN | DRAFTER: PMW

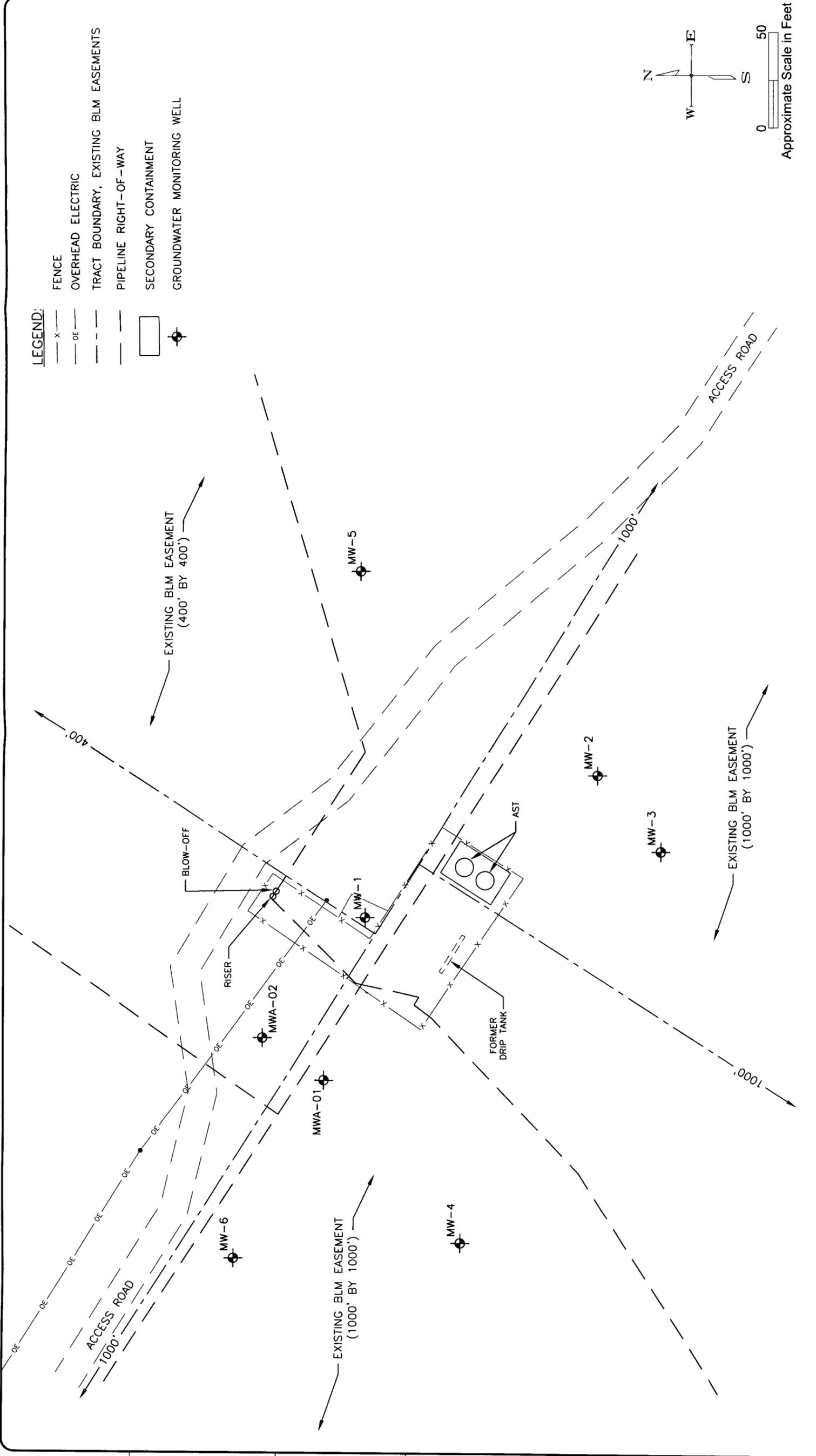


### Site Location Map

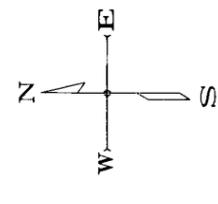
PCA JUNCTION  
Eddy County, New Mexico

FIGURE

1



- LEGEND:**
- x — FENCE
  - OE — OVERHEAD ELECTRIC
  - — — — — TRACT BOUNDARY, EXISTING BLM EASEMENTS
  - — — — — PIPELINE RIGHT-OF-WAY
  - ▭ SECONDARY CONTAINMENT
  - ⊕ GROUNDWATER MONITORING WELL



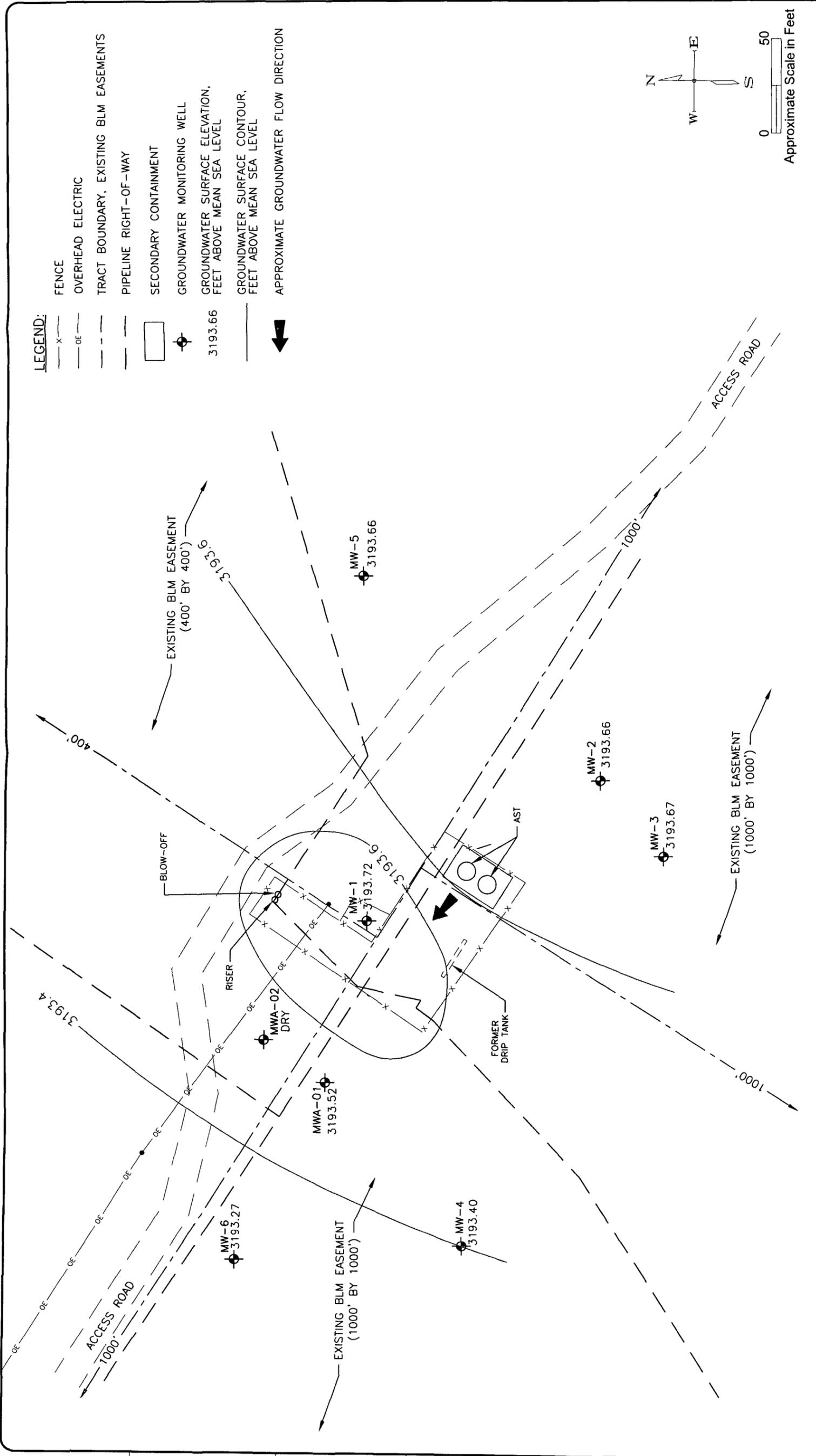
Approximate Scale in Feet

FIGURE  
**2**

**Site Map**

PCA JUNCTION  
Eddy County, New Mexico





DWG DATE: 11/21/07 PRCT NO.: C0001042.0003  
DRAWING: COWLE-0361  
CHECKED: PS  
APPROVED: CN  
DRAFTER: MTH

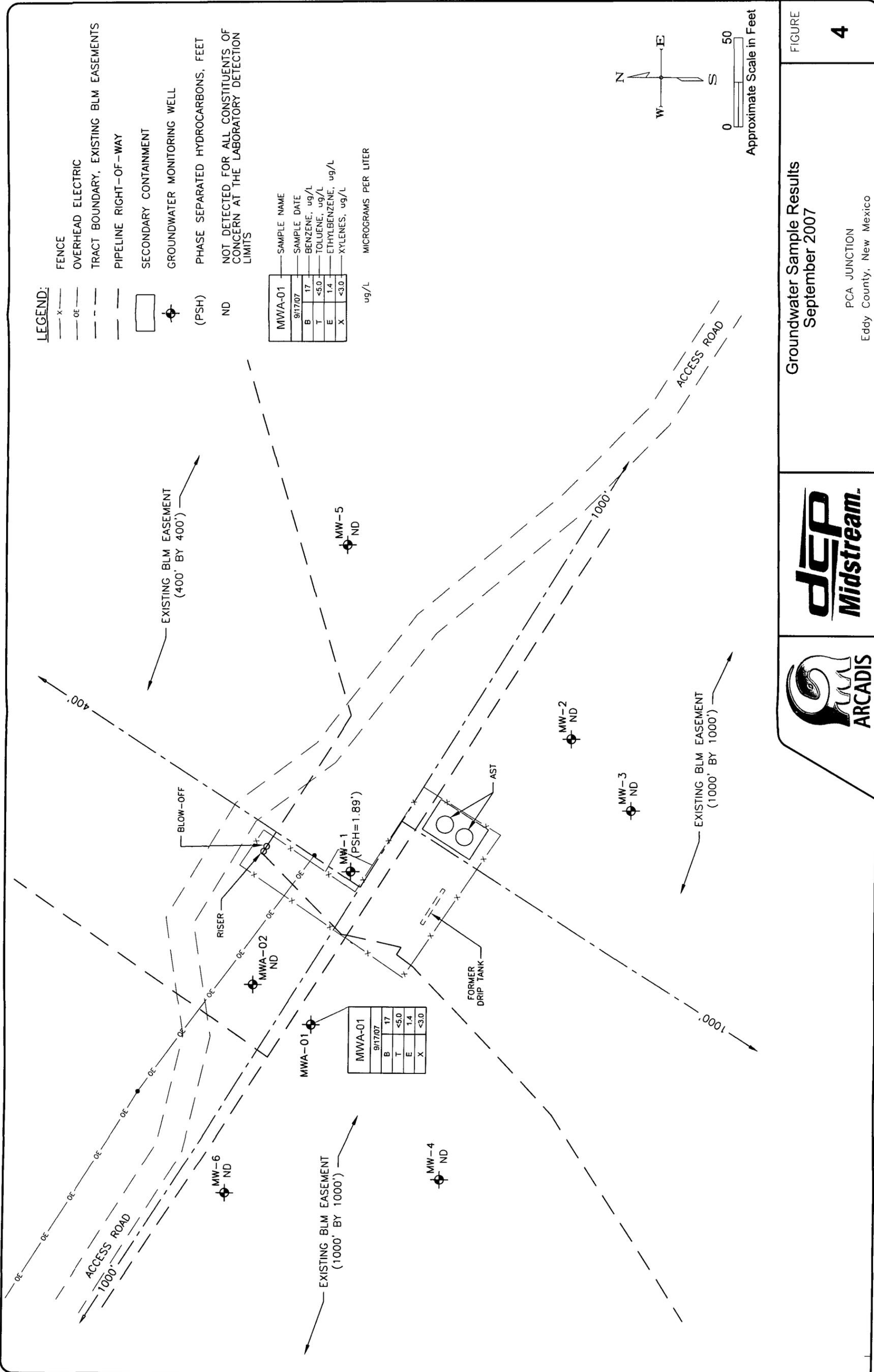
**ARCADIS**

**dcp Midstream**

Groundwater Potentiometric Surface Map  
September 17, 2007

PCA JUNCTION  
Eddy County, New Mexico

FIGURE **3**



Groundwater Sample Results  
September 2007

PCA JUNCTION  
Eddy County, New Mexico



ARCADIS

**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch CO  
630 Plaza Dr Ste 200

Highlands Ranch, CO 80129-2379

Report Summary

Thursday September 27, 2007

Report Number: L311793

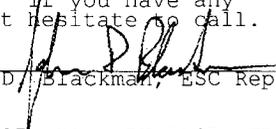
Samples Received: 09/20/07

Client Project:

Description: PCA Junction

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John D. Blackman, ESC Representative

**Laboratory Certification Numbers**

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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8 Samples Reported: 09/27/07 14:02 Printed: 09/27/07 17:51

Page 1 of 11



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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction

ESC Sample # : L311793-01

Sample ID : PCA-MW-2

Site ID :

Collected By :  
Collection Date : 09/17/07 13:56

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	09/23/07 2321	1
Toluene	BDL	0.0050	mg/l		8260B	09/23/07 2321	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/23/07 2321	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/23/07 2321	1
Surrogate Recovery							
Toluene-d8	93.1		% Rec.		8260B	09/23/07 2321	1
Dibromofluoromethane	87.7		% Rec.		8260B	09/23/07 2321	1
4-Bromofluorobenzene	95.7		% Rec.		8260B	09/23/07 2321	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:  
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-3  
Collected By :  
Collection Date : 09/17/07 13:50

ESC Sample # : L311793-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	09/23/07 2343	1
Toluene	BDL	0.0050	mg/l		8260B	09/23/07 2343	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/23/07 2343	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/23/07 2343	1
Surrogate Recovery							
Toluene-d8	92.2		% Rec.		8260B	09/23/07 2343	1
Dibromofluoromethane	88.7		% Rec.		8260B	09/23/07 2343	1
4-Bromofluorobenzene	94.3		% Rec.		8260B	09/23/07 2343	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-4  
Collected By :  
Collection Date : 09/17/07 13:30

ESC Sample # : L311793-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	09/24/07 0005	1
Toluene	BDL	0.0050	mg/l		8260B	09/24/07 0005	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/24/07 0005	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/24/07 0005	1
Surrogate Recovery							
Toluene-d8	68.6		% Rec.	J2	8260B	09/24/07 0005	1
Dibromofluoromethane	87.2		% Rec.		8260B	09/24/07 0005	1
4-Bromofluorobenzene	95.2		% Rec.		8260B	09/24/07 0005	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction

ESC Sample # : L311793-04

Sample ID : PCA-MW-5

Site ID :

Collected By :  
Collection Date : 09/17/07 14:12

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	09/24/07 0027	1
Toluene	BDL	0.0050	mg/l		8260B	09/24/07 0027	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/24/07 0027	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/24/07 0027	1
Surrogate Recovery							
Toluene-d8	63.4		% Rec.	J2	8260B	09/24/07 0027	1
Dibromofluoromethane	88.4		% Rec.		8260B	09/24/07 0027	1
4-Bromofluorobenzene	101.		% Rec.		8260B	09/24/07 0027	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
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AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction

ESC Sample # : L311793-05

Sample ID : PCA-MW-6

Site ID :

Collected By :  
Collection Date : 09/17/07 13:05

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	09/24/07 0049	1
Toluene	BDL	0.0050	mg/l		8260B	09/24/07 0049	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/24/07 0049	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/24/07 0049	1
Surrogate Recovery							
Toluene-d8	63.8		% Rec.	J2	8260B	09/24/07 0049	1
Dibromofluoromethane	86.9		% Rec.		8260B	09/24/07 0049	1
4-Bromofluorobenzene	92.9		% Rec.		8260B	09/24/07 0049	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction

ESC Sample # : L311793-06

Sample ID : PCA-MWA-01

Site ID :

Collected By :  
Collection Date : 09/17/07 12:39

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.017	0.0010	mg/l		8260B	09/24/07 0111	1
Toluene	BDL	0.0050	mg/l	J6	8260B	09/24/07 0111	1
Ethylbenzene	0.0014	0.0010	mg/l		8260B	09/24/07 0111	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/24/07 0111	1
Surrogate Recovery							
Toluene-d8	61.4		% Rec.	J2	8260B	09/24/07 0111	1
Dibromofluoromethane	88.6		% Rec.		8260B	09/24/07 0111	1
4-Bromofluorobenzene	97.5		% Rec.		8260B	09/24/07 0111	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction  
Sample ID : PCA-DUP  
Collected By :  
Collection Date : 09/17/07 00:00

ESC Sample # : L311793-07

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.012	0.0010	mg/l		8260B	09/27/07 0133	1
Toluene	BDL	0.0050	mg/l		8260B	09/27/07 0133	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/27/07 0133	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/27/07 0133	1
Surrogate Recovery							
Toluene-d8	106.		% Rec.		8260B	09/27/07 0133	1
Dibromofluoromethane	103.		% Rec.		8260B	09/27/07 0133	1
4-Bromofluorobenzene	105.		% Rec.		8260B	09/27/07 0133	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:  
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:  
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Reported: 09/27/07 14:02 Printed: 09/27/07 17:52



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

September 27, 2007

Date Received : September 20, 2007  
Description : PCA Junction  
Sample ID : PCA-TRIP BLANK  
Collected By :  
Collection Date : 09/17/07 00:00

ESC Sample # : L311793-08

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	09/24/07 2242	1
Toluene	BDL	0.0050	mg/l		8260B	09/24/07 2242	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	09/24/07 2242	1
Total Xylenes	BDL	0.0030	mg/l		8260B	09/24/07 2242	1
Surrogate Recovery							
Toluene-d8	91.1		% Rec.		8260B	09/24/07 2242	1
Dibromofluoromethane	84.5		% Rec.		8260B	09/24/07 2242	1
4-Bromofluorobenzene	98.9		% Rec.		8260B	09/24/07 2242	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.

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Attachment A  
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L311793-03	Toluene-d8	J2
L311793-04	Toluene-d8	J2
L311793-05	Toluene-d8	J2
L311793-06	Toluene	J6
	Toluene-d8	J2

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

**Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

**Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

**Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

			Control Limits		(AQ)	(SS)
2-Fluorophenol	31-119	Nitrobenzene-d5	43-118	Dibromfluoromethane	68-128	64-125
Phenol-d5	12-134	2-Fluorobiphenyl	45-128	Toluene-d8	76-115	69-118
2,4,6-Tribromophenol	51-141	Terphenyl-d14	43-137	4-Bromofluorobenzene	79-127	61-134

**TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
09/27/07 at 17:52:06

TSR Signing Reports: 151  
R5 - Desired TAT

No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; ARCADIS EDD and  
QC2 on all; Prefix sample IDs with PCA-

Sample: L311793-01 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-02 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-03 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-04 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-05 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-06 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-07 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02  
Sample: L311793-08 Account: DUKARCAD Received: 09/20/07 09:00 Due Date: 09/27/07 00:00 RPT Date: 09/27/07 14:02

**Arcadis-US, Inc. - Highlands Ranch CO**  
 630 Plaza Dr Ste 200  
 Highlands Ranch, CO 80129-2379

Report to: **Ms. Trisha Elizondo**  
 Project Description: **PCA Junction**  
 Phone: (720) 344-3500  
 FAX: (720) 344-3535  
 Collected by (print):  
 City/State Collected: **telizondo@arcadis-us.com, m.**  
 Lab Project #: **DUKARCAD-PCAJUNCTII**  
 P.O.#:

Client Project #: **DUKARCAD-PCAJUNCTII**  
 Siter/Facility ID#: **P.O.#:**  
**Rush? (Lab MUST Be Notified)**  
 Same Day ..... 200%  
 Next Day ..... 100%  
 Two Day ..... 50%  
 Three Day ..... 25%

Sample ID	Comp/Grab	Matrix*	Depth	Date Results Needed		No. of Cntrs
				Email? No	Yes	
PCA-MW-1	---	GW				3
PCA-MW-2	g-r-b	GW		09/17/07	1356	3
PCA-MW-3	g-r-b	GW		09/17/07	1350	3
PCA-MW-4	g-r-b	GW		09/17/07	1330	3
PCA-MW-5	g-r-b	GW		09/17/07	1412	3
PCA-MW-6	g-r-b	GW		09/17/07	1305	3
PCA-MWA-01	g-r-b	GW		09/17/07	1239	3
PCA-MWA-02	---	GW				3
PCA-DUP	g-r-b	GW		09/17/07		3

Alternate billing information:

Analysis/Containers/Preservative

Chain of Custody  
 Page 1 of 2

Prepared by:  
**ENVIRONMENTAL SCIENCE CORP.**  
 12065 Lebanon Road  
 Mt. Juliet, TN 37122  
 Phone (800) 767-5859  
 FAX (615) 758-5859

Account: **DUKARCAD** (lab use only)  
 Template/Prelogin: **T34828/P221443**  
 Cooler #: **9110 AE**  
 Shipped Via: **FedEX Saver**

Remarks/Contaminant	Sample # (lab only)
	<b>L317793-01</b>
	<b>02</b>
	<b>03</b>
	<b>04</b>
	<b>05</b>
	<b>06</b>
	<b>07</b>

V8260BTEX 40mLamb-HCl  
 V8260BTEX 40mLamb-HCl-BIK

\*Matrix: **SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other**

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by: (Signature) 	Date: 09/18/07 Time: 7:30	Received by: (Signature) 	Time: _____	Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> Courier	Condition: <b>OK</b>	(lab use only)
Relinquished by: (Signature) 	Date: _____ Time: _____	Received by: (Signature) 	Time: _____	<input type="checkbox"/> Temp <input type="checkbox"/> Bottles Received	COC Seal Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	
Relinquished by: (Signature) 	Date: _____ Time: _____	Received for lab by: (Signature) 	Time: _____	3.20 Date: 9/20/07	pH Checked: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	



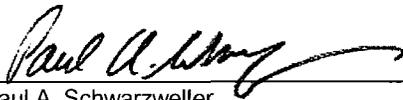


**Q2 2007 GROUNDWATER  
MONITORING REPORT**

PCA Junction  
Eddy County, New Mexico

October 2007

ARCADIS



Paul A. Schwarzweller  
Environmental Scientist



Kelly Ruder, PE  
Senior Engineer

**Q2 2007 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
DCP Midstream

Prepared by:  
ARCADIS U.S., Inc.  
630 Plaza Drive  
Suite 100  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
9 October 2007

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<b>1. Site Location and Background</b>	<b>1</b>
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1	Summary of Groundwater Elevations
2	Summary of BTEX Concentrations in Groundwater
3	Summary of Field Parameters in Groundwater

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2	Site Map
3	Groundwater Potentiometric Surface Map – June 18, 2007
4	Groundwater Sample Results – June 2007

**Appendices**

A	Laboratory Analytical Reports
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## **1. Site Location and Background**

ARCADIS is submitting to DCP Midstream (DCP) the results of groundwater monitoring activities and phase-separated hydrocarbon (PSH) recovery efforts that were performed during the second quarter of 2007 (Q2 2007) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The Site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of pigging. The Site occupies approximately 4 acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the Site in September 2000. Benzene was discovered in the soil and groundwater below the on-site tank battery. In 2002, PSH was observed in a groundwater monitoring well in 2002.

The ownership of the PCA Junction was transferred from COP to Duke Energy Field Services (DEFS) on March 10, 2004. In November 2004, DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD). DEFS changed its name to DCP in January 2007.

## **2. Groundwater Monitoring**

ARCADIS conducted quarterly groundwater monitoring activities at the Site on June 18, 2007. Monitoring consisted of the measurement of water levels from eight groundwater monitoring wells. Groundwater samples were collected from seven of the wells for water quality analysis. Well MW01 contained PSH and was not sampled. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260.

### **2.1 Water Level Gauging**

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from approximately 23.31 to 29.21 feet below ground surface. Groundwater elevation contours constructed using the June 18, 2007 measurements are provided on Figure 3. The groundwater gradient is consistent with previous gauging events and varies from 0.003 to 0.009 foot/foot (ft/ft) across the Site.

## **2.2 Groundwater Quality Monitoring**

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers, and packed and shipped in accordance with accepted practices to Environmental Science Corporation in Mt. Juliet, Tennessee for analyses.

Table 2 summarizes BTEX concentrations in the groundwater collected during the Q2 2007 sampling event and the laboratory analytical reports are included in Appendix A. Table 3 summarized field collected groundwater parameters. The groundwater sample results are also posted on Figure 4, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q2 2007 analytical results can be summarized as follows:

- Benzene was detected in one groundwater sample from monitoring well MWA01 with a concentration of 18 micrograms per liter (ug/L), which is above the regulatory standard of 10 ug/L. Toluene, ethylbenzene, and xylenes were not detected above the regulatory standards.

## **2.3 PSH Recovery Efforts**

PSH is being actively recovered through hand bailing at the Site on a monthly basis. PSH is bailed from all wells with a practically recoverable amount. During the Q2 2007 site visits, PSH and water mix were recovered from well MW01.

## **3. Closing Remarks**

ARCADIS will continue to perform Site visits and PSH recovery when practical. Results of third quarter 2007 (Q3 2007) sampling and PSH recovery efforts will be reported in the Q3 2007 Groundwater Monitoring Report.

ARCADIS

Tables

**Table 1. Summary of Groundwater Elevations  
PCA Junction  
DCP Midstream**

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Eastings	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW01	659755.9	577763.7	3219.46	-	6/18/2007	26.23	24.85	1.38	3194.36	
	-	-	-	-	5/24/2007	26.21	24.87	1.34	3194.35	Bailed 1 gal
	-	-	-	-	3/27/2007	26.84	25.22	1.62	3193.95	
	-	-	-	-	2/26/2007	26.80	25.2	1.60	3193.97	Bailed 2 gal
	-	-	-	-	12/12/2006	26.86	25.13	1.73	3194.02	
	-	-	-	-	11/13/2006	26.82	25.11	1.71	3194.04	
	-	-	-	-	10/17/2006	26.30	25.14	26.3	3214.73	Bailed 1.0 gal PSH/water mix
	-	-	-	-	9/11/2006	26.75	25.14	1.61	3194.03	Bailed 1.0 gal
	-	-	-	-	8/16/2006	26.42	25.41	1.01	3193.87	Bailed 1.25 gal
	-	-	-	-	7/18/2006	26.43	25.00	1.43	3194.20	Bailed 2.5 gal
	-	-	-	-	6/19/2006	27.05	25.19	1.86	3193.94	Bailed 2.5 gal
	-	-	-	-	3/27/2006	26.40	24.92	1.48	3194.27	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	3194.39	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	3194.21	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	3194.12	Bailed 2 gal 30% product
	-	-	-	-	7/27/2005	26.80	25.08	1.72	3194.07	Purged 1 gal
	-	-	-	-	5/23/2005	25.92	24.62	1.30	3194.61	320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	3194.44	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	3194.55	Bailed 2.5 gal
	-	-	-	-	2/25/2005	25.85	25.34	0.51	3194.03	Bailed 0.25 gal
	-	-	-	-	2/24/2005	26.14	24.85	1.29	3194.38	Bailed 0.5 gal
MW02	659829.9	577640	3218.32	28.1	6/18/2007	23.89	-	-	3194.43	
	-	-	-	-	5/24/2007	23.85	-	-	3194.47	
	-	-	-	-	3/27/2007	24.02	-	-	3194.30	
	-	-	-	-	2/26/2007	24.05	-	-	3194.27	
	-	-	-	-	12/12/2006	24.66	-	-	3193.66	
	-	-	-	-	11/13/2006	24.13	-	-	3194.19	
	-	-	-	-	10/17/2006	24.35	-	-	3193.97	
	-	-	-	-	9/11/2006	25.16	-	-	3193.16	
	-	-	-	-	8/16/2006	24.65	-	-	3193.67	
	-	-	-	-	6/19/2006	24.40	-	-	3193.92	
	-	-	-	-	3/27/2006	23.98	-	-	3194.34	
	-	-	-	-	2/15/2006	24.19	-	-	3194.13	
	-	-	-	-	1/24/2006	24.00	-	-	3194.32	
MW03	659790.2	577606.4	3217.8	36.4	6/18/2007	23.31	-	-	3194.49	
	-	-	-	-	5/24/2007	23.24	-	-	3194.56	
	-	-	-	-	3/27/2007	23.35	-	-	3194.45	
	-	-	-	-	2/26/2007	23.48	-	-	3194.32	
	-	-	-	-	12/12/2006	23.59	-	-	3194.21	
	-	-	-	-	11/13/2006	23.61	-	-	3194.19	
	-	-	-	-	10/17/2006	23.34	-	-	3194.46	
	-	-	-	-	9/11/2006	23.54	-	-	3194.26	
	-	-	-	-	8/16/2006	24.10	-	-	3193.70	
	-	-	-	-	7/18/2006	24.03	-	-	3193.77	
	-	-	-	-	6/19/2006	23.85	-	-	3193.95	
	-	-	-	-	3/27/2006	23.41	-	-	3194.39	
	-	-	-	-	2/15/2006	23.64	-	-	3194.16	
	-	-	-	-	1/24/2006	23.46	-	-	3194.34	
MW04	659585	577712.5	3221.26	36.4	6/18/2007	27.15	-	-	3194.11	
	-	-	-	-	5/24/2007	27.18	-	-	3194.08	
	-	-	-	-	3/27/2007	27.37	-	-	3193.89	
	-	-	-	-	2/26/2007	27.31	-	-	3193.95	
	-	-	-	-	12/12/2006	27.44	-	-	3193.82	
	-	-	-	-	11/13/2006	27.51	-	-	3193.75	
	-	-	-	-	10/17/2006	28.53	-	-	3192.73	
	-	-	-	-	9/11/2006	27.48	-	-	3193.78	
	-	-	-	-	8/16/2006	27.84	-	-	3193.42	
	-	-	-	-	7/18/2006	27.26	-	-	3194.00	
	-	-	-	-	6/19/2006	27.58	-	-	3193.68	
	-	-	-	-	3/27/2006	27.22	-	-	3194.04	
	-	-	-	-	2/15/2006	27.06	-	-	3194.20	

**Table 1. Summary of Groundwater Elevations  
PCA Junction  
DCP Midstream**

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW05	659936.9	577766.4	3223.55	37.86	6/18/2007	29.21	-	-	3194.34	
	-	-	-	-	5/24/2007	29.24	-	-	3194.31	
	-	-	-	-	3/27/2007	29.39	-	-	3194.16	
	-	-	-	-	2/26/2007	29.39	-	-	3194.16	
	-	-	-	-	12/12/2006	29.51	-	-	3194.04	
	-	-	-	-	11/13/2006	29.50	-	-	3194.05	
	-	-	-	-	10/17/2006	29.58	-	-	3193.97	
	-	-	-	-	9/11/2006	29.59	-	-	3193.96	
	-	-	-	-	8/16/2006	29.94	-	-	3193.61	
	-	-	-	-	7/18/2006	29.33	-	-	3194.22	
	-	-	-	-	6/19/2006	29.73	-	-	3193.82	
	-	-	-	-	3/27/2006	29.31	-	-	3194.24	
	-	-	-	-	2/15/2006	29.35	-	-	3194.20	
	-	-	-	-	1/24/2006	29.35	-	-	3194.20	
MW06	659576.9	577833	3221.56	39.4	6/18/2007	27.66	-	-	3193.90	
	-	-	-	-	5/24/2007	27.73	-	-	3193.83	
	-	-	-	-	3/27/2007	27.85	-	-	3193.71	
	-	-	-	-	2/26/2007	27.83	-	-	3193.73	
	-	-	-	-	12/12/2006	27.96	-	-	3193.60	
	-	-	-	-	11/13/2006	27.91	-	-	3193.65	
	-	-	-	-	10/17/2006	28.05	-	-	3193.51	
	-	-	-	-	9/11/2006	28.05	-	-	3193.51	
	-	-	-	-	8/16/2006	28.31	-	-	3193.25	
	-	-	-	-	7/18/2006	27.77	-	-	3193.79	
	-	-	-	-	6/19/2006	28.01	-	-	3193.55	
	-	-	-	-	3/27/2006	27.70	-	-	3193.86	
	-	-	-	-	2/15/2006	27.78	-	-	3193.78	
	-	-	-	-	1/24/2006	27.78	-	-	3193.78	
MWA1	659670.9	577785.4	3218.72	34.7	6/18/2007	24.54	-	-	3194.18	
	-	-	-	-	5/24/2007	25.90	-	-	3192.82	
	-	-	-	-	3/27/2007	25.06	-	-	3193.66	
	-	-	-	-	2/26/2007	24.72	-	-	3194.00	
	-	-	-	-	12/12/2006	24.84	-	-	3193.88	
	-	-	-	-	11/13/2006	24.84	-	-	3193.88	
	-	-	-	-	10/17/2006	24.91	-	-	3193.81	
	-	-	-	-	9/11/2006	24.90	-	-	3193.82	
	-	-	-	-	8/16/2006	25.25	-	-	3193.47	
	-	-	-	-	7/17/2006	24.64	-	-	3194.08	
	-	-	-	-	6/19/2006	25.94	-	-	3192.78	
	-	-	-	-	3/27/2006	24.59	-	-	3194.13	
	-	-	-	-	2/15/2006	26.84	-	-	3191.88	
	-	-	-	-	1/24/2006	26.84	-	-	3191.88	
MWA2	659693.2	577818	3220.02	28.7	6/18/2007	25.88	-	-	3194.14	
	-	-	-	-	5/24/2007	25.90	-	-	3194.12	
	-	-	-	-	3/27/2007	26.07	-	-	3193.95	
	-	-	-	-	2/26/2007	26.06	-	-	3193.96	
	-	-	-	-	12/12/2006	26.61	-	-	3193.41	
	-	-	-	-	11/13/2006	26.21	-	-	3193.81	
	-	-	-	-	10/17/2006	26.27	-	-	3193.75	
	-	-	-	-	9/11/2006	26.24	-	-	3193.78	
	-	-	-	-	8/16/2006	26.57	-	-	3193.45	
	-	-	-	-	7/17/2006	26.01	-	-	3194.01	
	-	-	-	-	6/19/2006	26.30	-	-	3193.72	
	-	-	-	-	3/27/2006	25.95	-	-	3194.07	
	-	-	-	-	2/15/2006	26.20	-	-	3193.82	
	-	-	-	-	1/24/2006	26.01	-	-	3194.01	
-	-	-	-	1/24/2006	24.64	-	-	3195.38		

PSH: Phase-Separated Hydrocarbon

**Table 2. Summary of BTEX Concentrations in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	Benzene	Toluene	Ethyl		TPH-GRO
				benzene	Xylenes	
		-----ug/L-----				mg/L
MW02	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW03	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW05	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW06	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 0.5	< 5.0	< 1.5	-
	3/27/2006	< 1.0	49	< 1.0	< 3.0	< 0.1
MWA01	6/18/2007	18	< 5.0	3.8	< 3.0	-
	3/27/2007	21	< 5.0	5.2	< 3.0	-
	11/14/2006	6.5	< 5.0	2.9	< 3.0	-
	8/16/2006	2.1	< 5.0	2.7	< 1.5	-
	DUP	8/16/2006	4.6	< 5.0	7.6	< 1.5
	3/27/2006	3.2	< 5.0	16	< 3.0	0.37
MWA02	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	6/18/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	0.97	< 5.0	< 0.5	1.8	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	0.47

Notes:  
 MW: Monitoring well  
 TPH: Total Petroleum Hydrocarbons  
 ug/L: Micrograms per liter  
 mg/L: Milligrams per liter  
 GRO: Gasoline Range Organics  
 -: Not analyzed

**Table 3. Summary of Field Parameters in Groundwater  
PCA Junction  
DCP Midstream**

<b>Well ID</b>	<b>Sample Date</b>	<b>pH</b>	<b>Conductivity</b>	<b>Temperature</b>	<b>Dissolved Oxygen</b>	<b>ORP</b>
		<b>(s.u.)</b>	<b>(MS/cm)</b>	<b>(°C)</b>	<b>(g/L)</b>	<b>(mV)</b>
MW02	6/18/2007	7.20	3.541	20.94	4.29	48.1
	3/27/2007	7.10	3.209	19.92	5.81	181.0
	11/13/2006	7.10	3.661	19.04	5.81	198.3
	8/16/2006	7.15	3.432	19.99	5.38	184.6
	3/27/2006	7.35	2.600	20.60	3.58	-
MW03	6/18/2007	6.91	2.512	19.92	2.51	48.1
	3/27/2007	6.83	2.493	19.50	3.93	136.6
	11/13/2006	6.77	2.481	18.97	3.56	188.2
	8/16/2006	6.89	2.380	19.77	3.98	123.0
	3/27/2006	7.04	1.831	20.60	2.88	-
MW04	6/18/2007	7.01	3.175	19.63	4.78	90.4
	3/27/2007	6.99	3.059	19.45	5.63	153.4
	11/13/2006	6.87	3.217	19.32	6.10	211.2
	8/16/2006	7.04	2.895	19.46	6.43	137.4
	3/27/2006	7.05	2.200	21.40	4.35	-
MW05	6/18/2007	7.08	6.969	19.83	4.28	42.3
	3/27/2007	7.15	6.744	19.94	4.74	164.3
	11/13/2006	7.03	6.910	19.57	6.20	222.2
	8/16/2006	7.19	6.388	19.80	6.03	141.8
	3/27/2006	7.39	4.280	21.20	4.33	-
MW06	6/18/2007	7.30	2.749	19.89	6.52	118.9
	3/27/2007	7.17	2.714	19.64	6.25	125.6
	11/13/2006	6.89	2.852	19.25	4.13	173.1
	8/16/2006	7.22	2.618	19.93	6.63	110.4
	3/27/2006	7.24	1.800	20.40	4.69	-
MWA01	6/18/2007	6.69	2.962	19.98	2.96	2.8
	3/27/2007	6.74	3.019	19.89	3.52	24.3
	11/13/2006	6.69	3.125	19.50	5.39	110.3
	8/16/2006	6.81	2.890	20.44	1.54	10.0
	3/27/2006	6.95	2.000	20.40	1.69	-
MWA02	6/18/2007	6.98	4.333	19.96	3.58	42.5
	3/27/2007	7.06	4.248	21.41	5.42	235.3
	11/13/2006	7.14	4.320	19.50	5.34	120.7
	8/16/2006	7.08	4.047	20.43	3.55	88.7
	3/27/2006	7.21	2.870	20.20	3.55	-

Notes:

ORP: Oxidation reduction potential

s.u.: Standard unit

uS/cm: microSiemens per centimeter

°C: Degree Celsius

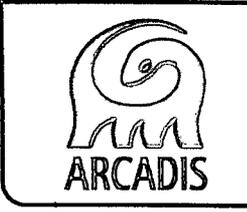
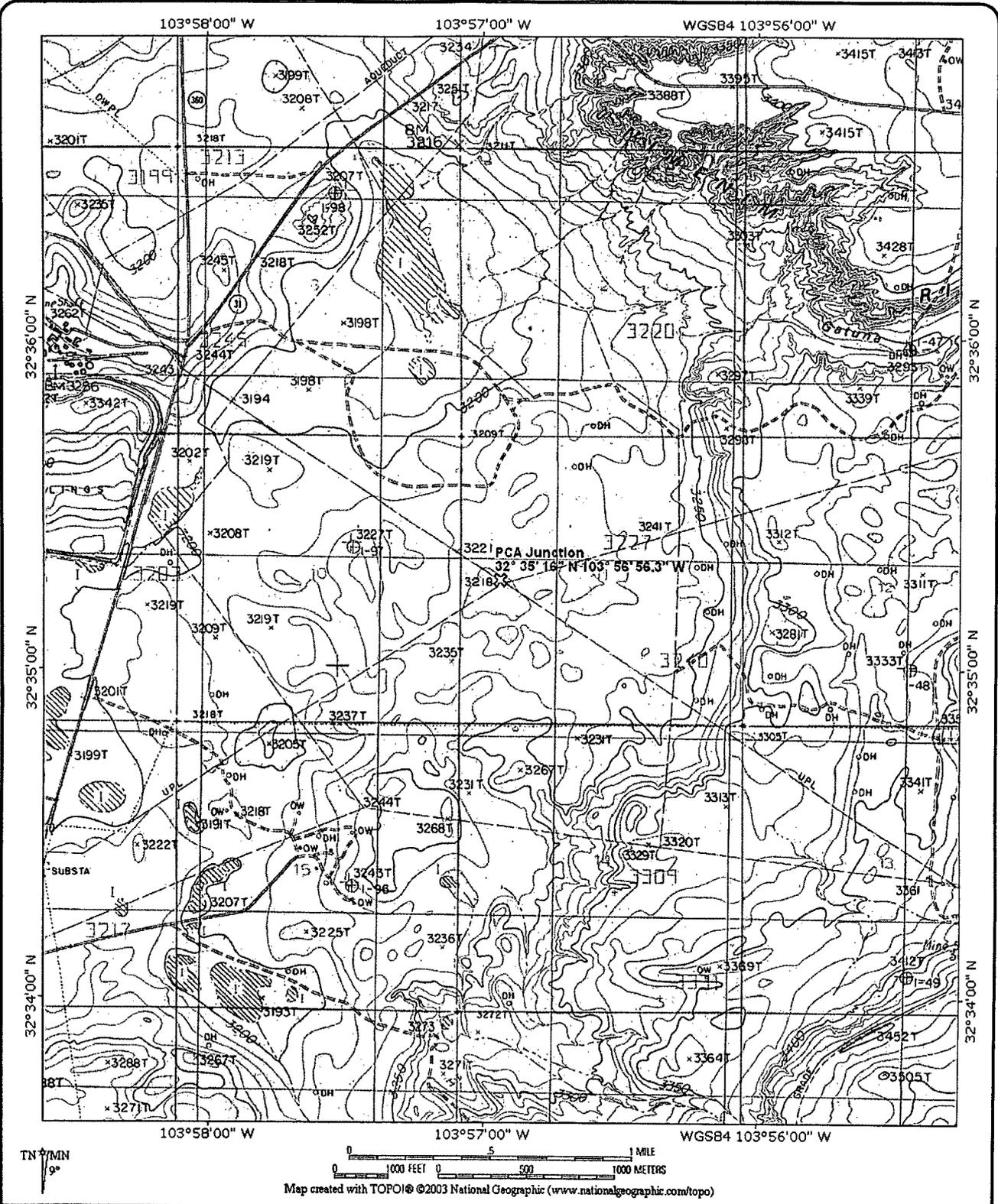
g/L: Grams per liter

mV: Millivolts

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Figures

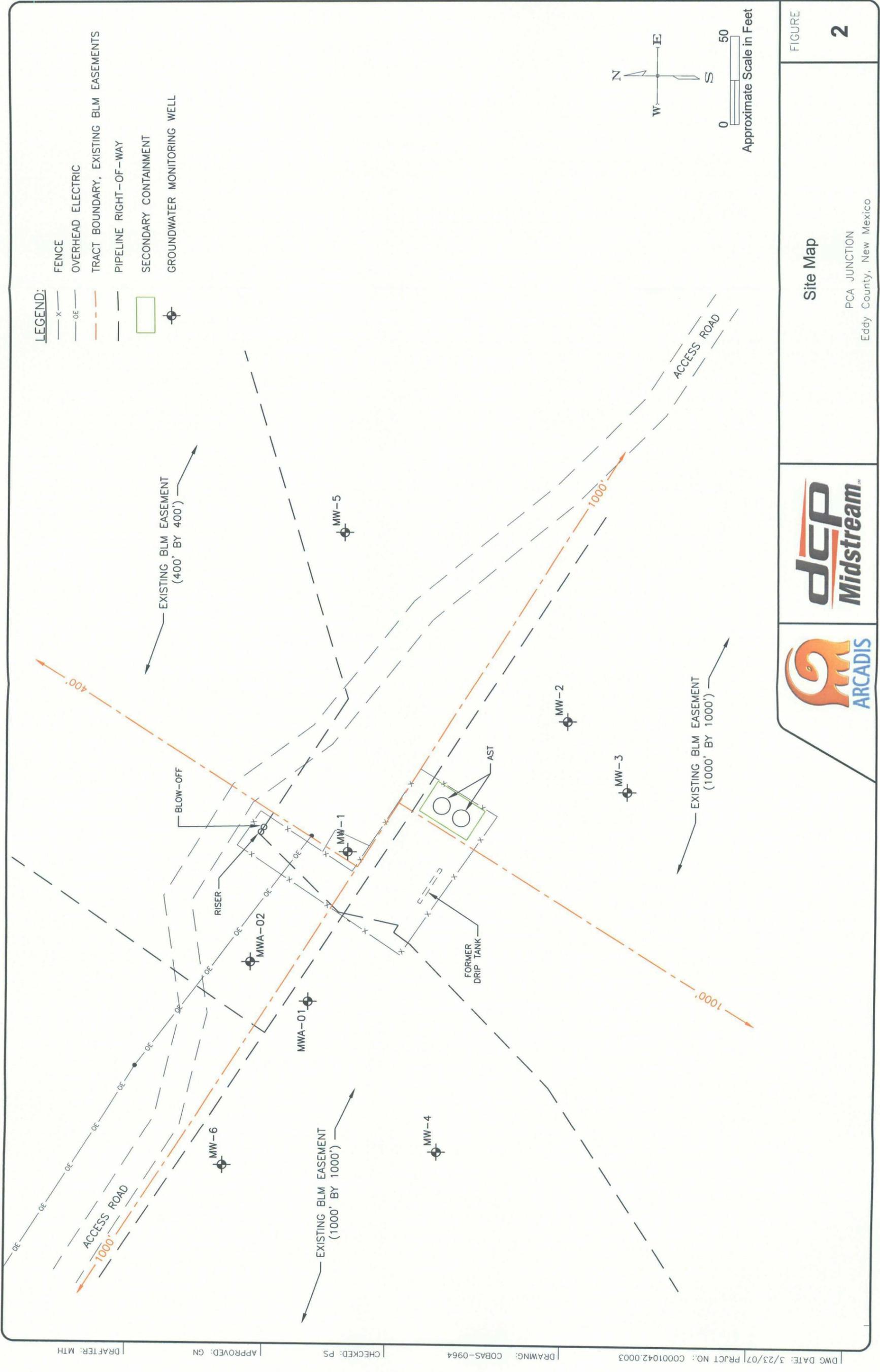
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Site Location Map

PCA JUNCTION  
Eddy County, New Mexico

FIGURE  
1



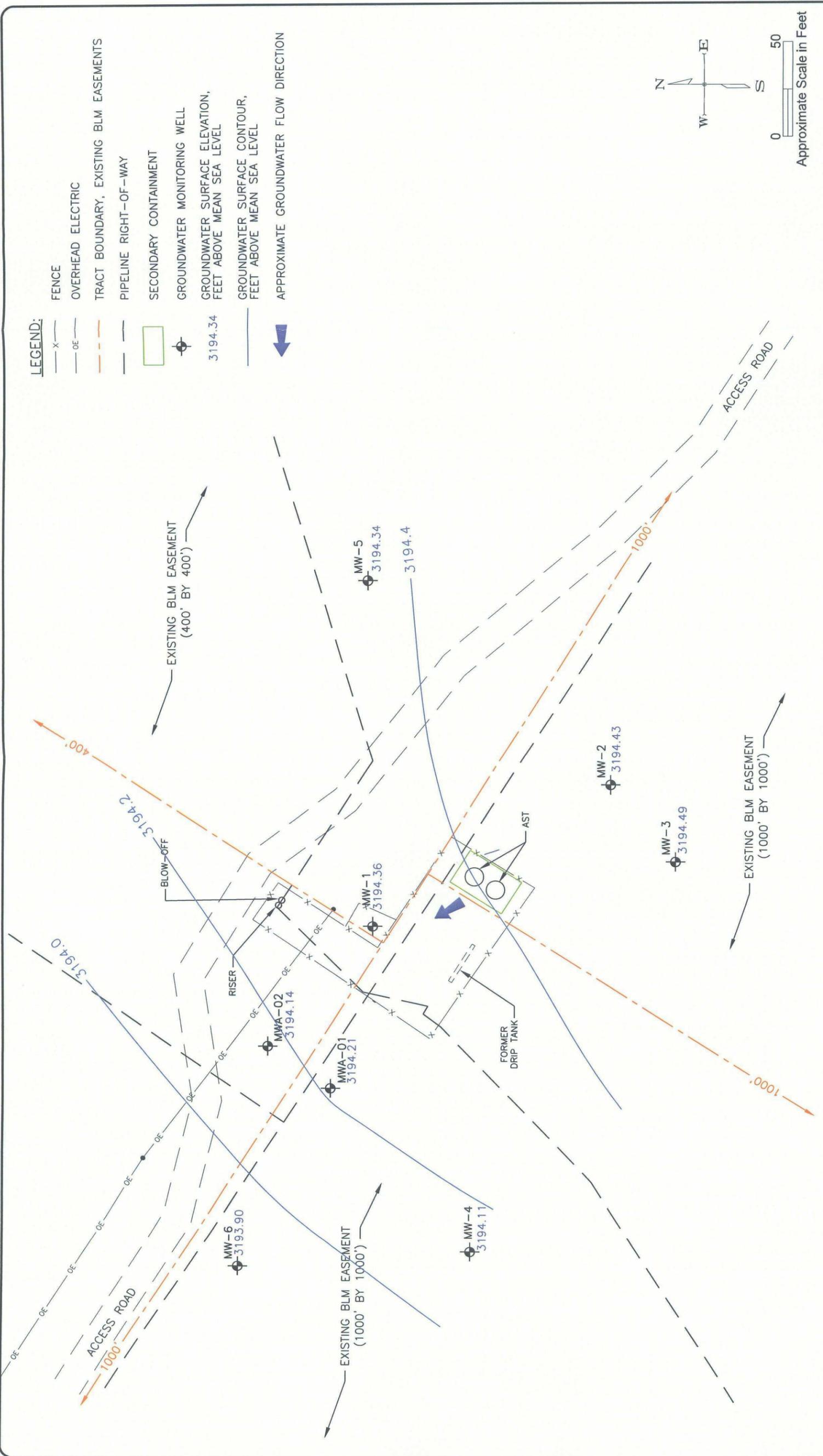
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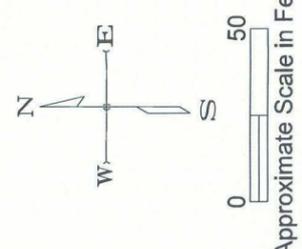
**Site Map**  
PCA JUNCTION  
Eddy County, New Mexico

FIGURE  
**2**

DWG DATE: 8/2/07 | PRCT NO.: C0001042.0003 | DRAWING: COWLE-0341 | CHECKED: DW | APPROVED: GN | DRAFTER: MTH



- LEGEND:**
- x — FENCE
  - OE — OVERHEAD ELECTRIC
  - - - - TRACT BOUNDARY, EXISTING BLM EASEMENTS
  - - - - PIPELINE RIGHT-OF-WAY
  - SECONDARY CONTAINMENT
  - ⊕ GROUNDWATER MONITORING WELL
  - 3194.34 GROUNDWATER SURFACE ELEVATION, FEET ABOVE MEAN SEA LEVEL
  - GROUNDWATER SURFACE CONTOUR, FEET ABOVE MEAN SEA LEVEL
  - ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION



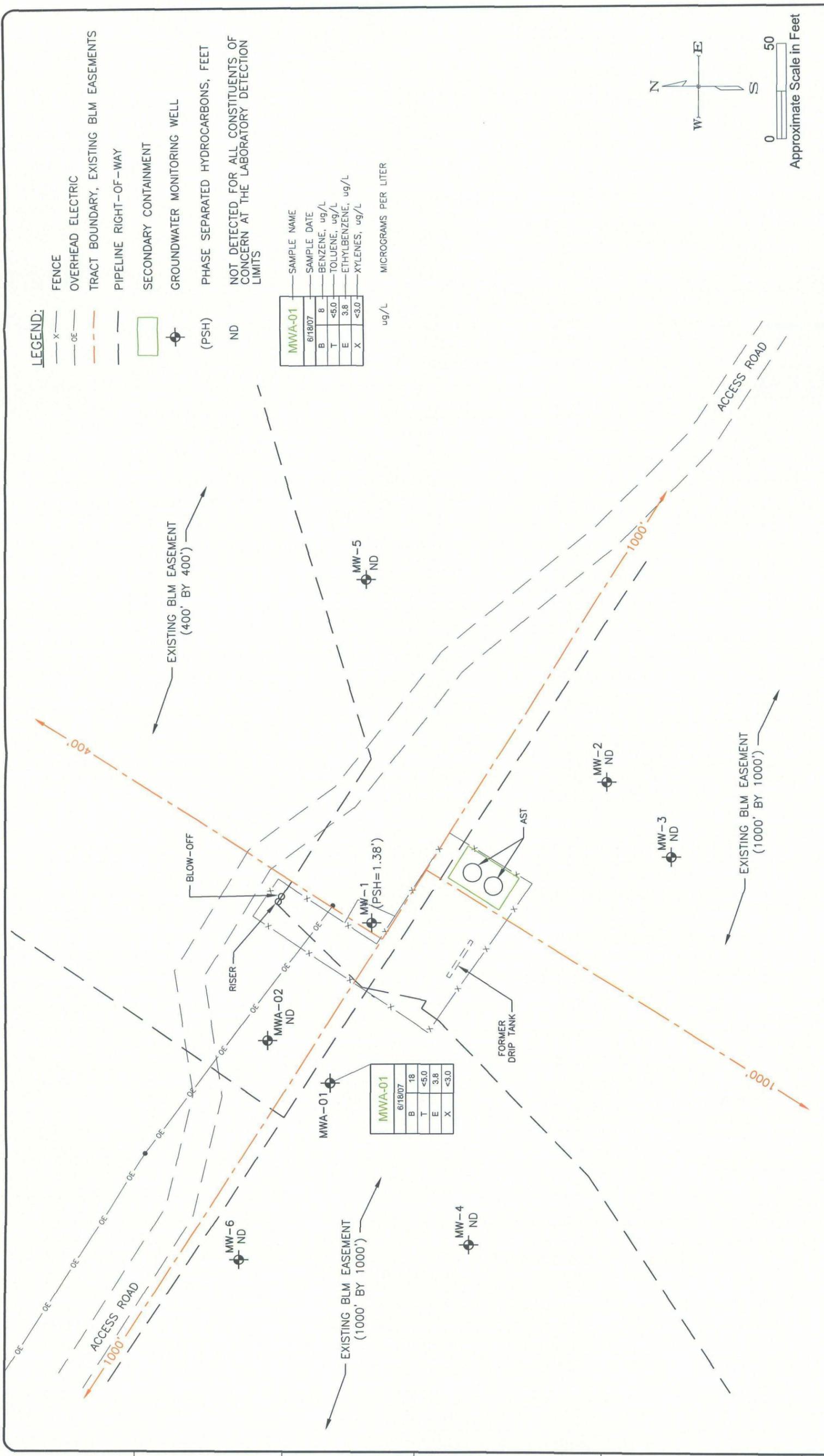
**Groundwater Potentiometric Surface Map**  
 June 18, 2007

PCA JUNCTION  
 Eddy County, New Mexico



FIGURE  
**3**

DWG DATE: 5/17/07 PRCT NO.: C0001042.0003 DRAWING: COWF-0650 CHECKED: PS APPROVED: CN DRAFTER: MTH



**dcp Midstream**

Groundwater Sample Results  
June 2007

PCA JUNCTION  
Eddy County, New Mexico

FIGURE  
**4**

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**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859  
Tax I.D. 62-0814289  
Est. 1970

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch CO  
630 Plaza Dr Ste 200

Highlands Ranch, CO 80129-2379

Report Summary

Thursday June 28, 2007

Report Number: L299124

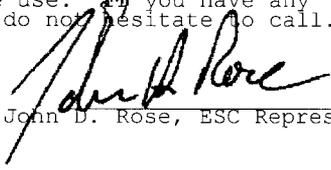
Samples Received: 06/22/07

Client Project:

Description: PCA Junction

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

  
John D. Rose, ESC Representative

**Laboratory Certification Numbers**

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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8 Samples Reported: 06/27/07 17:20 Revised: 06/28/07 08:59



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1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-2  
Collected By :  
Collection Date : 06/18/07 16:00

ESC Sample # : L299124-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 0744	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 0744	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 0744	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 0744	1
Surrogate Recovery							
Toluene-d8	104.		% Rec.		8260B	06/27/07 0744	1
Dibromofluoromethane	103.		% Rec.		8260B	06/27/07 0744	1
4-Bromofluorobenzene	99.7		% Rec.		8260B	06/27/07 0744	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-3  
Collected By :  
Collection Date : 06/18/07 15:15

ESC Sample # : L299124-02  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 0809	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 0809	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 0809	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 0809	1
Surrogate Recovery							
Toluene-d8	103.		% Rec.		8260B	06/27/07 0809	1
Dibromofluoromethane	103.		% Rec.		8260B	06/27/07 0809	1
4-Bromofluorobenzene	99.3		% Rec.		8260B	06/27/07 0809	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction

ESC Sample # : L299124-03

Sample ID : PCA-MW-4

Site ID :

Collected By :  
Collection Date : 06/18/07 13:40

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 0834	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 0834	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 0834	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 0834	1
Surrogate Recovery							
Toluene-d8	103.		% Rec.		8260B	06/27/07 0834	1
Dibromofluoromethane	103.		% Rec.		8260B	06/27/07 0834	1
4-Bromofluorobenzene	100.		% Rec.		8260B	06/27/07 0834	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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REPORT OF ANALYSIS

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-5  
Collected By :  
Collection Date : 06/18/07 14:35

ESC Sample # : L299124-04  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 0859	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 0859	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 0859	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 0859	1
Surrogate Recovery							
Toluene-d8	103.		% Rec.		8260B	06/27/07 0859	1
Dibromofluoromethane	104.		% Rec.		8260B	06/27/07 0859	1
4-Bromofluorobenzene	99.8		% Rec.		8260B	06/27/07 0859	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:  
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-6  
Collected By :  
Collection Date : 06/18/07 13:00

ESC Sample # : L299124-05  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 1100	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 1100	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 1100	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 1100	1
Surrogate Recovery							
Toluene-d8	103.		% Rec.		8260B	06/27/07 1100	1
Dibromofluoromethane	104.		% Rec.		8260B	06/27/07 1100	1
4-Bromofluorobenzene	100.		% Rec.		8260B	06/27/07 1100	1

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:  
AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Reported: 06/27/07 17:20 Revised: 06/28/07 08:59



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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction  
Sample ID : PCA-MWA-01  
Collected By :  
Collection Date : 06/18/07 16:45

ESC Sample # : L299124-06  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.018	0.0010	mg/l		8260B	06/27/07 1126	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 1126	1
Ethylbenzene	0.0038	0.0010	mg/l		8260B	06/27/07 1126	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 1126	1
Surrogate Recovery							
Toluene-d8	104.		% Rec.		8260B	06/27/07 1126	1
Dibromofluoromethane	105.		% Rec.		8260B	06/27/07 1126	1
4-Bromofluorobenzene	104.		% Rec.		8260B	06/27/07 1126	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.

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Reported: 06/27/07 17:20 Revised: 06/28/07 08:59



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction

ESC Sample # : L299124-07

Sample ID : PCA-MWA-02

Site ID :

Collected By :  
Collection Date : 06/18/07 17:15

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 1151	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 1151	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 1151	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 1151	1
Surrogate Recovery							
Toluene-d8	104.		% Rec.		8260B	06/27/07 1151	1
Dibromofluoromethane	104.		% Rec.		8260B	06/27/07 1151	1
4-Bromofluorobenzene	101.		% Rec.		8260B	06/27/07 1151	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Mt. Juliet, TN 37122  
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1-800-767-5859  
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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis-US, Inc. - Highlands Ranch  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

June 28, 2007

Date Received : June 22, 2007  
Description : PCA Junction

ESC Sample # : L299124-08

Sample ID : PCA-DUP

Site ID :

Collected By :  
Collection Date : 06/18/07 00:01

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	06/27/07 1217	1
Toluene	BDL	0.0050	mg/l		8260B	06/27/07 1217	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	06/27/07 1217	1
Total Xylenes	BDL	0.0030	mg/l		8260B	06/27/07 1217	1
Surrogate Recovery							
Toluene-d8	103.		% Rec.		8260B	06/27/07 1217	1
Dibromofluoromethane	105.		% Rec.		8260B	06/27/07 1217	1
4-Bromofluorobenzene	101.		% Rec.		8260B	06/27/07 1217	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Summary of Remarks For Samples Printed  
06/28/07 at 08:59:59

TSR Signing Reports: 151  
R5 - Desired TAT

No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; ARCADIS EDD and QC2 on all; Prefix sample IDs with PCA-

Sample: L299124-01 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-02 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-03 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-04 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-05 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-06 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-07 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20  
Sample: L299124-08 Account: DUKARCAD Received: 06/22/07 09:00 Due Date: 06/29/07 00:00 RPT Date: 06/27/07 17:20

**Arcadis G & M, Inc. - Highlands Ranch CO**  
 630 Plaza Dr Ste 200  
 Highlands Ranch, CO 80129-2379

Report to: Ms. Trisha Elizondo

Email: telizondo@arcadis-us.com, m

Project Description: PCA Junction

City/State Collected

Phone: (720) 344-3500  
 FAX: (720) 344-3535

Client Project #

Lab Project #

Collected by (print):

Site/Facility ID#:

DUKARCAD-PCAJUNCTI

Collected by (signature):

Rush? (Lab MUST Be Notified)

Same Day ..... 200%  
 Next Day ..... 100%  
 Two Day ..... 50%  
 Three Day ..... 25%

Date Results Needed  
 Email? \_\_\_ No \_\_\_ Yes  
 FAX? \_\_\_ No \_\_\_ Yes  
 Date  
 Time

Sample ID

Comp/Grab

Matrix\*

Depth

No. of Cntrs

Sample ID	Comp/Grab	Matrix*	Depth	No. of Cntrs	Date	Time	Remarks/Contaminant	Sample # (lab only)
PCA-MW-1		GW		3				129124
PCA-MW-2	GRAB	GW		3	18 June 2007	1600		01
PCA-MW-3	GRAB	GW		3	18 June 2007	1515		02
PCA-MW-4	GRAB	GW		3	18 June 2007	1340		03
PCA-MW-5	GRAB	GW		3	18 June 2007	1435		04
PCA-MW-6	GRAB	GW		3	18 June 2007	1300		05
PCA-MWA-01	GRAB	GW		3	18 June 2007	1645		06
PCA-MWA-02	GRAB	GW		3	18 June 2007	1715		07
PCA-DUP	GRAB	GW		3	18 June 2007	0001		08

\*Matrix: SS - Soil GW - Groundwater WW - Wastewater DW - Drinking Water OT - Other

Remarks:

pH \_\_\_\_\_ Temp \_\_\_\_\_

Flow \_\_\_\_\_ Other \_\_\_\_\_

Alternate billing information:

V8260BTEX 40mlAMB-HCI  
 V8260BTEX 40mlAMB-HCI-BIK

Analysis/Container/Preservative

Chain of Custody

Page \_\_\_ of \_\_\_

Prepared by:



**ENVIRONMENTAL SCIENCE CORP.**

12065 Lebanon Road  
 Mt. Juliet, TN 37122

Phone (800) 767-5859  
 FAX (615) 758-5859

Accum: DUKARCAD (lab use only)  
 Template/Prelog: T34829 P213142  
 Cooler #: 6113 KW  
 Shipped Via: FedEx Saver.

Relinquished by: (Signature) 	Date: 21 June 2007 1830	Received by: (Signature) 	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only)
Relinquished by: (Signature) 	Date: _____	Received by: (Signature) 	Temp: 3/10 Bottles Received: 244TB	pH Checked: _____
Relinquished by: (Signature) 	Date: _____	Received for lab by: (Signature) 	Date: 6-22-07 Time: 09:00	INCF: _____



**Q1 2007 GROUNDWATER  
MONITORING REPORT**

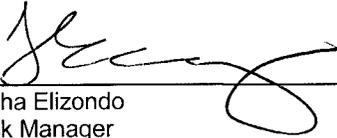
PCA Junction  
Eddy County, New Mexico

June 2007

ARCADIS



Darla Waibel  
Geologist



Trisha Elizondo  
Task Manager

**Q1 2007 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
DCP Midstream

Prepared by:  
ARCADIS U.S., Inc.  
630 Plaza Drive  
Suite 100  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
6 June 2007

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3	Summary of Field Parameters in Groundwater

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2	Site Map
3	Groundwater Potentiometric Surface Map – March 27, 2007
4	Groundwater Sample Results – March 2007

**Appendices**

A	Laboratory Analytical Reports
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## **1. Site Location and Background**

ARCADIS is submitting to DCP Midstream (DCP) the results of groundwater monitoring activities and phase-separated hydrocarbon (PSH) recovery efforts that were performed during the first quarter of 2007 (Q1 2007) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The Site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of pigging. The Site occupies approximately 4 acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the Site in September 2000. Benzene was discovered in the soil and groundwater below the on-site tank battery. In 2002, PSH was observed in a groundwater monitoring well.

The ownership of the PCA Junction was transferred from COP to Duke Energy Field Services (DEFS) on March 10, 2004. In November 2004, DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD). DEFS changed its name to DCP in January 2006.

## **2. Groundwater Monitoring**

ARCADIS conducted quarterly groundwater monitoring activities at the Site on March 27, 2007. Monitoring consisted of the measurement of water levels from eight groundwater monitoring wells. Groundwater samples were collected from seven of the wells for water quality analysis. Well MW01 contained PSH and was not sampled. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260.

### **2.1 Water Level Gauging**

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from approximately 23.35 to 29.39 feet below ground surface. Monitoring wells at the Site were surveyed on February 26, 2007 and groundwater flow direction was determined to be towards the north-northwest. Groundwater elevation contours constructed using the March 27, 2007 measurements are provided on Figure 3. The groundwater gradient varies from 0.003 to 0.009 foot/foot (ft/ft) across the site.

## **2.2 Groundwater Quality Monitoring**

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers, and packed and shipped in accordance with accepted practices to Environmental Science Corporation in Mt. Juliet, Tennessee for analyses.

Table 2 summarizes BTEX concentrations in the groundwater collected during the Q1 2007 sampling event and the laboratory analytical reports are included in Appendix A. Table 3 summarized field collected groundwater parameters. The groundwater sample results are also posted on Figure 4, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q1 2007 analytical results can be summarized as follows:

- Benzene was detected in one groundwater sample from monitoring well MWA01 with a concentration of 21 micrograms per liter (ug/L), which is above the regulatory standard of 10 ug/L. Toluene, ethylbenzene, and xylenes were not detected above the regulatory standards.

## **2.3 PSH Recovery Efforts**

PSH is being actively recovered through hand bailing at the Site on a monthly basis. PSH is bailed from all wells with a practically recoverable amount. During the Q1 2007 site visits, PSH and water mix were recovered from well MW01.

## **3. Closing Remarks**

ARCADIS will continue to perform Site visits and PSH recovery when practical. Results of second quarter 2007 (Q2 2007) sampling and PSH recovery efforts will be reported in the Q2 2007 Groundwater Monitoring Report.

ARCADIS

Tables

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW01	659755.9	577763.7	3219.46	-	3/27/2007	26.84	25.22	1.62	3193.95	
	-	-	-	-	12/12/2006	26.86	25.13	1.73	3193.93	
	-	-	-	-	11/13/2006	26.82	25.11	1.71	3193.97	
	-	-	-	-	10/17/2006	26.30	25.14	26.3	3194.49	Bailed 1.0 gal PSH/water mix
	-	-	-	-	9/11/2006	26.75	25.14	1.61	3194.04	Bailed 1.0 gal
	-	-	-	-	8/16/2006	26.42	25.41	1.01	3194.37	Bailed 1.25 gal
	-	-	-	-	7/18/2006	26.43	25.00	1.43	3194.36	Bailed 2.5 gal
	-	-	-	-	6/19/2006	27.05	25.19	1.86	3193.74	Bailed 2.5 gal
	-	-	-	-	3/27/2006	26.40	24.92	1.48	3194.39	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	3194.53	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	3194.30	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	3194.05	Bailed 2 gal 30% product
	-	-	-	-	7/27/2005	26.80	25.08	1.72	3193.99	Purged 1 gal
	-	-	-	-	5/23/2005	25.92	24.62	1.30	3194.87	320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	3195.51	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	3194.85	Bailed 2.5 gal
	-	-	-	-	2/25/2005	25.85	25.34	0.51	3194.94	Bailed 0.25 gal
	-	-	-	-	2/24/2005	26.14	24.85	1.29	3194.65	Bailed 0.5 gal
MW02	659829.9	577640	3218.32	28.1	3/27/2007	24.02	-	-	3194.30	
	-	-	-	-	12/12/2006	24.66	-	-	3193.66	
	-	-	-	-	11/13/2006	24.13	-	-	3194.19	
	-	-	-	-	10/17/2006	24.35	-	-	3193.97	
	-	-	-	-	9/11/2006	25.16	-	-	3193.16	
	-	-	-	-	8/16/2006	24.65	-	-	3193.67	
	-	-	-	-	6/19/2006	24.40	-	-	3193.92	
	-	-	-	-	3/27/2006	23.98	-	-	3194.34	
	-	-	-	-	2/15/2006	24.19	-	-	3194.13	
	-	-	-	-	1/24/2006	24.00	-	-	3194.32	
MW03	659790.2	577606.4	3217.8	36.4	3/27/2007	23.35	-	-	3194.45	
	-	-	-	-	12/12/2006	23.59	-	-	3194.21	
	-	-	-	-	11/13/2006	23.61	-	-	3194.19	
	-	-	-	-	10/17/2006	23.34	-	-	3194.46	
	-	-	-	-	9/11/2006	23.54	-	-	3194.26	
	-	-	-	-	8/16/2006	24.10	-	-	3193.70	
	-	-	-	-	7/18/2006	24.03	-	-	3193.77	
	-	-	-	-	6/19/2006	23.85	-	-	3193.95	
	-	-	-	-	3/27/2006	23.41	-	-	3194.39	
	-	-	-	-	2/15/2006	23.64	-	-	3194.16	
	-	-	-	-	1/24/2006	23.46	-	-	3194.34	
MW04	659585	577712.5	3221.26	36.4	3/27/2007	27.37	-	-	3193.89	
	-	-	-	-	12/12/2006	27.44	-	-	3193.82	
	-	-	-	-	11/13/2006	27.51	-	-	3193.75	
	-	-	-	-	10/17/2006	28.53	-	-	3192.73	
	-	-	-	-	9/11/2006	27.48	-	-	3193.78	
	-	-	-	-	8/16/2006	27.84	-	-	3193.42	
	-	-	-	-	7/18/2006	27.26	-	-	3194.00	
	-	-	-	-	6/19/2006	27.58	-	-	3193.68	
	-	-	-	-	3/27/2006	27.22	-	-	3194.04	
	-	-	-	-	2/15/2006	27.06	-	-	3194.20	
MW05	659936.9	577766.4	3223.55	37.86	3/27/2007	29.39	-	-	3194.16	
	-	-	-	-	12/12/2006	29.51	-	-	3194.04	
	-	-	-	-	11/13/2006	29.50	-	-	3194.05	
	-	-	-	-	10/17/2006	29.58	-	-	3193.97	
	-	-	-	-	9/11/2006	29.59	-	-	3193.96	
	-	-	-	-	8/16/2006	29.94	-	-	3193.61	
	-	-	-	-	7/18/2006	29.33	-	-	3194.22	
	-	-	-	-	6/19/2006	29.73	-	-	3193.82	
	-	-	-	-	3/27/2006	29.31	-	-	3194.24	
	-	-	-	-	2/15/2006	29.35	-	-	3194.20	
	-	-	-	-	1/24/2006	29.35	-	-	3194.20	

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					Comments
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	
MW06	659576.9	577833	3221.56	39.4	3/27/2007	27.85	-	-	3193.71	
	-	-	-	-	12/12/2006	27.96	-	-	3193.60	
	-	-	-	-	11/13/2006	27.91	-	-	3193.65	
	-	-	-	-	10/17/2006	28.05	-	-	3193.51	
	-	-	-	-	9/11/2006	28.05	-	-	3193.51	
	-	-	-	-	8/16/2006	28.31	-	-	3193.25	
	-	-	-	-	7/18/2006	27.77	-	-	3193.79	
	-	-	-	-	6/19/2006	28.01	-	-	3193.55	
	-	-	-	-	3/27/2006	27.70	-	-	3193.86	
	-	-	-	-	2/15/2006	27.78	-	-	3193.78	
	-	-	-	-	1/24/2006	27.78	-	-	3193.78	
MWA1	659670.9	577785.4	3218.72	34.7	3/27/2007	25.06	-	-	3193.66	
	-	-	-	-	12/12/2006	24.84	-	-	3193.88	
	-	-	-	-	11/13/2006	24.84	-	-	3193.88	
	-	-	-	-	10/17/2006	24.91	-	-	3193.81	
	-	-	-	-	9/11/2006	24.90	-	-	3193.82	
	-	-	-	-	8/16/2006	25.25	-	-	3193.47	
	-	-	-	-	7/17/2006	24.64	-	-	3194.08	
	-	-	-	-	6/19/2006	25.94	-	-	3192.78	
	-	-	-	-	3/27/2006	24.59	-	-	3194.13	
	-	-	-	-	2/15/2006	26.84	-	-	3191.88	
MWA2	659693.2	577818	3220.02	28.7	3/27/2007	26.07	-	-	3193.95	
	-	-	-	-	12/12/2006	26.61	-	-	3193.41	
	-	-	-	-	11/13/2006	26.21	-	-	3193.81	
	-	-	-	-	10/17/2006	26.27	-	-	3193.75	
	-	-	-	-	9/11/2006	26.24	-	-	3193.78	
	-	-	-	-	8/16/2006	26.57	-	-	3193.45	
	-	-	-	-	7/17/2006	26.01	-	-	3194.01	
	-	-	-	-	6/19/2006	26.30	-	-	3193.72	
	-	-	-	-	3/27/2006	25.95	-	-	3194.07	
	-	-	-	-	2/15/2006	26.20	-	-	3193.82	
	-	-	-	-	1/24/2006	26.01	-	-	3194.01	
	-	-	-	-	1/24/2006	24.64	-	-	3195.38	

PSH: Phase-Separated Hydrocarbon

**Table 2. Summary of BTEX Concentrations in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	Ethyl				TPH-GRO mg/L
		Benzene -----ug/L-----	Toluene	benzene	Xylenes	
MW02	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW03	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW05	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW06	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 0.5	< 5.0	< 1.5	-
	3/27/2006	< 1.0	49	< 1.0	< 3.0	< 0.1
MWA01	3/27/2007	21	< 5.0	5.2	< 3.0	-
	11/14/2006	6.5	< 5.0	2.9	< 3.0	-
	8/16/2006	2.1	< 5.0	2.7	< 1.5	-
DUP	8/16/2006	4.6	< 5.0	7.6	< 1.5	-
	3/27/2006	3.2	< 5.0	16	< 3.0	0.37
MWA02	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	3/27/2007	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	8/16/2006	0.97	< 5.0	< 0.5	1.8	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	0.47

Notes:

MW: Monitoring well

TPH: Total Petroleum Hydrocarbons

ug/L: Micrograms per liter

mg/L: Milligrams per liter

GRO: Gasoline Range Organics

-: Not analyzed

**Table 3. Summary of Field Parameters in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	pH (s.u.)	Conductivity (MS/cm)	Temperature (°C)	Dissolved Oxygen (g/L)	ORP (mV)
MW02	3/27/2007	7.10	3.209	19.92	5.81	181.0
	11/13/2006	7.10	3.661	19.04	5.81	198.3
	8/16/2006	7.15	3.432	19.99	5.38	184.6
	3/27/2006	7.35	2.600	20.60	3.58	-
MW03	3/27/2007	6.83	2.493	19.50	3.93	136.6
	11/13/2006	6.77	2.481	18.97	3.56	188.2
	8/16/2006	6.89	2.380	19.77	3.98	123.0
	3/27/2006	7.04	1.831	20.60	2.88	-
MW04	3/27/2007	6.99	3.059	19.45	5.63	153.4
	11/13/2006	6.87	3.217	19.32	6.10	211.2
	8/16/2006	7.04	2.895	19.46	6.43	137.4
	3/27/2006	7.05	2.200	21.40	4.35	-
MW05	3/27/2007	7.15	6.744	19.94	4.74	164.3
	11/13/2006	7.03	6.910	19.57	6.20	222.2
	8/16/2006	7.19	6.388	19.80	6.03	141.8
	3/27/2006	7.39	4.280	21.20	4.33	-
MW06	3/27/2007	7.17	2.714	19.64	6.25	125.6
	11/13/2006	6.89	2.852	19.25	4.13	173.1
	8/16/2006	7.22	2.618	19.93	6.63	110.4
	3/27/2006	7.24	1.800	20.40	4.69	-
MWA01	3/27/2007	6.74	3.019	19.89	3.52	24.3
	11/13/2006	6.69	3.125	19.50	5.39	110.3
	8/16/2006	6.81	2.890	20.44	1.54	10.0
	3/27/2006	6.95	2.000	20.40	1.69	-
MWA02	3/27/2007	7.06	4.248	21.41	5.42	235.3
	11/13/2006	7.14	4.320	19.50	5.34	120.7
	8/16/2006	7.08	4.047	20.43	3.55	88.7
	3/27/2006	7.21	2.870	20.20	3.55	-

Notes:

ORP: Oxidation reduction potential

s.u.: Standard unit

uS/cm: microSiemens per centimeter

°C: Degree Celsius

g/L: Grams per liter

mV: Millivolts

ARCADIS

Figures

DWG DATE: 5/17/07 | PRJCT NO.: C00001042.0003 | HARD FILE: | DRAWING: COSLM-0051 | CHECKED: TE | APPROVED: GN | DRAFTER: PMW



Map created with TOPO! © 2003 National Geographic (www.nationalgeographic.com/topo)

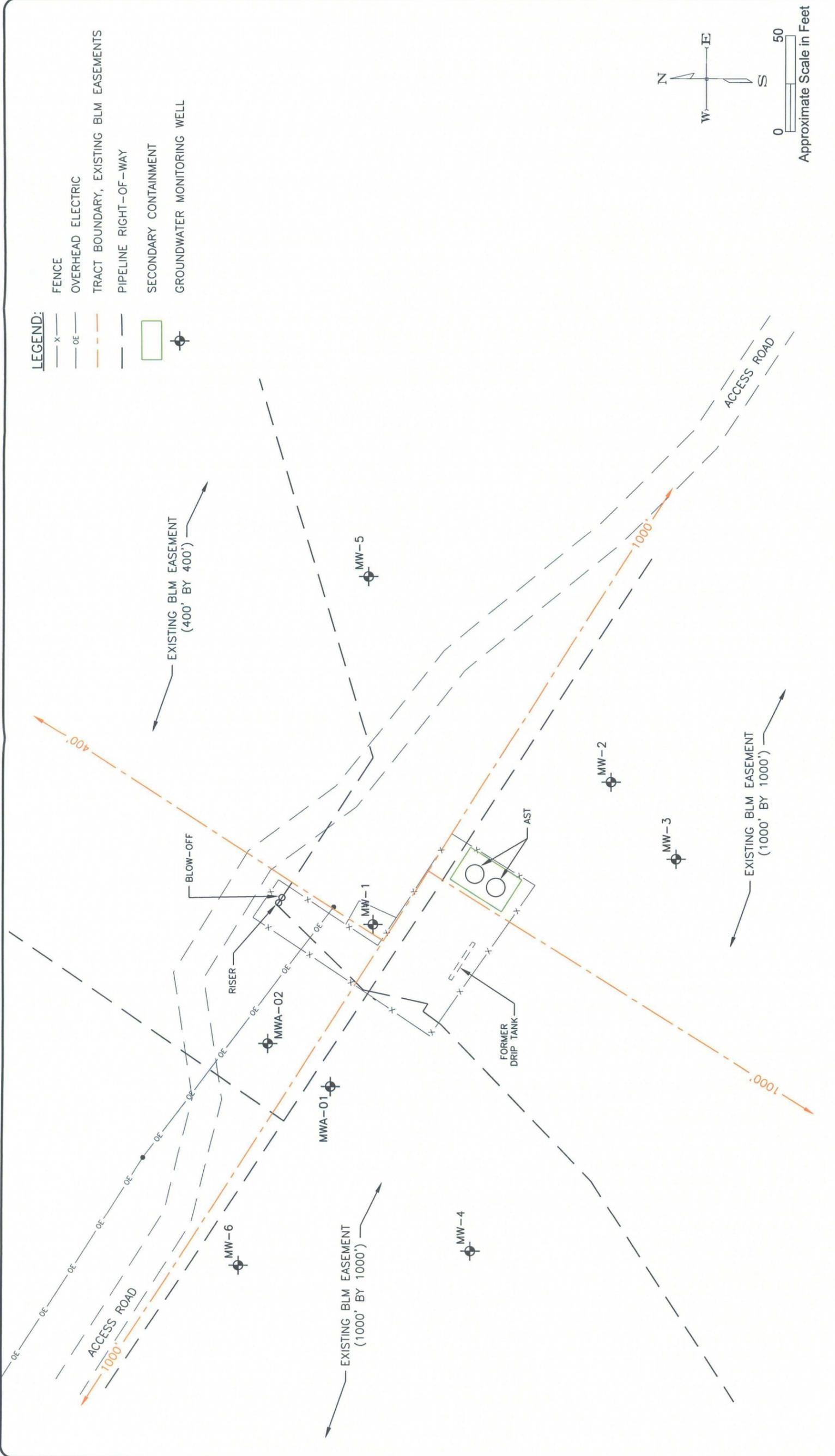


### Site Location Map

PCA JUNCTION  
Eddy County, New Mexico

FIGURE

1



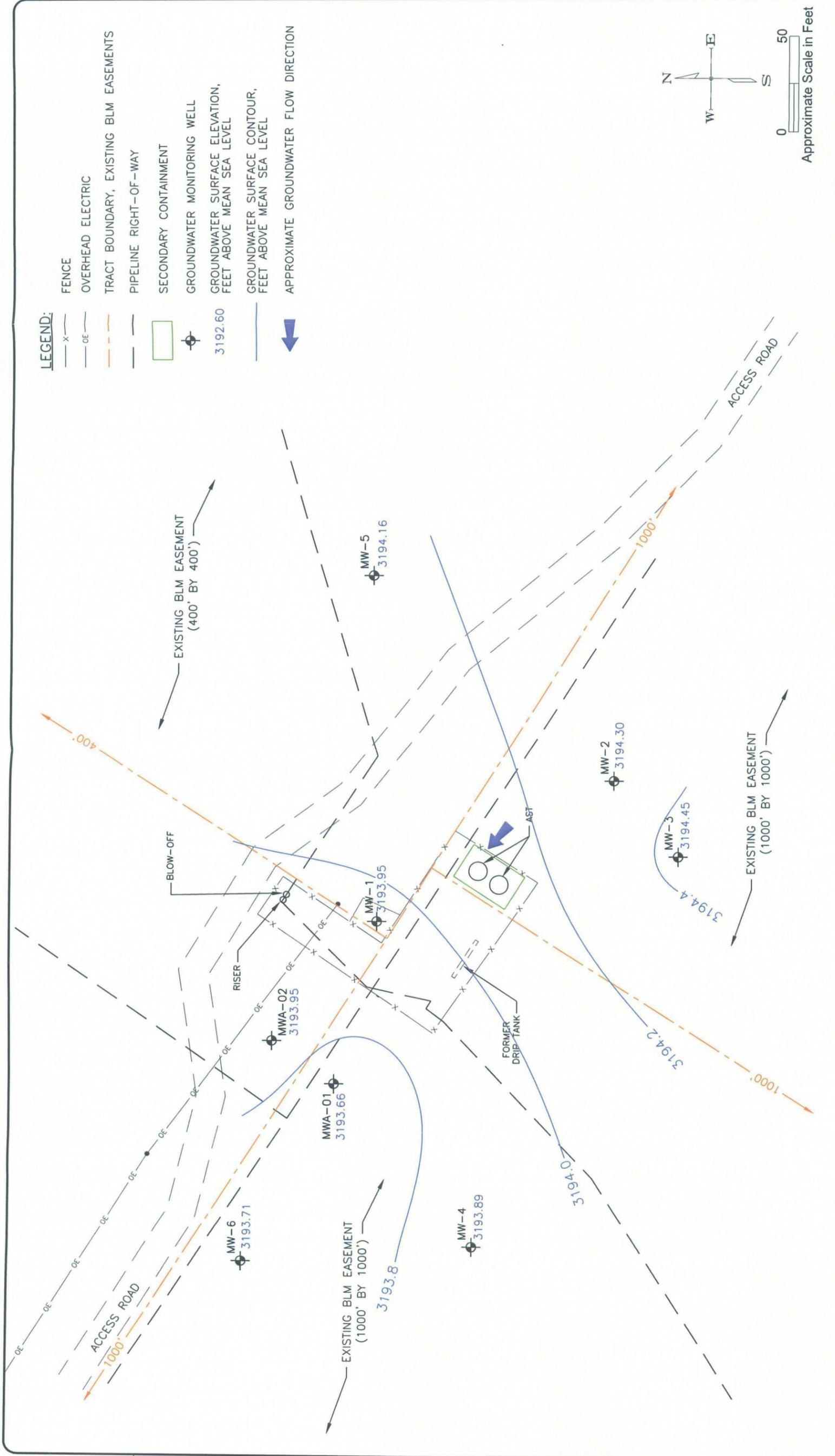
DWG DATE: 3/23/07 PRCT NO.: C0001042.0003 DRAWING: COBAS-0964 CHECKED: PS APPROVED: GN DRAFTER: MTH



**Site Map**  
 PCA JUNCTION  
 Eddy County, New Mexico

FIGURE  
**2**

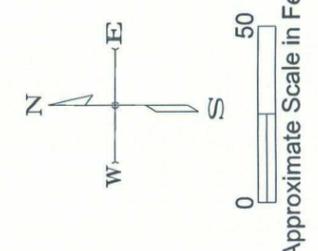
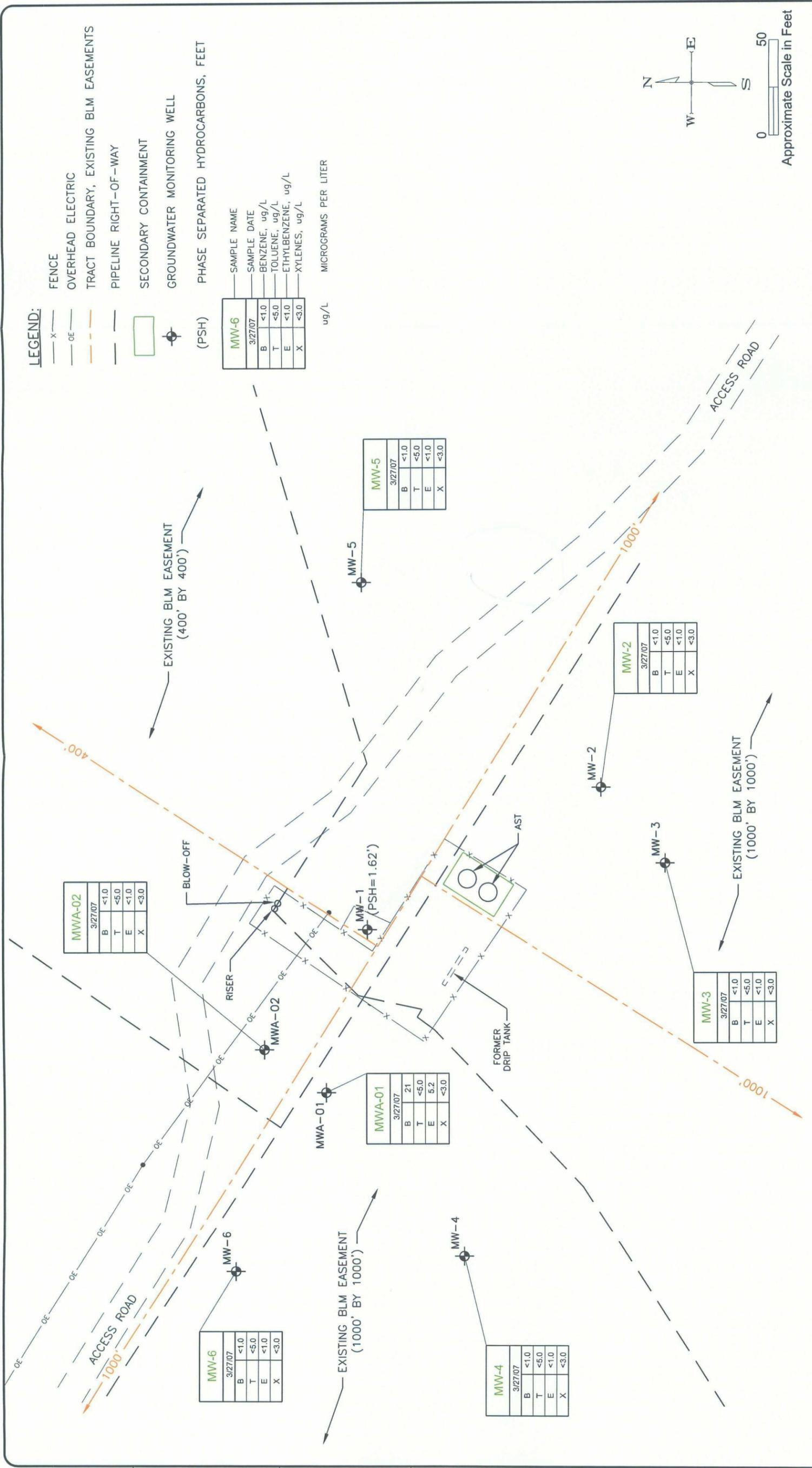
- LEGEND:**
- FENCE
  - OVERHEAD ELECTRIC
  - TRACT BOUNDARY, EXISTING BLM EASEMENTS
  - PIPELINE RIGHT-OF-WAY
  - SECONDARY CONTAINMENT
  - GROUNDWATER MONITORING WELL
  - GROUNDWATER SURFACE ELEVATION, FEET ABOVE MEAN SEA LEVEL
  - GROUNDWATER SURFACE CONTOUR, FEET ABOVE MEAN SEA LEVEL
  - APPROXIMATE GROUNDWATER FLOW DIRECTION



**Groundwater Potentiometric Surface Map**  
 March 27, 2007



PCA JUNCTION  
 Eddy County, New Mexico



Groundwater Sample Results  
March 2007



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**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
SCIENCE CORP.

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(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ranch CO  
630 Plaza Dr Ste 200

Highlands Ranch, CO 80129-2379

Report Summary

Monday April 09, 2007

Report Number: L287326

Samples Received: 04/03/07

Client Project:

Description: PCA Junction

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Reviewed By:

Chelli Boucher, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, WA - C1915

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-2  
Collected By :  
Collection Date : 03/27/07 14:49

ESC Sample # : L287326-01  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0420	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0420	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0420	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0420	1
Surrogate Recovery							
Toluene-d8	98.4		% Rec.		8260B	04/08/07 0420	1
Dibromofluoromethane	95.0		% Rec.		8260B	04/08/07 0420	1
4-Bromofluorobenzene	99.0		% Rec.		8260B	04/08/07 0420	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-3  
Collected By :  
Collection Date : 03/27/07 15:08

ESC Sample # : L287326-02  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0443	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0443	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0443	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0443	1
Surrogate Recovery							
Toluene-d8	100.		% Rec.		8260B	04/08/07 0443	1
Dibromofluoromethane	86.8		% Rec.		8260B	04/08/07 0443	1
4-Bromofluorobenzene	98.4		% Rec.		8260B	04/08/07 0443	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-4  
Collected By :  
Collection Date : 03/27/07 13:54

ESC Sample # : L287326-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0507	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0507	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0507	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0507	1
Surrogate Recovery							
Toluene-d8	99.5		% Rec.		8260B	04/08/07 0507	1
Dibromofluoromethane	90.8		% Rec.		8260B	04/08/07 0507	1
4-Bromofluorobenzene	94.5		% Rec.		8260B	04/08/07 0507	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-5  
Collected By :  
Collection Date : 03/27/07 14:26

ESC Sample # : L287326-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0531	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0531	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0531	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0531	1
Surrogate Recovery							
Toluene-d8	101.		% Rec.		8260B	04/08/07 0531	1
Dibromofluoromethane	90.0		% Rec.		8260B	04/08/07 0531	1
4-Bromofluorobenzene	95.3		% Rec.		8260B	04/08/07 0531	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MW-6  
Collected By :  
Collection Date : 03/27/07 13:26

ESC Sample # : L287326-05

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0554	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0554	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0554	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0554	1
Surrogate Recovery							
Toluene-d8	98.8		% Rec.		8260B	04/08/07 0554	1
Dibromofluoromethane	97.6		% Rec.		8260B	04/08/07 0554	1
4-Bromofluorobenzene	95.6		% Rec.		8260B	04/08/07 0554	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MWA-02  
Collected By :  
Collection Date : 03/27/07 12:15

ESC Sample # : L287326-06  
Site ID :  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0617	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0617	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0617	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0617	1
Surrogate Recovery							
Toluene-d8	99.3		% Rec.		8260B	04/08/07 0617	1
Dibromofluoromethane	90.3		% Rec.		8260B	04/08/07 0617	1
4-Bromofluorobenzene	98.4		% Rec.		8260B	04/08/07 0617	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Tax I.D. 62-0814289

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-DUP  
Collected By :  
Collection Date : 03/27/07 00:00

ESC Sample # : L287326-07

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0641	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0641	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0641	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0641	1
Surrogate Recovery							
Toluene-d8	100.		% Rec.		8260B	04/08/07 0641	1
Dibromofluoromethane	92.2		% Rec.		8260B	04/08/07 0641	1
4-Bromofluorobenzene	99.2		% Rec.		8260B	04/08/07 0641	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-TRIP BLANK  
Collected By :  
Collection Date : 03/27/07 00:00

ESC Sample # : L287326-08

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	04/08/07 0159	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0159	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/08/07 0159	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0159	1
Surrogate Recovery							
Toluene-d8	99.6		% Rec.		8260B	04/08/07 0159	1
Dibromofluoromethane	91.9		% Rec.		8260B	04/08/07 0159	1
4-Bromofluorobenzene	98.9		% Rec.		8260B	04/08/07 0159	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.  
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Reported: 04/09/07 10:16 Revised: 04/09/07 15:15



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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 09, 2007

Date Received : April 03, 2007  
Description : PCA Junction  
Sample ID : PCA-MWA-01  
Collected By :  
Collection Date : 03/27/07 12:55

ESC Sample # : L287326-10

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.021	0.0010	mg/l		8260B	04/08/07 0704	1
Toluene	BDL	0.0050	mg/l		8260B	04/08/07 0704	1
Ethylbenzene	0.0052	0.0010	mg/l		8260B	04/08/07 0704	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/08/07 0704	1
Surrogate Recovery							
Toluene-d8	100.		% Rec.		8260B	04/08/07 0704	1
Dibromofluoromethane	91.5		% Rec.		8260B	04/08/07 0704	1
4-Bromofluorobenzene	102.		% Rec.		8260B	04/08/07 0704	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.  
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Reported: 04/09/07 10:16 Revised: 04/09/07 15:15

Summary of Remarks For Samples Printed  
04/09/07 at 15:15:39

TSR Signing Reports: 070  
R5 - Desired TAT

No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; ARCADIS EDD and  
QC2 on all; Prefix sample IDs with PCA-

Sample: L287326-01 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-02 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-03 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-04 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-05 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-06 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-07 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-08 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16  
Sample: L287326-10 Account: DUKARCAD Received: 04/03/07 09:00 Due Date: 04/10/07 00:00 RPT Date: 04/09/07 10:16



**Q4 2006 GROUNDWATER  
MONITORING REPORT**

PCA Junction  
Eddy County, New Mexico

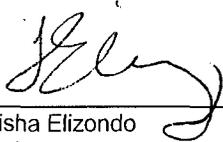
January 2007

ARCADIS



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Paul A. Schwarzweller  
Environmental Scientist



---

Trisha Elizondo  
Task Manager

**Q4 2006 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
DCP Midstream

Prepared by:  
ARCADIS U.S., Inc.  
630 Plaza Drive  
Suite 100  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
6 June 2007

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<b>2. Groundwater Monitoring</b>	<b>1</b>
2.1 Water Level Gauging	1
2.2 Groundwater Quality Monitoring	2
2.3 PSH Recovery Efforts	2
<b>3. Closing Remarks</b>	<b>2</b>

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1	Summary of Groundwater Elevations
2	Summary of BTEX Concentrations in Groundwater
3	Summary of Field Parameters in Groundwater

**Figures**

1	Site Location Map
2	Site Map
3	Groundwater Sample Results – November 2006

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A	Laboratory Analytical Reports
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## 1. Site Location and Background

ARCADIS is submitting to DCP Midstream (DCP) the results of groundwater monitoring activities and phase-separated hydrocarbon (PSH) recovery efforts that were performed during the fourth quarter of 2006 (Q4 2006) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The Site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of pigging. The Site occupies approximately 4 acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release at the Site was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the Site in September 2000. Benzene was discovered in the soil and groundwater below the on-site tank battery. In 2002, PSH was observed in a groundwater monitoring well.

The ownership of the PCA Junction was transferred from COP to Duke Energy Field Services (DEFS) on March 10, 2004. DEFS changed its name to DCP in January 2006. In November 2004, DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD).

## 2. Groundwater Monitoring

ARCADIS conducted quarterly groundwater monitoring activities at the Site on November 13, 2006. Monitoring consisted of the measurement of water levels from eight groundwater monitoring wells. Groundwater samples were collected from seven of the wells for water quality analysis. Well MW01 exhibited measurable PSH and therefore was not sampled. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260.

### 2.1 Water Level Gauging

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from approximately 23.61 to 29.50 feet below ground surface. PSH was detected in one well, MW01, at a thickness of 1.71 feet.

## 2.2 Groundwater Quality Monitoring

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers, and packed and shipped in accordance with accepted practices to Environmental Science Corporation in Mt. Juliet, Tennessee for analyses.

Table 2 summarizes BTEX concentrations in the groundwater collected during the Q4 2006 sampling event and the laboratory analytical reports are included in Appendix A. The groundwater sample results are also posted on Figure 3, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q4 2006 analytical results can be summarized as follows:

- Benzene was detected in one groundwater sample from monitoring well MWA01 with a concentration of 6.5 micrograms per liter (ug/L), which is below the regulatory standard of 10 ug/L. Toluene, ethylbenzene, and xylenes were not detected above the regulatory standards.

## 2.3 PSH Recovery Efforts

As noted on Table 1, PSH is being actively recovered through hand bailing efforts when practical. During the Q4 2006 site visits, approximately 7.25 gallons of a PSH and water mix were recovered from well MW01.

## 3. Closing Remarks

ARCADIS will continue to perform Site visits and PSH recovery when practical. Results of first quarter 2007 (Q1 2007) sampling and PSH recovery efforts will be reported in the Q1 2007 Groundwater Monitoring Report. ARCADIS anticipates completing a survey of the existing wells during Q1 2007, and therefore will be able to provide potentiometric surface maps for the Site in future monitoring reports.

ARCADIS

Tables

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					Comments
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	
MW01	-	-	-	-	12/12/2006	26.86	25.13	1.73	-	
	-	-	-	-	11/13/2006	26.82	25.11	1.71	-	
	-	-	-	-	10/17/2006	26.30	25.14	26.3	-	Bailed 1.0 gal PSH/water mix
	-	-	-	-	9/11/2006	26.75	25.14	1.61	-	Bailed 1.0 gal
	-	-	-	-	8/16/2006	26.42	25.41	1.01	-	Bailed 1.25 gal
	-	-	-	-	7/18/2006	26.43	25.00	1.43	-	Bailed 2.5 gal
	-	-	-	-	6/19/2006	27.05	25.19	1.86	-	Bailed 2.5 gal
	-	-	-	-	3/27/2006	26.40	24.92	1.48	-	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	-	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	-	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	-	
	-	-	-	-	7/27/2005	26.80	25.08	1.72	-	Bailed 2 gal 30% product
	-	-	-	-	5/23/2005	25.92	24.62	1.30	-	Purged 1 gal 320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	-	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	-	Bailed 2.5 gal
	-	-	-	-	2/25/2005	25.85	25.34	0.51	-	Bailed 0.25 gal
-	-	-	-	2/24/2005	26.14	24.85	1.29	-	Bailed 0.5 gal	
MW02	-	-	-	-	12/12/2006	24.66	-	-	-	
	-	-	-	-	11/13/2006	24.13	-	-	-	
	-	-	-	-	10/17/2006	24.35	-	-	-	
	-	-	-	-	9/11/2006	25.16	-	-	-	
	-	-	-	-	8/16/2006	24.65	-	-	-	
	-	-	-	-	6/19/2006	24.40	-	-	-	
	-	-	-	-	3/27/2006	23.98	-	-	-	
	-	-	-	-	2/15/2006	24.19	-	-	-	
-	-	-	-	1/24/2006	24.00	-	-	-		
MW03	-	-	-	-	12/12/2006	23.59	-	-	-	
	-	-	-	-	11/13/2006	23.61	-	-	-	
	-	-	-	-	10/17/2006	23.34	-	-	-	
	-	-	-	-	9/11/2006	23.54	-	-	-	
	-	-	-	-	8/16/2006	24.10	-	-	-	
	-	-	-	-	7/18/2006	24.03	-	-	-	
	-	-	-	-	6/19/2006	23.85	-	-	-	
	-	-	-	-	3/27/2006	23.41	-	-	-	
-	-	-	-	2/15/2006	23.64	-	-	-		
-	-	-	-	1/24/2006	23.46	-	-	-		
MW04	-	-	-	-	12/12/2006	27.44	-	-	-	
	-	-	-	-	11/13/2006	27.51	-	-	-	
	-	-	-	-	10/17/2006	28.53	-	-	-	
	-	-	-	-	9/11/2006	27.48	-	-	-	
	-	-	-	-	8/16/2006	27.84	-	-	-	
	-	-	-	-	7/18/2006	27.26	-	-	-	
	-	-	-	-	6/19/2006	27.58	-	-	-	
	-	-	-	-	3/27/2006	27.22	-	-	-	
-	-	-	-	2/15/2006	27.06	-	-	-		
MW05	-	-	-	-	12/12/2006	29.51	-	-	-	
	-	-	-	-	11/13/2006	29.50	-	-	-	
	-	-	-	-	10/17/2006	29.58	-	-	-	
	-	-	-	-	9/11/2006	29.59	-	-	-	
	-	-	-	-	8/16/2006	29.94	-	-	-	
	-	-	-	-	7/18/2006	29.33	-	-	-	
	-	-	-	-	6/19/2006	29.73	-	-	-	
	-	-	-	-	3/27/2006	29.31	-	-	-	
-	-	-	-	2/15/2006	29.35	-	-	-		
-	-	-	-	1/24/2006	29.35	-	-	-		
MW06	-	-	-	-	12/12/2006	27.96	-	-	-	
	-	-	-	-	11/13/2006	27.91	-	-	-	
	-	-	-	-	10/17/2006	28.05	-	-	-	
	-	-	-	-	9/11/2006	28.05	-	-	-	
	-	-	-	-	8/16/2006	28.31	-	-	-	
	-	-	-	-	7/18/2006	27.77	-	-	-	
	-	-	-	-	6/19/2006	28.01	-	-	-	
	-	-	-	-	3/27/2006	27.70	-	-	-	
-	-	-	-	2/15/2006	27.78	-	-	-		
-	-	-	-	1/24/2006	27.78	-	-	-		

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 DCP Midstream

Well ID	Survey Data (feet)				Depth to Water Data (feet)					Comments
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	
MWA1	-	-	-	-	12/12/2006	24.84	-	-	-	
	-	-	-	-	11/13/2006	24.84	-	-	-	
	-	-	-	-	10/17/2006	24.91	-	-	-	
	-	-	-	-	9/11/2006	24.90	-	-	-	
	-	-	-	-	8/16/2006	25.25	-	-	-	
	-	-	-	-	7/17/2006	24.64	-	-	-	
	-	-	-	-	6/19/2006	25.94	-	-	-	
	-	-	-	-	3/27/2006	24.59	-	-	-	
	-	-	-	-	2/15/2006	26.84	-	-	-	
MWA2	-	-	-	-	12/12/2006	26.61	-	-	-	
	-	-	-	-	11/13/2006	26.21	-	-	-	
	-	-	-	-	10/17/2006	26.27	-	-	-	
	-	-	-	-	9/11/2006	26.24	-	-	-	
	-	-	-	-	8/16/2006	26.57	-	-	-	
	-	-	-	-	7/17/2006	26.01	-	-	-	
	-	-	-	-	6/19/2006	26.30	-	-	-	
	-	-	-	-	3/27/2006	25.95	-	-	-	
	-	-	-	-	2/15/2006	26.20	-	-	-	
	-	-	-	1/24/2006	26.01	-	-	-		
	-	-	-	1/24/2006	24.64	-	-	-		

PSH: Phase-Separated Hydrocarbon

**Table 2. Summary of BTEX Concentrations in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	Benzene	Ethyl			TPH-GRO
			Toluene	benzene	Xylenes	
		-----ug/L-----				mg/L
MW02	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW03	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW05	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW06	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	< 0.5	< 0.5	< 5.0	< 1.5	-
	3/27/2006	< 1.0	49	< 1.0	< 3.0	< 0.1
MWA01	11/14/2006	6.5	<5.0	2.9	<3.0	-
	8/16/2006	2.1	< 5.0	2.7	< 1.5	-
DUP	8/16/2006	4.6	< 5.0	7.6	< 1.5	-
	3/27/2006	3.2	< 5.0	16	< 3.0	0.37
MWA02	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
DUP	11/14/2006	< 1.0	< 5.0	< 1.0	< 3.0	-
	8/16/2006	0.97	< 5.0	< 0.5	1.8	-
	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	0.47

Notes:

MW: Monitoring well

TPH: Total Petroleum Hydrocarbons

ug/L: Micrograms per liter

mg/L: Milligrams per liter

GRO: Gasoline Range Organics

-: Not analyzed

**Table 3. Summary of Field Parameters in Groundwater  
PCA Junction  
DCP Midstream**

Well ID	Sample Date	pH (s.u.)	Conductivity (MS/cm)	Temperature (°C)	Dissolved Oxygen (g/L)	ORP (mV)
MW02	11/13/2006	7.10	3.661	19.04	5.81	198.3
MW02	8/16/2006	7.15	3.432	19.99	5.38	184.6
MW02	3/27/2006	7.35	2.600	20.60	3.58	-
MW03	11/13/2006	6.77	2.481	18.97	3.56	188.2
MW03	8/16/2006	6.89	2.380	19.77	3.98	123.0
MW03	3/27/2006	7.04	1.831	20.60	2.88	-
MW04	11/13/2006	6.87	3.217	19.32	6.10	211.2
MW04	8/16/2006	7.04	2.895	19.46	6.43	137.4
MW04	3/27/2006	7.05	2.200	21.40	4.35	-
MW05	11/13/2006	7.03	6.910	19.57	6.20	222.2
MW05	8/16/2006	7.19	6.388	19.80	6.03	141.8
MW05	3/27/2006	7.39	4.280	21.20	4.33	-
MW06	11/13/2006	6.89	2.852	19.25	4.13	173.1
MW06	8/16/2006	7.22	2.618	19.93	6.63	110.4
MW06	3/27/2006	7.24	1.800	20.40	4.69	-
MWA01	11/13/2006	6.69	3.125	19.50	5.39	110.3
MWA01	8/16/2006	6.81	2.890	20.44	1.54	10.0
MWA01	3/27/2006	6.95	2.000	20.40	1.69	-
MWA02	11/13/2006	7.14	4.320	19.50	5.34	120.7
MWA02	8/16/2006	7.08	4.047	20.43	3.55	88.7
MWA02	3/27/2006	7.21	2.870	20.20	3.55	-

Notes:

ORP: Oxidation reduction potential

s.u.: Standard unit

uS/cm: microSiemens per centimeter

°C: Degree Celsius

g/L: Grams per liter

mV: Millivolts

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Figures

DRAFTER: PMW

APPROVED: GN

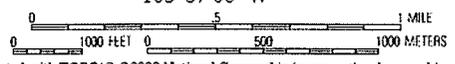
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DRAWING: COSLM-0051

HARD FILE:

PRCT NO.: C0000889.2801

DWG DATE: 11/17/04



Map created with TOPO!® ©2003 National Geographic ([www.nationalgeographic.com/topo](http://www.nationalgeographic.com/topo))



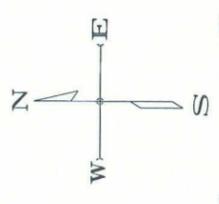
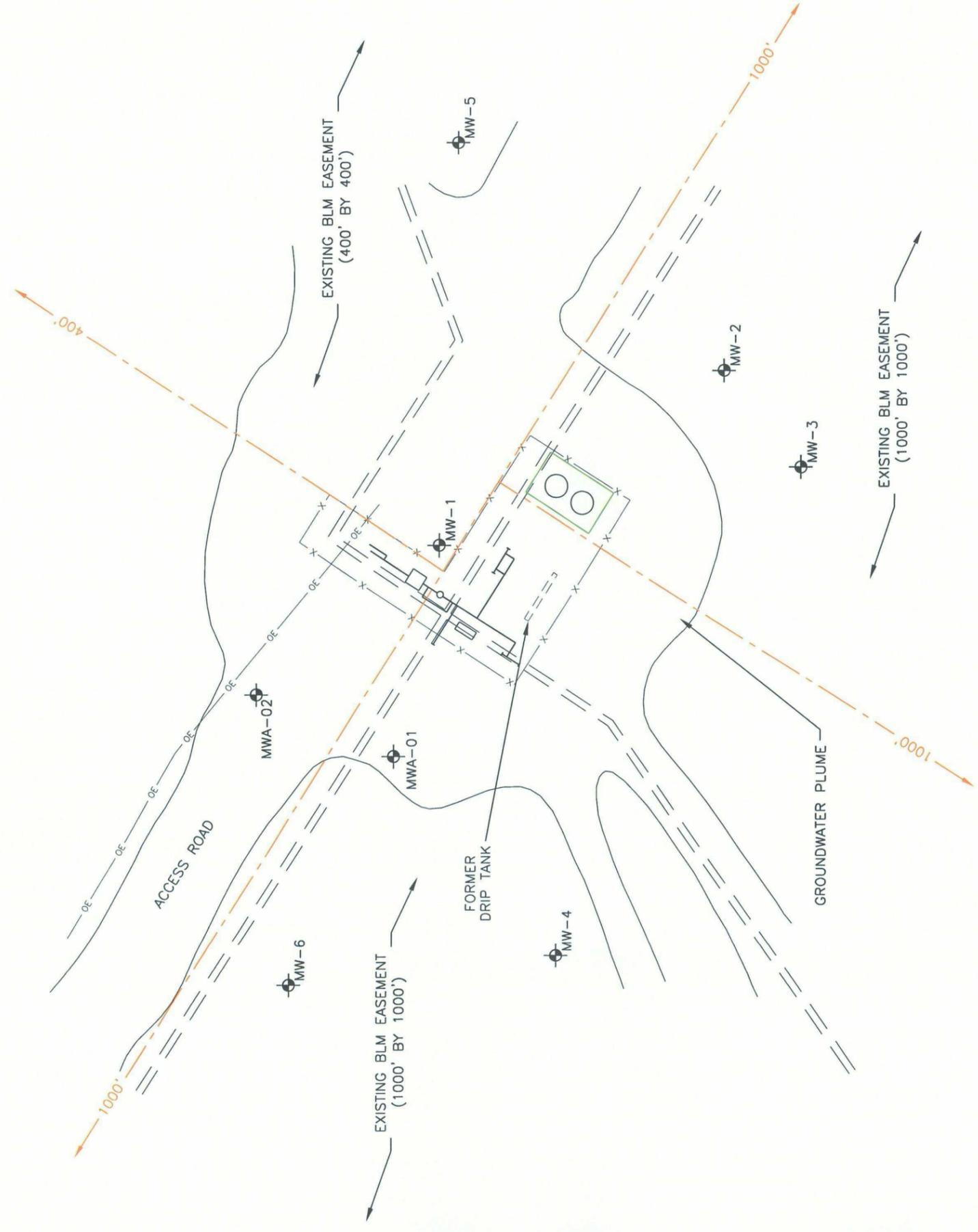
# Site Location Map

PCA JUNCTION  
Eddy County, New Mexico

FIGURE

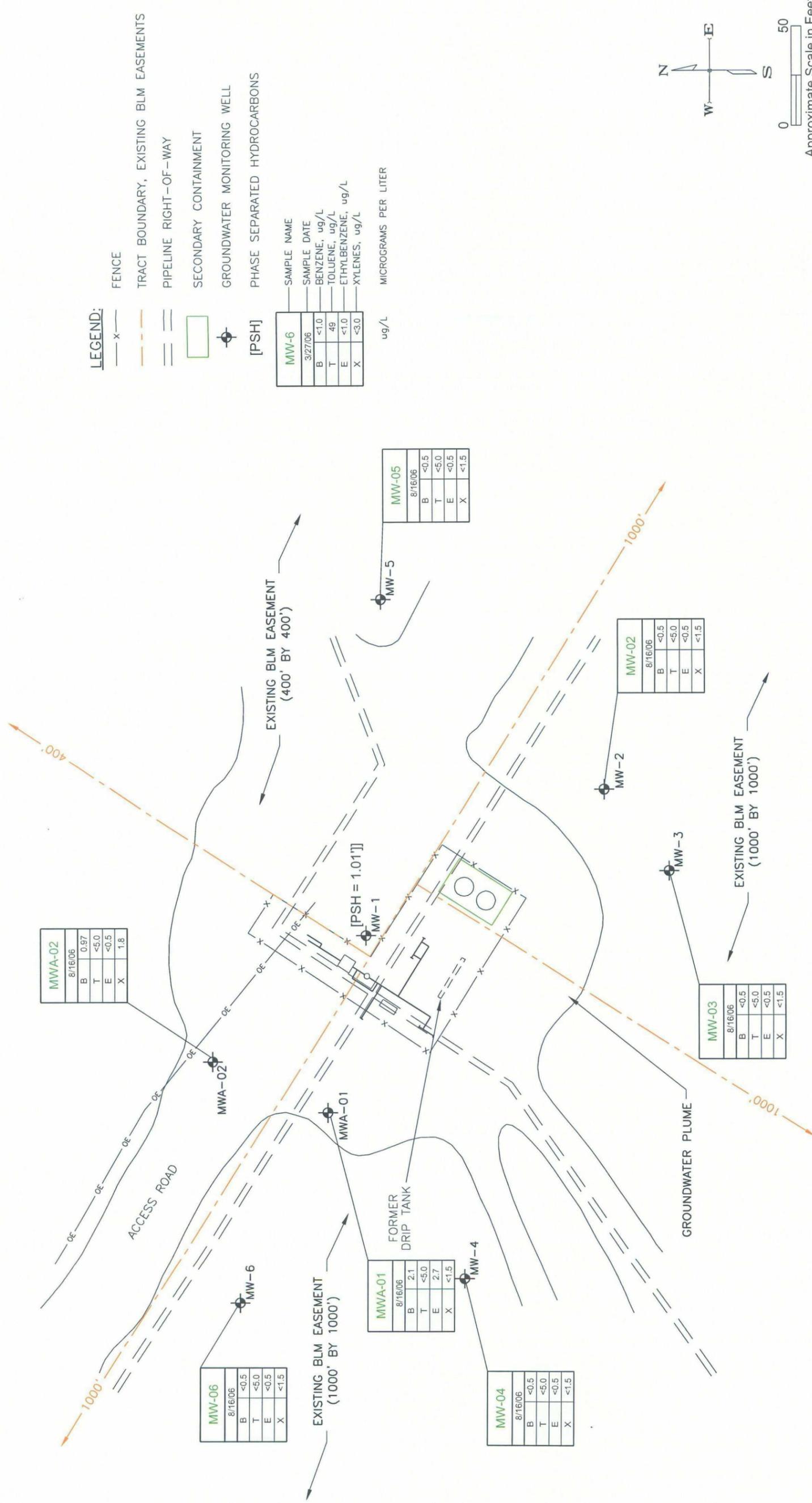
1

- LEGEND:**
- FENCE
  - TRACT BOUNDARY, EXISTING BLM EASEMENTS
  - PIPELINE RIGHT-OF-WAY
  - SECONDARY CONTAINMENT
  - GROUNDWATER MONITORING WELL



**Site Map**  
 PCA JUNCTION  
 Eddy County, New Mexico





Groundwater Sample Results  
August 2006  
PCA JUNCTION  
Eddy County, New Mexico



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**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
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12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ranch CO  
630 Plaza Dr Ste 200

Highlands Ranch, CO 80129-2379

Report Summary

Tuesday November 21, 2006

Report Number: L269666

Samples Received: 11/17/06

Client Project:

Description: PCA Junction

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Reviewed By:

*Cheli Boucher*  
Cheli Boucher, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, WA - C1915

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-2  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 17:28

ESC Sample # : L269666-01

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0251	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0251	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0251	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0251	1
Surrogate Recovery							
Toluene-d8	85.9		% Rec.		8260B	11/20/06 0251	1
Dibromofluoromethane	82.9		% Rec.		8260B	11/20/06 0251	1
4-Bromofluorobenzene	77.3		% Rec.	J2	8260B	11/20/06 0251	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-3  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 17:45

ESC Sample # : L269666-02

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0313	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0313	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0313	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0313	1
Surrogate Recovery							
Toluene-d8	87.4		% Rec.		8260B	11/20/06 0313	1
Dibromofluoromethane	85.2		% Rec.		8260B	11/20/06 0313	1
4-Bromofluorobenzene	79.2		% Rec.		8260B	11/20/06 0313	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-4  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 16:46

ESC Sample # : L269666-03

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0336	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0336	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0336	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0336	1
Surrogate Recovery							
Toluene-d8	88.4		% Rec.		8260B	11/20/06 0336	1
Dibromofluoromethane	84.1		% Rec.		8260B	11/20/06 0336	1
4-Bromofluorobenzene	81.3		% Rec.		8260B	11/20/06 0336	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-5  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 17:05

ESC Sample # : L269666-04

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0359	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0359	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0359	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0359	1
Surrogate Recovery							
Toluene-d8	89.0		% Rec.		8260B	11/20/06 0359	1
Dibromofluoromethane	84.6		% Rec.		8260B	11/20/06 0359	1
4-Bromofluorobenzene	79.5		% Rec.		8260B	11/20/06 0359	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-6  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 16:28

ESC Sample # : L269666-05

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0421	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0421	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0421	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0421	1
Surrogate Recovery							
Toluene-d8	87.4		% Rec.		8260B	11/20/06 0421	1
Dibromofluoromethane	84.9		% Rec.		8260B	11/20/06 0421	1
4-Bromofluorobenzene	81.7		% Rec.		8260B	11/20/06 0421	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MWA-01  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 16:09

ESC Sample # : L269666-06

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.0065	0.0010	mg/l		8260B	11/20/06 0444	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0444	1
Ethylbenzene	0.0029	0.0010	mg/l		8260B	11/20/06 0444	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0444	1
Surrogate Recovery							
Toluene-d8	88.2		% Rec.		8260B	11/20/06 0444	1
Dibromofluoromethane	84.9		% Rec.		8260B	11/20/06 0444	1
4-Bromofluorobenzene	82.0		% Rec.		8260B	11/20/06 0444	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

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AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-MWA-02  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 15:44

ESC Sample # : L269666-07

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0506	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0506	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0506	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0506	1
Surrogate Recovery							
Toluene-d8	89.8		% Rec.		8260B	11/20/06 0506	1
Dibromofluoromethane	84.6		% Rec.		8260B	11/20/06 0506	1
4-Bromofluorobenzene	82.5		% Rec.		8260B	11/20/06 0506	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction  
Sample ID : PCA-DUP  
Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 00:00

ESC Sample # : L269666-08

Site ID :

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0529	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0529	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0529	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0529	1
Surrogate Recovery							
Toluene-d8	87.0		% Rec.		8260B	11/20/06 0529	1
Dibromofluoromethane	85.2		% Rec.		8260B	11/20/06 0529	1
4-Bromofluorobenzene	79.4		% Rec.		8260B	11/20/06 0529	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

November 21, 2006

Date Received : November 17, 2006  
Description : PCA Junction

ESC Sample # : L269666-09

Sample ID : PCA-TRIP BLANK

Site ID :

Collected By : Jerry S. Longwell  
Collection Date : 11/13/06 00:00

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.0010	mg/l		8260B	11/20/06 0037	1
Toluene	BDL	0.0050	mg/l		8260B	11/20/06 0037	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	11/20/06 0037	1
Total Xylenes	BDL	0.0030	mg/l		8260B	11/20/06 0037	1
Surrogate Recovery							
Toluene-d8	88.5		% Rec.		8260B	11/20/06 0037	1
Dibromofluoromethane	82.3		% Rec.		8260B	11/20/06 0037	1
4-Bromofluorobenzene	80.9		% Rec.		8260B	11/20/06 0037	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Attachment A  
List of Analytes with QC Qualifiers

Sample #	Analyte	Qualifier
L269666-01	4-Bromofluorobenzene	J2

Attachment B  
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods, it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable unless qualified as 'R' (Rejected).

Definitions

**Accuracy** - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

**Precision** - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Difference.

**Surrogate** - Organic compounds that are similar in chemical composition, extraction, and chromatography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

	Control Limits		(AQ)	(SS)
2-Fluorophenol	31-119	Nitrobenzene-d5 43-118	Dibromfluoromethane 68-128	64-125
Phenol-d5	12-134	2-Fluorobiphenyl 45-128	Toluene-d8 76-115	69-118
2,4,6-Tribromophenol	51-141	Terphenyl-d14 43-137	4-Bromofluorobenzene 79-127	61-134

**TIC** - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed  
11/21/06 at 00:22:32

TSR Signing Reports: 070  
R5 - Desired TAT

No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; ARCADIS EDD and  
QC2 on all; Prefix sample IDs with PCA-

Sample: L269666-01 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-02 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-03 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-04 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-05 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-06 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-07 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-08 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2  
Sample: L269666-09 Account: DUKARCAD Received: 11/17/06 09:00 Due Date: 11/27/06 00:00 RPT Date: 11/20/06 15:03  
QC2

**Arcadis G & M, Inc. - Highlands Ranch CO**  
 630 Plaza Dr Ste 200  
 Highlands Ranch, CO 80129-2379

Report to: Ms. Trisha Elizondo  
 Email: telizondo@arcadis-us.com, m

Project Description: PCA Junction  
 City/State Collected: [Blank]

Client Project #: [Blank]  
 Lab Project #: DUKARCAD-PCAJUNCTI

Phone: (720) 344-3500  
 FAX: (720) 344-3535

Site/Facility ID#: [Blank]  
 P.O.#: [Blank]

Collected by (print): *Tracy S. Hayward*  
 Collected by (signature): *[Signature]*  
 Packed on Ice N  Y

Rush? (Lab MUST Be Notified)  
 Same Day ..... 200%  
 Next Day ..... 100%  
 Two Day ..... 50%  
 Three Day ..... 25%

Sample ID	Comp/Grab	Matrix*	Depth	Date Results Needed		No. of Cntrs
				Email? FAX?	No Yes	
PCA-MW-1		GW				3
PCA-MW-2	✓	GW		11-13-06	1728	3
PCA-MW-3	✓	GW		11-13-06	1745	3
PCA-MW-4	✓	GW		11-13-06	1644	3
PCA-MW-5	✓	GW		11-13-06	1705	3
PCA-MW-6	✓	GW		11-13-06	1628	3
PCA-MWA-01	✓	GW		11-13-06	1609	3
PCA-MWA-02	✓	GW		11-13-06	1594	3
PCA-DUP	✓	GW		11-13-06	---	3

Alternate billing information: [Blank]

Analysis/Container/Preservative: V8260BTEX 40mlAmb-HCI

Remarks/Contaminant: [Blank]

Sample # (lab only): [Blank]

Actinum: DUKARCAD (lab use only)  
 Template/Prelogin: T34828/P193098  
 Cooler #: 11918  
 Shipped Via: FedEx Priority

Prepared by: ENVIRONMENTAL SCIENCE CORP.  
 12065 Lebanon Road  
 Mt. Juliet, TN 37122  
 Phone (800) 767-5859  
 FAX (615) 758-5859

pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other \_\_\_\_\_

Relinquished by (Signature): *[Signature]*  
 Relinquished by (Signature): *[Signature]*  
 Relinquished by (Signature): *[Signature]*

Received by (Signature): *[Signature]*  
 Received by (Signature): *[Signature]*  
 Received for (lab use only) (Signature): *[Signature]*

Date: 11-16-06 Time: 1530  
 Date: [Blank] Time: [Blank]  
 Date: [Blank] Time: [Blank]

Samples returned via:  UPS  FedEx  Courier  
 Bottles Received: 244 MB  
 Temp: 36.00  
 Date: 11-17-06 Time: 0900

pH Checked: [Blank] NCF

**Arcadis G & M, Inc. - Highlands Ranch CO**  
 630 Plaza Dr Ste 200  
 Highlands Ranch, CO 80129-2379

Report to: Ms. Trisha Elizondo

Project Description: PCA Junction

Phone: (720) 344-3500  
 FAX: (720) 344-3535

Collected by (print): *Eric S. Longwell*

Collected by (signature): *[Signature]*

Packed on Ice N Y ✓

Email: telizondo@arcadis-us.com, m

City/State Collected

Lab Project #

DUKARCAD-PCA.JUNCTI

P.O.#:

Rush? (Lab MUST Be Notified)

Same Day ..... 200%  
 Next Day ..... 100%  
 Two Day ..... 50%  
 Three Day ..... 25%

Date Results Needed

Email? \_\_\_ No \_\_\_ Yes  
 FAX? \_\_\_ No \_\_\_ Yes  
 No. of Cntrs

Date

11-13-06

Depth

---

Matrix\*

GW

Comp/Grab

---

Sample ID

PCA-TRIP BLANK

Analysis/Container/Preservative

V8260BTEX 40mlamb-HCl  
 V8260BTEX 40mlamb-HCl-BIK

Remarks/Contaminant

Sample # (lab only)

V8260B-01

Chain of Custody Page 2/2

Prepared by:

**ENVIRONMENTAL SCIENCE CORP.**

12065 Lebanon Road  
 Mt. Juliet, TN 37122  
 Phone (800) 767-5859  
 FAX (615) 758-5859

Account: DUKARCAD (lab use only)  
 Template/Prelogin: T34828/P193098  
 Cooler #: 11678  
 Shipped Via: FedEx Priority

\*Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other

pH \_\_\_\_\_ Temp \_\_\_\_\_  
 Flow \_\_\_\_\_ Other \_\_\_\_\_

Relinquished by (Signature): <i>[Signature]</i>	Date: 11-16-06	Received by (Signature): <i>[Signature]</i>	Samples returned via: <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier	Condition: (lab use only) <i>[Signature]</i>
Relinquished by (Signature): <i>[Signature]</i>	Date: _____	Received by (Signature): <i>[Signature]</i>	Temp: 3.6 Date: 11-17-06 Time: 0900	pH Checked: NCF
Relinquished by (Signature): <i>[Signature]</i>	Date: _____	Received for lab by (Signature): <i>[Signature]</i>	Bottles Received: 244 T10	

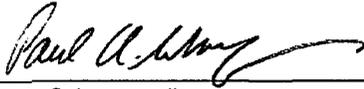


## **Q3 2006 GROUNDWATER MONITORING REPORT**

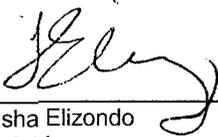
PCA Junction  
Eddy County, New Mexico

November 2006

ARCADIS



Paul A. Schwarzweller  
Environmental Scientist



Trisha Elizondo  
Task Manager

**Q3 2006 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
Duke Energy Field Services, LP

Prepared by:  
ARCADIS G&M, Inc.  
630 Plaza Drive  
Suite 200  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
6 June 2007

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2	Summary of BTEX and TPH-GRO Concentrations in Groundwater

**Figures**

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2	Site Map
3	Groundwater Sample Results – August 2006

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## 1. Site Location and Background

ARCADIS is submitting to Duke Energy Field Services, LP (DEFS) the results of groundwater monitoring activities and phase separated hydrocarbon (PSH) recovery efforts that were performed during the third quarter of 2006 (Q3 2006) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The Site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of pigging. The Site occupies approximately 4 acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release at the Site was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the Site in September 2000. Benzene was discovered in the soil and groundwater below the onsite tank battery. In 2002, PSH was observed in a groundwater monitoring well.

The ownership of the PCA Junction was transferred from COP to DEFS on March 10, 2004. In November 2004, DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD).

## 2. Groundwater Monitoring

ARCADIS conducted quarterly groundwater monitoring activities at the Site on August 16, 2006. Monitoring consisted of the measurement of water levels from eight groundwater monitoring wells. Groundwater samples were collected from seven of the wells for water quality analysis. Well MW01 exhibited measurable PSH and therefore was not sampled. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260.

### 2.1 Water Level Gauging

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from approximately 25.2 to 29.9 feet below ground surface. PSH was detected in one well, MW01, at a thickness of 1.01 feet.

### 2.2 Groundwater Quality Monitoring

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples

were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers, and packed and shipped in accordance with accepted practices to Environmental Science Corporation in Mt. Juliet, Tennessee for analyses.

A summary of BTEX concentrations in the groundwater collected during the Q3 2006 sampling event is provided in Table 2, and the laboratory analytical reports are included in Appendix A. The groundwater sample results are also posted on Figure 3, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q3 2006 analytical results can be summarized as follows:

- Benzene was detected in the two groundwater samples from monitoring wells MWA01 and MWA02 with concentrations of 2.1 micrograms per liter (ug/L) and 0.97 ug/L, respectively. Toluene, ethylbenzene, and xylene were not detected above the regulatory standards.

### 2.3 PSH Recovery Efforts

As noted on Table 1, PSH is being actively recovered through hand bailing efforts when practical. During the June, July, and August, 2006 site visits, approximately 6.25 gallons of a PSH and water mix were recovered from well MW01.

### 3. Closing Remarks

ARCADIS will continue to perform Site visits and PSH recovery when practical. Results of fourth quarter 2006 sampling and PSH recovery efforts will be reported in the Q4 2006 Groundwater Monitoring Report.

ARCADIS

Tables

**Table 1. Summary of Groundwater Elevations**  
**PCA Junction**  
**Duke Energy Field Services**

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW01	-	-	-	-	8/16/2006	26.42	25.41	1.01	-	Bailed 1.25 gal.
	-	-	-	-	7/18/2006	26.43	25.00	1.43	-	Bailed 2.5 gal
	-	-	-	-	6/19/2006	27.05	25.19	1.86	-	Bailed 2.5 gal
	-	-	-	-	3/27/2006	26.40	24.92	1.48	-	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	-	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	-	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	-	Bailed 2 gal 30% product
	-	-	-	-	7/27/2005	26.80	25.08	1.72	-	Purged 1 gal
	-	-	-	-	5/23/2005	25.92	24.62	1.30	-	320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	-	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	-	Bailed 2.5 gal
	-	-	-	-	2/25/2005	25.85	25.34	0.51	-	Bailed 0.25 gal
-	-	-	-	2/24/2005	26.14	24.85	1.29	-	Bailed 0.5 gal	
MW02	-	-	-	-	8/16/2006	24.65	-	-	-	
	-	-	-	-	6/19/2006	24.40	-	-	-	
	-	-	-	-	3/27/2006	23.98	-	-	-	
	-	-	-	-	2/15/2006	24.19	-	-	-	
MW03	-	-	-	-	1/24/2006	24.00	-	-	-	
	-	-	-	-	8/16/2006	24.10	-	-	-	
	-	-	-	-	7/18/2006	24.03	-	-	-	
	-	-	-	-	6/19/2006	23.85	-	-	-	
MW04	-	-	-	-	3/27/2006	23.41	-	-	-	
	-	-	-	-	2/15/2006	23.64	-	-	-	
	-	-	-	-	1/24/2006	23.46	-	-	-	
	-	-	-	-	8/16/2006	27.84	-	-	-	
MW05	-	-	-	-	7/18/2006	27.26	-	-	-	
	-	-	-	-	6/19/2006	27.58	-	-	-	
	-	-	-	-	3/27/2006	27.22	-	-	-	
	-	-	-	-	2/15/2006	27.06	-	-	-	
MW06	-	-	-	-	8/16/2006	29.94	-	-	-	
	-	-	-	-	7/18/2006	29.33	-	-	-	
	-	-	-	-	6/19/2006	29.73	-	-	-	
	-	-	-	-	3/27/2006	29.31	-	-	-	
	-	-	-	-	2/15/2006	29.35	-	-	-	
MW07	-	-	-	-	1/24/2006	29.35	-	-	-	
	-	-	-	-	8/16/2006	28.31	-	-	-	
	-	-	-	-	7/18/2006	27.77	-	-	-	
	-	-	-	-	6/19/2006	28.01	-	-	-	
	-	-	-	-	3/27/2006	27.70	-	-	-	
MWA1	-	-	-	-	2/15/2006	27.78	-	-	-	
	-	-	-	-	1/24/2006	27.78	-	-	-	
	-	-	-	-	8/16/2006	25.25	-	-	-	
	-	-	-	-	7/17/2006	24.64	-	-	-	
	-	-	-	-	6/19/2006	25.94	-	-	-	
MWA2	-	-	-	-	3/27/2006	24.59	-	-	-	
	-	-	-	-	2/15/2006	26.84	-	-	-	
	-	-	-	-	8/16/2006	26.57	-	-	-	
	-	-	-	-	7/17/2006	26.01	-	-	-	
	-	-	-	-	6/19/2006	26.30	-	-	-	
MWA3	-	-	-	-	3/27/2006	25.95	-	-	-	
	-	-	-	-	2/15/2006	26.20	-	-	-	
	-	-	-	-	1/24/2006	26.01	-	-	-	
	-	-	-	-	1/24/2006	24.64	-	-	-	

**Table 2. Summary of BTEX Concentrations in Groundwater  
PCA Junction  
Duke Energy Field Services**

Well ID	Sample Date	Ethyl				TPH-GRO
		Benzene	Toluene	benzene	Xylenes	
		-----ug/L-----				mg/L
MW02	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
MW02	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW03	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
MW03	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
MW04	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW04DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW05	8/16/2006	< 0.5	< 5.0	< 0.5	< 1.5	-
MW05	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	< 0.1
MW06	8/16/2006	< 0.5	< 0.5	< 5.0	< 1.5	-
MW06	3/27/2006	< 1.0	49	< 1.0	< 3.0	< 0.1
MWA01	8/16/2006	2.1	< 5.0	2.7	< 1.5	-
MWA01 DUP	8/16/2006	4.6	< 5.0	7.6	< 1.5	-
MWA01	3/27/2006	3.2	< 5.0	16	< 3.0	0.37
MWA02	8/16/2006	0.97	< 5.0	< 0.5	1.8	-
MWA02	3/27/2006	< 1.0	< 5.0	< 1.0	< 3.0	0.47

Notes:

MW: Monitoring well

TPH: Total Petroleum Hydrocarbons

ug/L: Micrograms per liter

mg/L: Milligrams per liter

GRO: Gasoline Range Organics

-: Not analyzed

ARCADIS

Figures

DRAFTER: PMW

APPROVED: GN

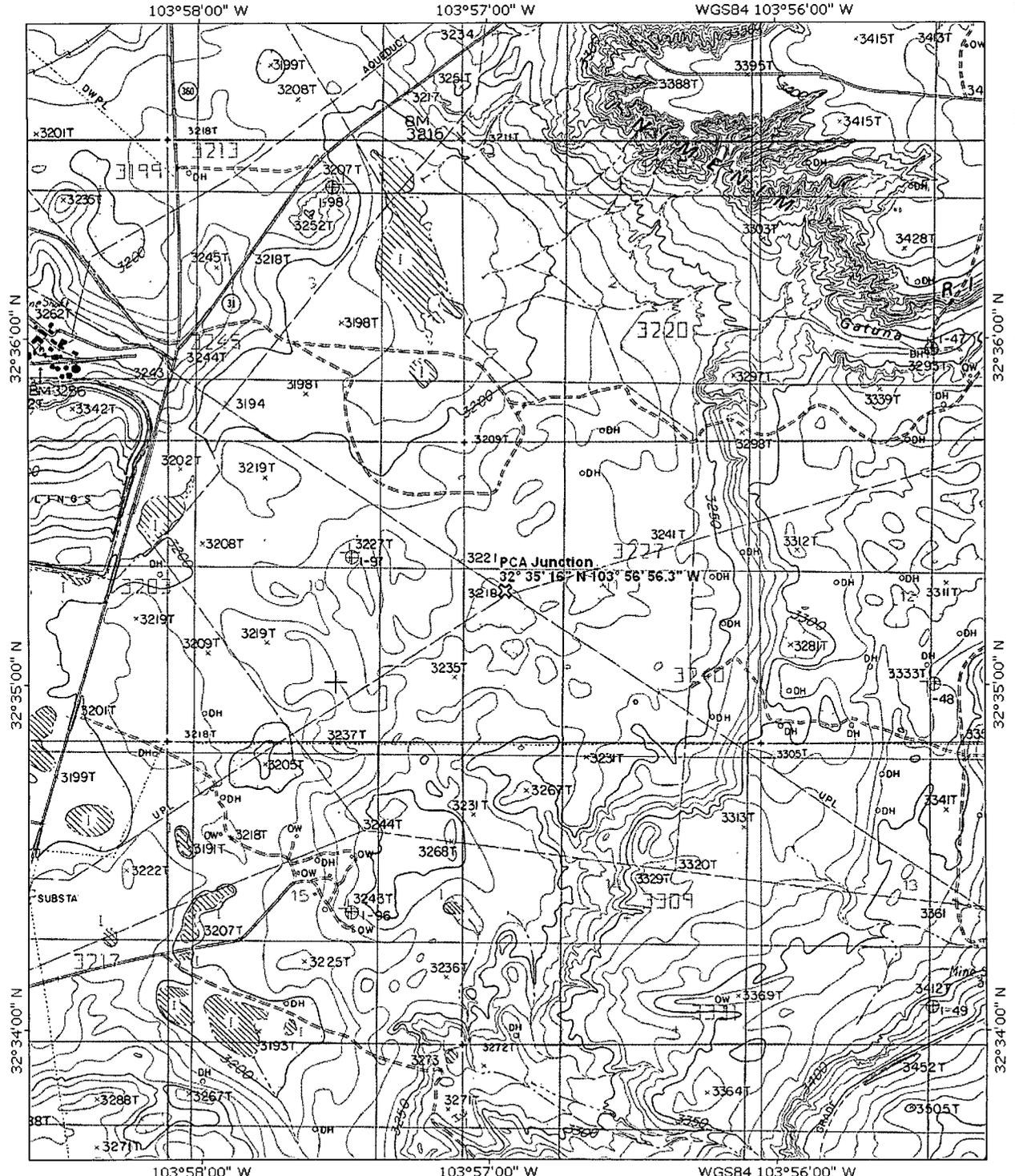
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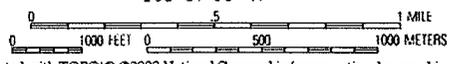
HARD FILE:

PRCT NO.: C0000889.2801

DWG DATE: 11/17/04



TN MN  
9°



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)



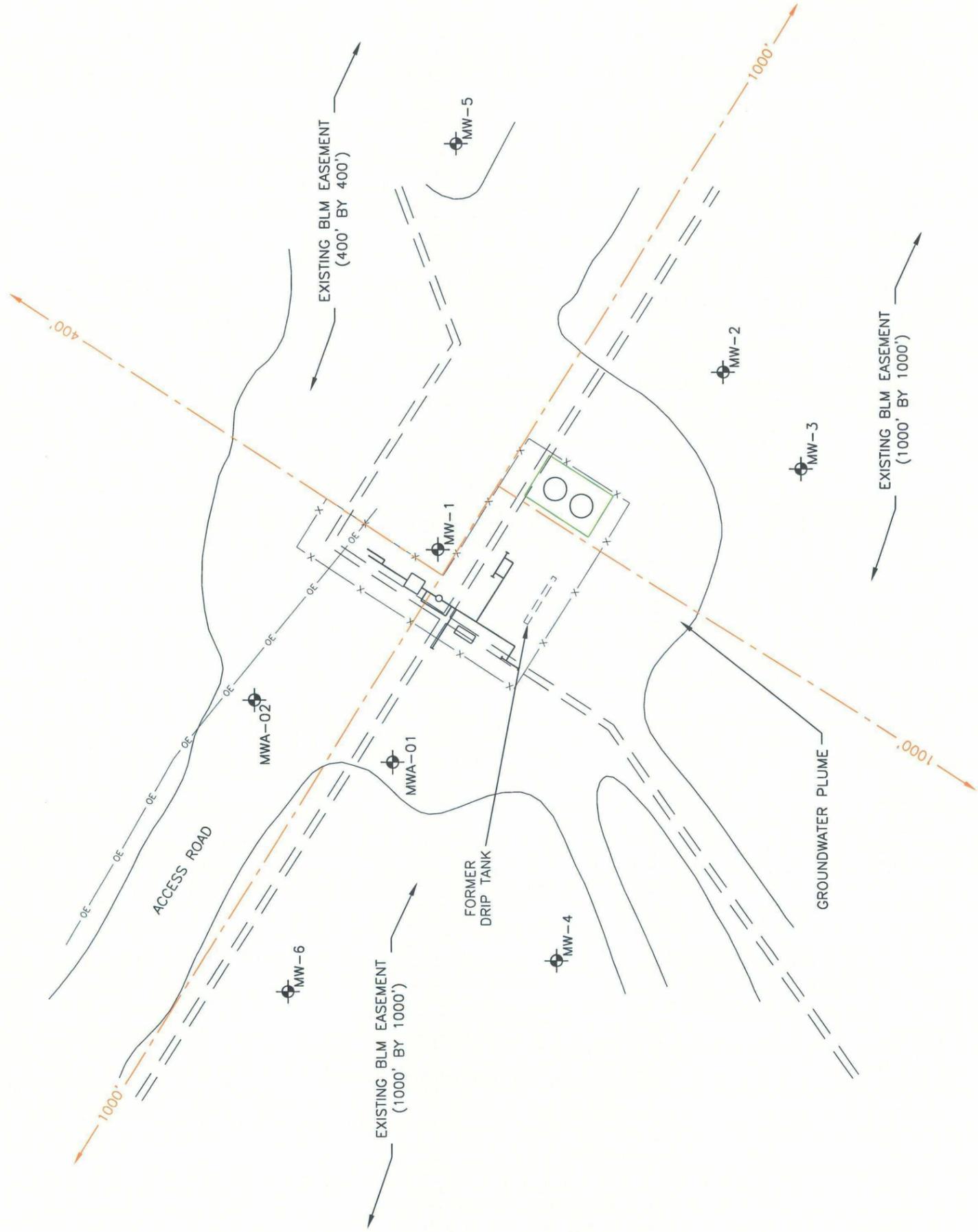
# Site Location Map

PCA JUNCTION  
Eddy County, New Mexico

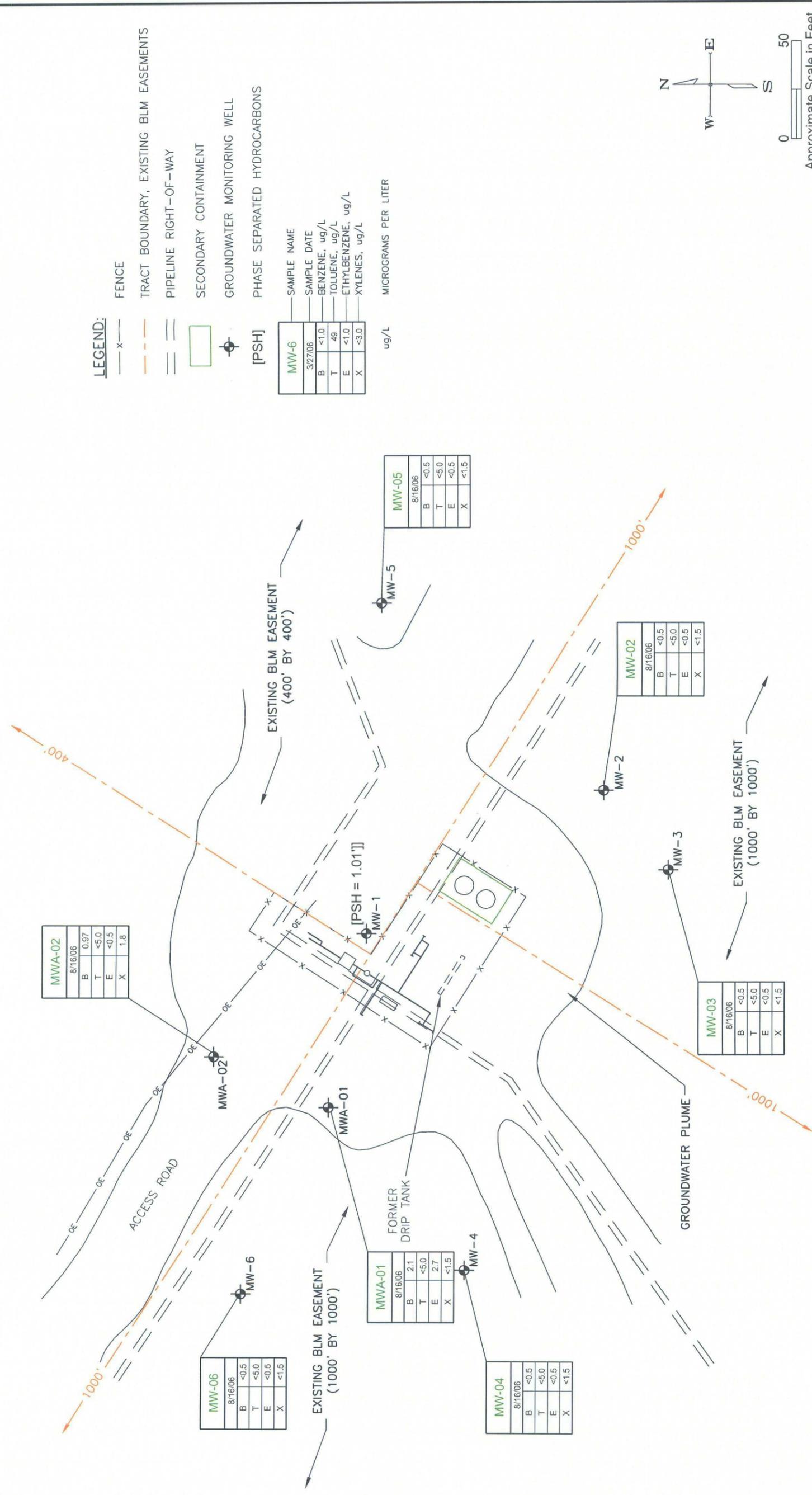
FIGURE

1

- LEGEND:**
- x — FENCE
  - — — TRACT BOUNDARY, EXISTING BLM EASEMENTS
  - — — PIPELINE RIGHT-OF-WAY
  - SECONDARY CONTAINMENT
  - ⊕ GROUNDWATER MONITORING WELL



**Site Map**  
 PCA JUNCTION  
 Eddy County, New Mexico



Groundwater Sample Results  
August 2006

PCA JUNCTION  
Eddy County, New Mexico

ARCADIS

**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ranch CO  
630 Plaza Dr Ste 200

Highlands Ranch, CO 80129-2379

Report Summary

Wednesday August 23, 2006

Report Number: L257519

Samples Received: 08/19/06

Client Project: CO001042.0002

Description: PCA Junction

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Reviewed By:

*Cheli Boucher*  
Cheli Boucher, ESC Representative

*Laboratory Certification Numbers*

A2LA - 1461-01, AIHA - 09227, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487  
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140  
NJ - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910

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1-800-767-5859  
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction

ESC Sample # : I257519-01

Sample ID : MWA-02

Site ID :

Collected By : Jerry Longwell  
Collection Date : 08/16/06 09:48

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.00097	0.00050	mg/l		8021B	08/21/06 2006	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2006	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 2006	1
Total Xylene	0.0018	0.0015	mg/l		8021B	08/21/06 2006	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene (PID)	97.38		% Rec.		8021B	08/21/06 2006	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.  
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Reported: 08/23/06 14:09 Printed: 08/23/06 17:58



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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction

ESC Sample # : L257519-02

Sample ID : MWA-01

Site ID :

Collected By : Jerry Longwell  
Collection Date : 08/16/06 10:19

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.0021	0.00050	mg/l		8021B	08/21/06 2030	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2030	1
Ethylbenzene	0.0027	0.00050	mg/l		8021B	08/21/06 2030	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 2030	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene (PID)	98.98		% Rec.		8021B	08/21/06 2030	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction

ESC Sample # : L257519-03

Sample ID : DUP

Site ID :

Collected By : Jerry Longwell  
Collection Date : 08/16/06 00:00

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	0.0046	0.00050	mg/l		8021B	08/21/06 2054	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2054	1
Ethylbenzene	0.0076	0.00050	mg/l		8021B	08/21/06 2054	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 2054	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene(PID)	100.08		% Rec.		8021B	08/21/06 2054	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction  
Sample ID : MW-6  
Collected By : Jerry Longwell  
Collection Date : 08/16/06 10:55

ESC Sample # : L257519-04

Site ID :

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.00050	mg/l		8021B	08/21/06 2118	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2118	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 2118	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 2118	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene(PID)	98.15		% Rec.		8021B	08/21/06 2118	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

Note:

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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction  
Sample ID : MW-4  
Collected By : Jerry Longwell  
Collection Date : 08/16/06 11:23

ESC Sample # : L257519-05

Site ID :

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.00050	mg/l		8021B	08/21/06 2141	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2141	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 2141	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 2141	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene(PID)	97.67		% Rec.		8021B	08/21/06 2141	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit(PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375,DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction  
Sample ID : MW-5  
Collected By : Jerry Longwell  
Collection Date : 08/16/06 11:50

ESC Sample # : L257519-06

Site ID :

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.00050	mg/l		8021B	08/21/06 2205	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2205	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 2205	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 2205	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene(PID)	97.81		% Rec.		8021B	08/21/06 2205	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - TN002, WI - 998093910

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REPORT OF ANALYSIS

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction

ESC Sample # : L257519-07

Sample ID : MW-2

Site ID :

Collected By : Jerry Longwell  
Collection Date : 08/16/06 12:38

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.00050	mg/l		8021B	08/21/06 1559	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 1559	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 1559	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 1559	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene(PID)	101.22		% Rec.		8021B	08/21/06 1559	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction  
Sample ID : MW-3  
Collected By : Jerry Longwell  
Collection Date : 08/16/06 13:05

ESC Sample # : L257519-08  
Site ID :  
Project # : C0001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.00050	mg/l		8021B	08/21/06 2048	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 2048	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 2048	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 2048	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene (PID)	101.19		% Rec.		8021B	08/21/06 2048	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

August 23, 2006

Date Received : August 19, 2006  
Description : PCA Junction

ESC Sample # : L257519-09

Sample ID : TRIP BLANK

Site ID :

Collected By : Jerry Longwell  
Collection Date : 08/16/06 00:00

Project # : CO001042.0002

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
Benzene	BDL	0.00050	mg/l		8021B	08/21/06 1341	1
Toluene	BDL	0.0050	mg/l		8021B	08/21/06 1341	1
Ethylbenzene	BDL	0.00050	mg/l		8021B	08/21/06 1341	1
Total Xylene	BDL	0.0015	mg/l		8021B	08/21/06 1341	1
Surrogate Recovery (77-118) a,a,a-Trifluorotoluene (PID)	101.11		% Rec.		8021B	08/21/06 1341	1

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
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Summary of Remarks For Samples Printed  
08/23/06 at 17:58:15

TSR Signing Reports: 070  
R5 - Desired TAT

cb-7/31/04 No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; EDD on all projects

Sample: L257519-01 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
BTEX by 8021 ok per TE email-cb 8/21  
Sample: L257519-02 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-03 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-04 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-05 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-06 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-07 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-08 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09  
Sample: L257519-09 Account: DUKARCAD Received: 08/19/06 09:00 Due Date: 08/25/06 00:00 RPT Date: 08/23/06 14:09



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Quality Assurance Report  
Level II

Highlands Ranch, CO 80129-2379

August 23, 2006

L257519

Analyte	Result	Laboratory Blank		Date Analyzed	Batch
		Units			
Benzene	< .0005	mg/l		08/21/06 11:51	WG263657
Ethylbenzene	< .0005	mg/l		08/21/06 11:51	WG263657
Toluene	< .005	mg/l		08/21/06 11:51	WG263657
Total Xylene	< .0015	mg/l		08/21/06 11:51	WG263657
Benzene	< .0005	mg/l		08/21/06 12:54	WG263673
Ethylbenzene	< .0005	mg/l		08/21/06 12:54	WG263673
Toluene	< .005	mg/l		08/21/06 12:54	WG263673
Total Xylene	< .0015	mg/l		08/21/06 12:54	WG263673

Analyte	Units	Laboratory Control Sample		% Rec	Limit	Batch
		Known Val	Result			
Benzene	mg/l	.05	0.0506	101.	70-130	WG263657
Ethylbenzene	mg/l	.05	0.0512	102.	70-130	WG263657
Toluene	mg/l	.05	0.0515	103.	70-130	WG263657
Total Xylene	mg/l	.15	0.152	101.	70-130	WG263657
Benzene	mg/l	.05	0.0533	107.	70-130	WG263673
Ethylbenzene	mg/l	.05	0.0553	111.	70-130	WG263673
Toluene	mg/l	.05	0.0549	110.	70-130	WG263673
Total Xylene	mg/l	.15	0.165	110.	70-130	WG263673

Analyte	Units	Laboratory Control Sample Duplicate			Limit	% Rec	Batch
		LCSD Res	Ref Res	RPD			
Benzene	mg/l	0.0527	0.0506	4.12	25	105	WG263657
Ethylbenzene	mg/l	0.0541	0.0512	5.42	25	108	WG263657
Toluene	mg/l	0.0537	0.0515	4.24	25	107	WG263657
Total Xylene	mg/l	0.160	0.152	5.41	25	107	WG263657
Benzene	mg/l	0.0505	0.0533	5.39	25	101	WG263673
Ethylbenzene	mg/l	0.0517	0.0553	6.70	25	103	WG263673
Toluene	mg/l	0.0510	0.0549	7.38	25	102	WG263673
Total Xylene	mg/l	0.153	0.165	7.30	25	102	WG263673

Analyte	Units	Matrix Spike			TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res						
Benzene	mg/l	0.0671	0.0130	.05	108.	70-130	L257510-14	WG263657	
Ethylbenzene	mg/l	0.0524	0.00	.05	105.	70-130	L257510-14	WG263657	
Toluene	mg/l	0.0532	0.00	.05	106.	70-130	L257510-14	WG263657	
Total Xylene	mg/l	0.160	0.0066	.15	102.	70-130	L257510-14	WG263657	
Benzene	mg/l	0.0450	0.00	.05	89.9	70-130	L257554-01	WG263673	
Ethylbenzene	mg/l	0.0464	0.00	.05	92.9	70-130	L257554-01	WG263673	
Toluene	mg/l	0.0472	0.00	.05	94.5	70-130	L257554-01	WG263673	
Total Xylene	mg/l	0.141	0.0016	.15	93.0	70-130	L257554-01	WG263673	

Analyte	Units	Matrix Spike Duplicate			RPD	Limit	% Rec	Ref Samp	Batch
		MSD Res	Ref Res						
Benzene	mg/l	0.0677	0.0671	0.859	25	109.	L257510-14	WG263657	
Ethylbenzene	mg/l	0.0550	0.0524	4.93	25	110.	L257510-14	WG263657	
Toluene	mg/l	0.0548	0.0532	2.91	25	110.	L257510-14	WG263657	
Total Xylene	mg/l	0.168	0.160	5.10	25	108.	L257510-14	WG263657	
Benzene	mg/l	0.0478	0.0450	6.07	25	95.6	L257554-01	WG263673	
Ethylbenzene	mg/l	0.0490	0.0464	5.33	25	97.9	L257554-01	WG263673	
Toluene	mg/l	0.0488	0.0472	3.31	25	97.7	L257554-01	WG263673	



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630 Plaza Dr Ste 200

Quality Assurance Report  
Level II

Highlands Ranch, CO 80129-2379

L257519

August 23, 2006

Total Xylene	mg/l	0.146	0.141	3.53	25	96.4	L257554-01 WG263673
--------------	------	-------	-------	------	----	------	---------------------

Batch number /Run number / Sample number cross reference

WG263657: R286570: L257519-01 02 03 04 05 06  
WG263673: R286608: L257519-07 08 09

\* \* Calculations are performed prior to rounding of reported values .



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630 Plaza Dr Ste 200

Quality Assurance Report  
Level II

Highlands Ranch, CO 80129-2379

L257519

August 23, 2006

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.



Laboratory Task Order No./P.O. No. \_\_\_\_\_

CHAIN-OF-CUSTODY RECORD Page 1 of 1

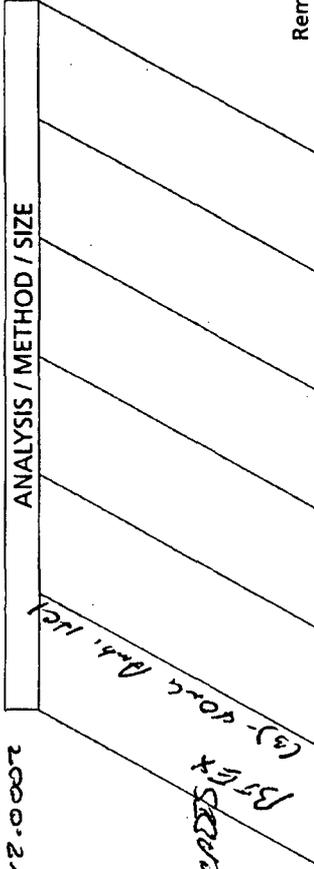
Project Number/Name DUKE PCA# C0010420007

Project Location PCA#1

Laboratory Environmental Services Corp.

Project Manager Isabele Elizondo

Sampler(s)/Affiliation Ferry S. Longwood / ARCADIS



Sample ID/Location	Matrix	Date/Time Sampled	Time	Remarks	Total
MWA-02	L	Aug 16 2006 0948	3	L257519-01	3
MWA-01	L	Aug 16 2006 1019	3	02	3
DUP	L	Aug 16 2006	3	03	3
MW-6	L	Aug 16 2006 1055	3	04	3
MW-4	L	Aug 16 2006 1123	3	05	3
MW-5	L	Aug 16 2006 1150	3	06	3
MW-2	L	Aug 16 2006 1238	3	07	3
MW-3	L	Aug 16 2006 1305	3	08	3
Trip Blank	L		1	09	1
IL					
OK					

Sample Matrix: L = Liquid; S = Solid; A = Air

Relinquished by: [Signature] Organization: ARCADIS Date: 8/18/06 Time: 1600 Seal Intact? Yes No N/A

Received by: \_\_\_\_\_ Organization: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Seal Intact? \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Organization: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Seal Intact? \_\_\_\_\_

Received by: \_\_\_\_\_ Organization: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Seal Intact? \_\_\_\_\_

Total No. of Bottles/Containers: 25

Special Instructions/Remarks: Custody and Intact

Delivery Method:  In Person  Common Carrier  Lab Courier  Other

[Signature] 8/19/06 / 9:00 / 3.4°C / 2.4 + TB = V

8558 1688 5316



## **Q1 2006 GROUNDWATER MONITORING REPORT**

PCA Junction  
Eddy County, New Mexico

July 2006

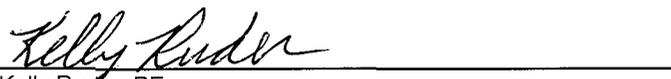


ARCADIS



---

Paul A. Schwarzweller  
Environmental Scientist



---

Kelly Ruder, PE  
Senior Engineer

**Q1 2006 Groundwater  
Monitoring Report**

PCA Junction

Prepared for:  
Duke Energy Field Services, LP

Prepared by:  
ARCADIS G&M, Inc.  
630 Plaza Drive  
Suite 200  
Highlands Ranch  
Colorado 80129  
Tel 720 344 3500  
Fax 720 344 3535

Our Ref.:  
CO001042

Date:  
24 July 2006

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<b>1. Site Location and Background</b>	<b>1</b>
<b>2. Groundwater Monitoring</b>	<b>1</b>
2.1 Water Level Gauging	1
2.2 Groundwater Quality Monitoring	2
<b>3. Closing Remarks</b>	<b>2</b>

**Tables**

1	Summary of Groundwater Elevations
2	Summary of BTEX and TPH-GRO Concentrations in Groundwater

**Figures**

1	Site Location Map
2	Site Map
3	Groundwater Sample Results – March 2006

**Appendices**

A	Laboratory Analytical Reports
---	-------------------------------

## 1. Site Location and Background

ARCADIS is submitting to Duke Energy Field Services, LP (DEFS) the results of groundwater monitoring activities and phase separated hydrocarbon (PSH) recovery efforts that were performed during the first quarter of 2006 (Q1 2006) at PCA Junction (Site) in Eddy County, New Mexico (Figures 1 and 2). The site is a pipeline drip station and pigging station. Equipment at the facility is inactive with the exception of pigging. The site occupies approximately four acres of land in the southwest quadrant of Section 11, Township 20 South, Range 30 East of the New Mexico Meridian.

A petroleum release at the site was first discovered during a property transaction in which ConocoPhillips (COP) obtained ownership of the site in September 2000. Benzene was discovered in the soil and groundwater below the onsite tank battery. In 2002, phase separated hydrocarbon (PSH) was observed in a groundwater monitoring well.

On March 10, 2004 the ownership of the PCA Junction was transferred from COP to DEFS. In November, 2004 DEFS submitted a Stage I Abatement Plan to the New Mexico Oil Conservation Division (OCD).

## 2. Groundwater Monitoring

ARCADIS conducted quarterly groundwater monitoring activities at the site on March 27, 2006. Monitoring consisted of the measurement of water levels from 8 groundwater monitoring wells. Groundwater samples were collected from 7 of the wells for water quality analysis. Water quality samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260 and total petroleum hydrocarbons – gasoline range organics (TPH-GRO) by EPA Method 8015M.

### 2.1 Water Level Gauging

ARCADIS collected water level measurements prior to disturbance of the water column (Table 1). Depth to water ranged from approximately 23.41 feet to 29.31 feet below ground surface. PSH was detected in one well, MW01, at a thickness of 1.48 feet.

Survey data is not currently available for the Site monitoring wells. The wells will need to be surveyed to develop accurate groundwater elevations and a potentiometric surface map.

**2.2 Groundwater Quality Monitoring**

Prior to sampling, wells were purged a minimum of three well casing volumes to ensure the collection of a representative groundwater sample. Groundwater samples were collected using dedicated disposable polyethylene bailers, placed in laboratory-supplied containers and packed and shipped in accordance with accepted practices to Environmental Science Corporation (ESC) in Mt. Juliet, Tennessee for analyses.

A summary of BTEX and TPH-GRO concentrations in the groundwater collected during the Q1 2006 sampling event is provided in Table 2 and the laboratory analytical reports are included in Appendix A. The groundwater sample results are also posted on Figure 3, illustrating the distribution of petroleum hydrocarbon in groundwater. The Q1 2006 analytical results can be summarized as follows:

- Three wells had detectable dissolved phase petroleum hydrocarbon – MW06, MWA01, and MWA02.
- Benzene was detected in a single groundwater sample from monitoring well MWA01 with a concentration of 3.2 micrograms per liter (ug/L).
- TPH-GRO was detected in two groundwater samples from monitoring wells MWA01 and MWA02 with concentrations of 0.37 milligrams per liter (mg/L) and 0.47 mg/L, respectively.

**2.3 PSH Recovery Efforts**

As noted on Table 1, PSH is being actively recovered through hand bailing efforts, when practical. During the February 15, 2006 site visit, approximately 5 gallons of a PSH and water mix was recovered from well MW01.

**3. Closing Remarks**

ARCADIS will continue to perform site visits and PSH recovery, when practical. Results of Q2 2006 sampling and PSH recovery efforts will be reported in the Q2 2006 Groundwater Monitoring Report.

ARCADIS

Tables

Table 1. Summary of Groundwater Elevations  
 PCA Junction  
 Duke Energy Field Services

Well ID	Survey Data (feet)				Depth to Water Data (feet)					
	Easting	Northing	Top of Casing Elevation	Well Depth	Sample Date	Depth to Water	Depth to PSH	PSH Thickness	Corrected Groundwater Elevation	Comments
MW01	-	-	-	-	3/27/2006	26.4	24.92	1.48	-	
	-	-	-	-	2/15/2006	26.26	24.81	1.45	-	Bailed 5 gal of PSH/water mix
	-	-	-	-	1/24/2006	26.49	24.98	1.51	-	
	-	-	-	-	8/24/2005	26.74	25.03	1.71	-	Bailed 2 gal 30% product
	-	-	-	-	7/27/2005	26.8	25.08	1.72	-	Purged 1 gal
	-	-	-	-	5/23/2005	25.92	24.62	1.30	-	320 oz bailed
	-	-	-	-	4/29/2005	25.28	24.96	0.32	-	Bailed 2 gal
	-	-	-	-	4/28/2005	25.94	24.68	1.26	-	Bailed 2.5 gal
MW02	-	-	-	-	2/25/2005	25.85	25.34	0.51	-	Bailed 0.25 gal
	-	-	-	-	2/24/2005	26.14	24.85	1.29	-	Bailed 0.5 gal
	-	-	-	-	3/27/2006	23.98	-	-	-	
MW03	-	-	-	-	2/15/2006	24.19	-	-	-	
	-	-	-	-	1/24/2006	24.00	-	-	-	
	-	-	-	-	3/27/2006	23.41	-	-	-	
MW04	-	-	-	-	2/15/2006	23.64	-	-	-	
	-	-	-	-	1/24/2006	23.46	-	-	-	
	-	-	-	-	3/27/2006	27.22	-	-	-	
MW05	-	-	-	-	2/15/2006	27.06	-	-	-	
	-	-	-	-	3/27/2006	29.31	-	-	-	
	-	-	-	-	2/15/2006	29.35	-	-	-	
MW06	-	-	-	-	1/24/2006	29.35	-	-	-	
	-	-	-	-	3/27/2006	27.7	-	-	-	
	-	-	-	-	2/15/2006	27.78	-	-	-	
MWA1	-	-	-	-	1/24/2006	27.78	-	-	-	
	-	-	-	-	3/27/2006	24.59	-	-	-	
	-	-	-	-	2/15/2006	26.84	-	-	-	
MWA2	-	-	-	-	3/27/2006	25.95	-	-	-	
	-	-	-	-	2/15/2006	26.20	-	-	-	
	-	-	-	-	1/24/2006	26.01	-	-	-	
	-	-	-	-	1/24/2006	24.64	-	-	-	

Notes:

ft Feet  
 btoc Below top of casing

Table 2. Summary of BTEX and TPH-GRO Concentrations in Groundwater  
 PCA Junction  
 Duke Energy Field Services

Well ID	Sample Date	Benzene	Toluene	Ethyl		Xylenes	TPH-GRO
				ug/L			
MW02	3/27/2006	< 1.0	< 5.0	< 1.0	< 1.0	< 3.0	< 0.1
MW03	3/27/2006	< 1.0	< 5.0	< 1.0	< 1.0	< 3.0	< 0.1
MW04	3/27/2006	< 1.0	< 5.0	< 1.0	< 1.0	< 3.0	< 0.1
MW04DUP	3/27/2006	< 1.0	< 5.0	< 1.0	< 1.0	< 3.0	< 0.1
MW05	3/27/2006	< 1.0	< 5.0	< 1.0	< 1.0	< 3.0	< 0.1
MW06	3/27/2006	< 1.0	49	< 1.0	< 1.0	< 3.0	< 0.1
MWA01	3/27/2006	3.2	< 5.0	16	< 1.0	< 3.0	0.37
MWA02	3/27/2006	< 1.0	< 5.0	< 1.0	< 1.0	< 3.0	0.47

Notes:

MW: Monitoring well

TPH: Total Petroleum Hydrocarbons

ug/L: Micrograms per liter

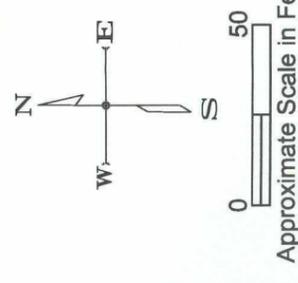
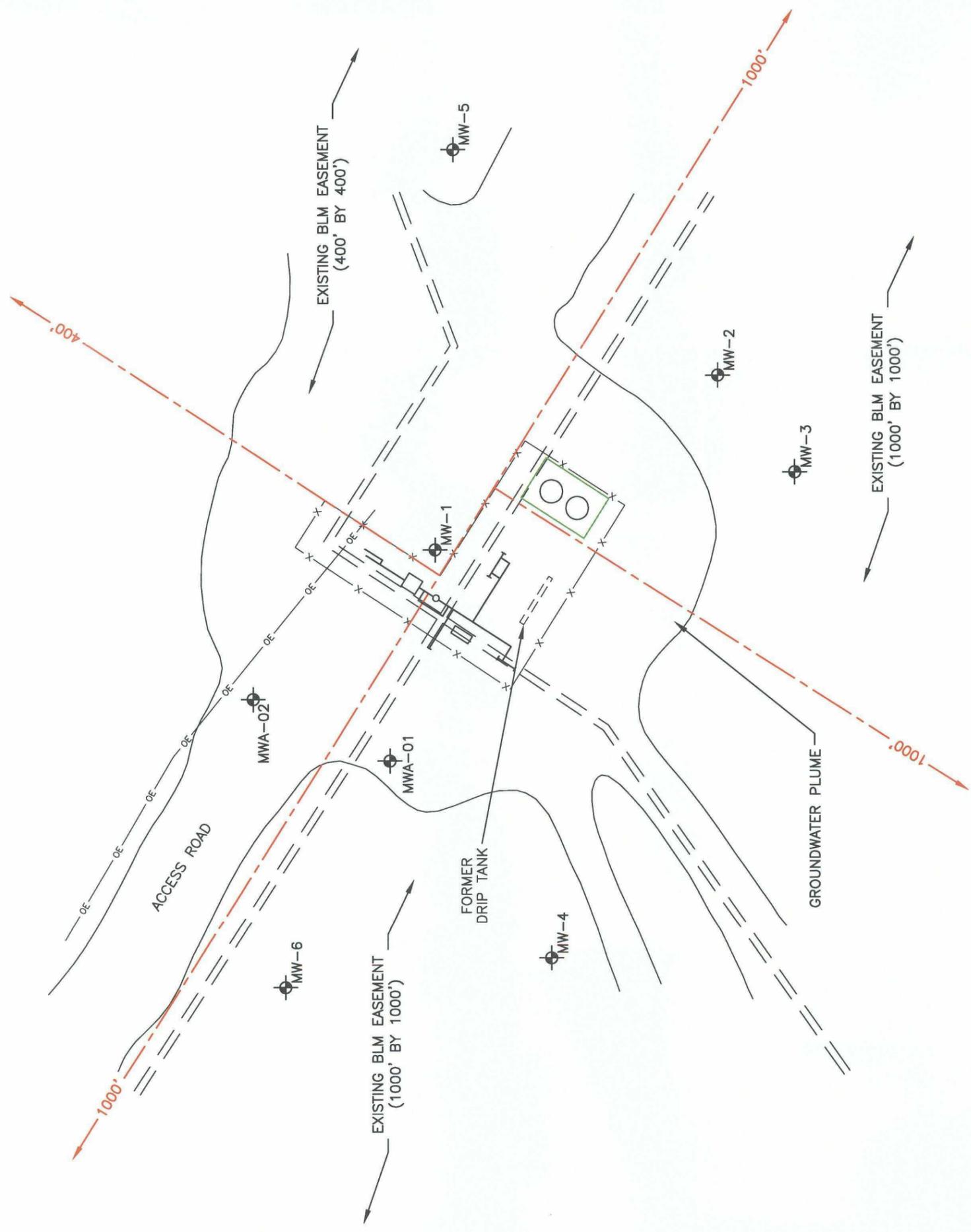
mg/L: Milligrams per liter

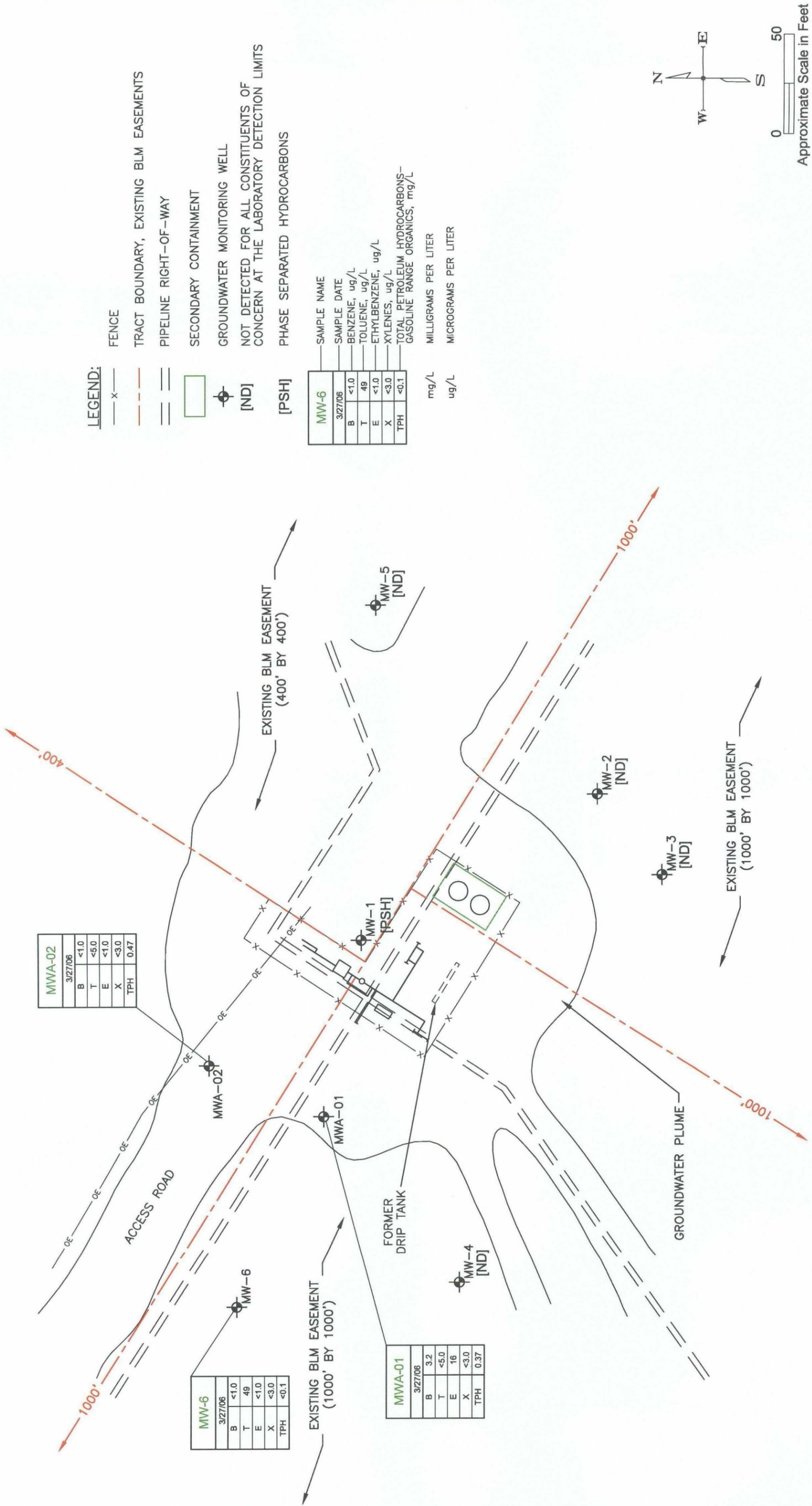
ARCADIS

Figures



- LEGEND:**
- x — FENCE
  - — — TRACT BOUNDARY, EXISTING BLM EASEMENTS
  - — — PIPELINE RIGHT-OF-WAY
  - ▭ SECONDARY CONTAINMENT
  - ⊕ GROUNDWATER MONITORING WELL





**Groundwater Sample Results**  
**March 2006**  
 PCA JUNCTION  
 Eddy County, New Mexico

ARCADIS

**Appendix A**

Laboratory Analytical Reports



ENVIRONMENTAL  
SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

April 04, 2006

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : March 29, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-2  
Collected By : Nanny-Sebring  
Collection Date : 03/27/06 16:10

ESC Sample # : L238949-01

Site ID : Q1 2006 SAMPLING

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l		5030/GRO	04/01/06 0519	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	99.		% Rec.		5030/GRO	04/01/06 0519	1
Benzene	BDL	0.0010	mg/l		8260B	04/02/06 1721	1
Toluene	BDL	0.0050	mg/l		8260B	04/02/06 1721	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/02/06 1721	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/02/06 1721	1
Surrogate Recovery Toluene-d8	89.		% Rec.		8260B	04/02/06 1721	1
Dibromofluoromethane	110		% Rec.		8260B	04/02/06 1721	1
4-Bromofluorobenzene	96.		% Rec.		8260B	04/02/06 1721	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - 81002, WI - 998093910

Note:

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REPORT OF ANALYSIS

April 04, 2006

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : March 29, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-3  
Collected By : Nanny-Sebring  
Collection Date : 03/27/06 16:00

ESC Sample # : L238949-02  
Site ID : Q1 2006 SAMPLING  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l		5030/GRO	04/01/06 0541	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	99.		% Rec.		5030/GRO	04/01/06 0541	1
Benzene	BDL	0.0010	mg/l		8260B	04/02/06 1746	1
Toluene	BDL	0.0050	mg/l		8260B	04/02/06 1746	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/02/06 1746	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/02/06 1746	1
Surrogate Recovery							
Toluene-d8	89.		% Rec.		8260B	04/02/06 1746	1
Dibromofluoromethane	110		% Rec.		8260B	04/02/06 1746	1
4-Bromofluorobenzene	95.		% Rec.		8260B	04/02/06 1746	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

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Det. Limit - Practical Quantitation Limit(PQL)

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : March 29, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-4  
Collected By : Nanny-Sebring  
Collection Date : 03/27/06 15:00

ESC Sample # : L238949-03  
Site ID : Q1 2006 SAMPLING  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l		5030/GRO	04/01/06 0602	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	98.		% Rec.		5030/GRO	04/01/06 0602	1
Benzene	BDL	0.0010	mg/l		8260B	04/02/06 1811	1
Toluene	BDL	0.0050	mg/l		8260B	04/02/06 1811	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/02/06 1811	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/02/06 1811	1
Surrogate Recovery							
Toluene-d8	88.		% Rec.		8260B	04/02/06 1811	1
Dibromofluoromethane	110		% Rec.		8260B	04/02/06 1811	1
4-Bromofluorobenzene	96.		% Rec.		8260B	04/02/06 1811	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : March 29, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-5  
Collected By : Nanny-Sebring  
Collection Date : 03/27/06 15:40

ESC Sample # : L238949-04

Site ID : Q1 2006 SAMPLING

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l		5030/GRO	04/01/06 0623	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	97.		% Rec.		5030/GRO	04/01/06 0623	1
Benzene	BDL	0.0010	mg/l		8260B	04/04/06 0104	1
Toluene	BDL	0.0050	mg/l		8260B	04/04/06 0104	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/04/06 0104	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/04/06 0104	1
Surrogate Recovery							
Toluene-d8	90.		% Rec.		8260B	04/04/06 0104	1
Dibromofluoromethane	110		% Rec.		8260B	04/04/06 0104	1
4-Bromofluorobenzene	96.		% Rec.		8260B	04/04/06 0104	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

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Det. Limit - Practical Quantitation Limit (PQL)

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

Date Received : March 29, 2006  
Description : PCA Junction  
Sample ID : PCA-MW-6  
Collected By : Nanny-Sebring  
Collection Date : 03/27/06 16:20

ESC Sample # : L238949-05

Site ID : Q1 2006 SAMPLING

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l		5030/GRO	04/01/06 0645	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	97.		% Rec.		5030/GRO	04/01/06 0645	1
Benzene	BDL	0.0010	mg/l		8260B	04/01/06 2037	1
Toluene	0.049	0.0050	mg/l		8260B	04/01/06 2037	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/01/06 2037	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/01/06 2037	1
Surrogate Recovery							
Toluene-d8	96.		% Rec.		8260B	04/01/06 2037	1
Dibromofluoromethane	99.		% Rec.		8260B	04/01/06 2037	1
4-Bromofluorobenzene	100		% Rec.		8260B	04/01/06 2037	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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April 04, 2006

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630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

ESC Sample # : L238949-06

Date Received : March 29, 2006  
Description : PCA Junction

Site ID : Q1 2006 SAMPLING

Sample ID : PCA-MWA-01

Project # :

Collected By : Nanny-Sebring  
Collection Date : 03/27/06 16:30

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	0.37	0.10	mg/l		5030/GRO	04/01/06 0706	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	99.		% Rec.		5030/GRO	04/01/06 0706	1
Benzene	0.0032	0.0010	mg/l		8260B	04/01/06 2058	1
Toluene	BDL	0.0050	mg/l		8260B	04/01/06 2058	1
Ethylbenzene	0.016	0.0010	mg/l		8260B	04/01/06 2058	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/01/06 2058	1
Surrogate Recovery Toluene-d8	96.		% Rec.		8260B	04/01/06 2058	1
Dibromofluoromethane	100		% Rec.		8260B	04/01/06 2058	1
4-Bromofluorobenzene	100		% Rec.		8260B	04/01/06 2058	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

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REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 04, 2006

Date Received : March 29, 2006  
Description : PCA Junction  
Sample ID : PCA-MWA-02  
Collected By : Nanny-Sebring  
Collection Date : 03/27/06 16:40

ESC Sample # : L238949-07  
Site ID : Q1 2006 SAMPLING  
Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	0.47	0.10	mg/l		5030/GRO	04/01/06 0626	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	100		% Rec.		5030/GRO	04/01/06 0626	1
Benzene	BDL	0.0010	mg/l		8260B	04/01/06 2119	1
Toluene	BDL	0.0050	mg/l		8260B	04/01/06 2119	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/01/06 2119	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/01/06 2119	1
Surrogate Recovery Toluene-d8	98.		% Rec.		8260B	04/01/06 2119	1
Dibromofluoromethane	110		% Rec.		8260B	04/01/06 2119	1
4-Bromofluorobenzene	100		% Rec.		8260B	04/01/06 2119	1

*Cheli Boucher*  
Cheli Boucher, ESC Representative

BDL - Below Detection Limit  
Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:  
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Est. 1970

REPORT OF ANALYSIS

Ms. Trisha Elizondo  
Arcadis G & M, Inc. - Highlands Ran  
630 Plaza Dr Ste 200  
Highlands Ranch, CO 80129-2379

April 04, 2006

Date Received : March 29, 2006  
Description : PCA Junction

ESC Sample # : L238949-08

Sample ID : PCA-DUP

Site ID : Q1 2006 SAMPLING

Collected By : Nanny-Sebring  
Collection Date : 03/27/06 15:00

Project # :

Parameter	Result	Det. Limit	Units	Qual	Method	Date	Dil.
TPH (GC/FID) Low Fraction	BDL	0.10	mg/l		5030/GRO	04/01/06 0647	1
Surrogate Recovery (70-130) a,a,a-Trifluorotoluene	100		% Rec.		5030/GRO	04/01/06 0647	1
Benzene	BDL	0.0010	mg/l		8260B	04/01/06 2141	1
Toluene	BDL	0.0050	mg/l		8260B	04/01/06 2141	1
Ethylbenzene	BDL	0.0010	mg/l		8260B	04/01/06 2141	1
Total Xylenes	BDL	0.0030	mg/l		8260B	04/01/06 2141	1
Surrogate Recovery Toluene-d8	96.		% Rec.		8260B	04/01/06 2141	1
Dibromofluoromethane	110		% Rec.		8260B	04/01/06 2141	1
4-Bromofluorobenzene	100		% Rec.		8260B	04/01/06 2141	1

*Cheli Boucher*

Cheli Boucher, ESC Representative

BDL - Below Detection Limit

Det. Limit - Practical Quantitation Limit (PQL)

Laboratory Certification Numbers:

AIHA - 100789, AL - 40660, CA - I-2327, CT- PH-0197, FL - E87487, GA - 923, IN - C-TN-01  
KY - 90010, KYUST - 0016, NC - ENV375, DW21704, ND - R-140, SC - 84004, TN - 2006, VA - 00109, WV - 233  
AZ -0612, MN - 047-999-395, NY - 11742, NJ - 81002, WI - 998093910

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 04/04/06 17:17 Printed: 04/04/06 17:18

Summary of Remarks For Samples Printed  
04/04/06 at 17:18:17

TSR Signing Reports: 070  
R5 - Desired TAT

cb-7/31/04 No E Qual - Use only TSR created projects  
Quals on report - design=DEFAULT4; EDD on all projects

Sample: L238949-01 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-02 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-03 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-04 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-05 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-06 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-07 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17  
Sample: L238949-08 Account: DUKARCAD Received: 03/29/06 09:00 Due Date: 04/05/06 00:00 RPT Date: 04/04/06 17:17



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SCIENCE CORP.

12065 Lebanon Rd.  
Mt. Juliet, TN 37122  
(615) 758-5858  
1-800-767-5859  
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Arcadis G & M, Inc. - Highlands Ranch CO  
Ms. Trisha Elizondo  
630 Plaza Dr Ste 200

Quality Assurance Report  
Level II

Highlands Ranch, CO 80129-2379

L238949

April 04, 2006

Analyte	Result	Laboratory Blank		Date Analyzed	Batch
		Units			
TPH (GC/FID) Low Fraction	< .1	mg/l		03/31/06 22:55	WG244632
TPH (GC/FID) Low Fraction	< .1	mg/l		04/01/06 04:41	WG244676
Benzene	< .001	mg/l		04/02/06 10:15	WG244738
Ethylbenzene	< .001	mg/l		04/02/06 10:15	WG244738
Toluene	< .005	mg/l		04/02/06 10:15	WG244738
Total Xylenes	< .003	mg/l		04/02/06 10:15	WG244738
Benzene	< .001	mg/l		04/01/06 20:15	WG244744
Ethylbenzene	< .001	mg/l		04/01/06 20:15	WG244744
Toluene	< .005	mg/l		04/01/06 20:15	WG244744
Total Xylenes	< .003	mg/l		04/01/06 20:15	WG244744
Benzene	< .001	mg/l		04/03/06 23:25	WG244905
Ethylbenzene	< .001	mg/l		04/03/06 23:25	WG244905
Toluene	< .005	mg/l		04/03/06 23:25	WG244905
Total Xylenes	< .003	mg/l		04/03/06 23:25	WG244905

Analyte	Laboratory Control		Sample Result	% Rec	Limit	Batch
	Units	Known Val				
TPH (GC/FID) Low Fraction	mg/l	2.2	2.57	117.	70-124	WG244632
TPH (GC/FID) Low Fraction	mg/l	2.2	2.22	101.	70-124	WG244676
Benzene	mg/l	.02	0.0199	99.0	63-121	WG244738
Ethylbenzene	mg/l	.02	0.0184	92.0	70-121	WG244738
Toluene	mg/l	.02	0.0202	101.	65-120	WG244738
Total Xylenes	mg/l	.06	0.0552	92.0	68-124	WG244738
Benzene	mg/l	.02	0.0187	93.0	63-121	WG244744
Ethylbenzene	mg/l	.02	0.0215	107.	70-121	WG244744
Toluene	mg/l	.02	0.0194	97.0	65-120	WG244744
Total Xylenes	mg/l	.06	0.0588	98.0	68-124	WG244744
Benzene	mg/l	.02	0.0204	102.	63-121	WG244905
Ethylbenzene	mg/l	.02	0.0184	92.0	70-121	WG244905
Toluene	mg/l	.02	0.0205	102.	65-120	WG244905
Total Xylenes	mg/l	.06	0.0540	90.0	68-124	WG244905

Analyte	Laboratory Control		Sample Duplicate		Limit	%Rec	Batch
	Units	LCSD Res	Ref Res	RPD			
TPH (GC/FID) Low Fraction	mg/l	2.63	2.57	2.29	20	120	WG244632
TPH (GC/FID) Low Fraction	mg/l	2.40	2.22	7.80	20	109	WG244676
Benzene	mg/l	0.0211	0.0199	6.01	16	105	WG244738
Ethylbenzene	mg/l	0.0193	0.0184	4.76	17	97	WG244738
Toluene	mg/l	0.0209	0.0202	3.34	18	105	WG244738
Total Xylenes	mg/l	0.0574	0.0552	3.91	17	96	WG244738
Benzene	mg/l	0.0191	0.0187	2.09	16	95	WG244744
Ethylbenzene	mg/l	0.0215	0.0215	0.0940	17	107	WG244744
Toluene	mg/l	0.0195	0.0194	0.101	18	97	WG244744
Total Xylenes	mg/l	0.0622	0.0588	5.59	17	104	WG244744
Benzene	mg/l	0.0208	0.0204	1.83	16	104	WG244905
Ethylbenzene	mg/l	0.0184	0.0184	0.193	17	92	WG244905



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L238949

April 04, 2006

Toluene mg/l 0.0205 0.0205 0.0759 18 102 WG244905

Analyte	Units	Laboratory Control		Sample Duplicate		Limit	%Rec	Batch
		LCSD Res	Ref Res	RPD	RPD			
Total Xylenes	mg/l	0.0548	0.0540	1.36	17	91		WG244905

Analyte	Units	Matrix Spike		TV	% Rec	Limit	Ref Samp	Batch
		MS Res	Ref Res					
TPH (GC/FID) Low Fraction	mg/l	2.57	0.370	2.2	100.	58-122	L238949-06	WG244632
TPH (GC/FID) Low Fraction	mg/l	2.00	0.00	2.2	91.0	58-122	L239065-06	WG244676
Benzene	mg/l	0.0176	0.00	.02	88.0	51-134	L239125-01	WG244744
Ethylbenzene	mg/l	0.0213	0.00	.02	106.	55-125	L239125-01	WG244744
Toluene	mg/l	0.0181	0.00	.02	91.0	57-126	L239125-01	WG244744
Total Xylenes	mg/l	0.0603	0.00	.06	101.	54-129	L239125-01	WG244744
Benzene	mg/l	0.0201	0.00	.02	101.	51-134	L239096-02	WG244905
Ethylbenzene	mg/l	0.0168	0.0021	.02	74.0	55-125	L239096-02	WG244905
Toluene	mg/l	0.0198	0.00	.02	99.0	57-126	L239096-02	WG244905
Total Xylenes	mg/l	0.0519	0.0073	.06	74.0	54-129	L239096-02	WG244905

Analyte	Units	Matrix Spike Duplicate		RPD	Limit	%Rec	Ref Samp	Batch
		MSD Res	Ref Res					
TPH (GC/FID) Low Fraction	mg/l	2.52	2.57	1.87	20	98.0	L238949-06	WG244632
Benzene	mg/l	0.0182	0.0176	3.64	18	91.0	L239125-01	WG244744
Ethylbenzene	mg/l	0.0216	0.0213	1.67	20	108.	L239125-01	WG244744
Toluene	mg/l	0.0196	0.0181	7.87	26	98.0	L239125-01	WG244744
Total Xylenes	mg/l	0.0597	0.0603	1.09	24	99.0	L239125-01	WG244744
Benzene	mg/l	0.0198	0.0201	1.41	18	99.0	L239096-02	WG244905
Ethylbenzene	mg/l	0.0176	0.0168	4.68	20	78.0	L239096-02	WG244905
Toluene	mg/l	0.0195	0.0198	1.78	26	97.0	L239096-02	WG244905
Total Xylenes	mg/l	0.0537	0.0519	3.35	24	77.0	L239096-02	WG244905

Batch number /Run number / Sample number cross reference

WG244744: R270362: L238949-05 06 07 08  
 WG244676: R270370: L238949-07 08  
 WG244632: R270380: L238949-01 02 03 04 05 06  
 WG244738: R270404: L238949-01 02 03  
 WG244905: R270587: L238949-04

\* \* Calculations are performed prior to rounding of reported values .



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The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.