

# GROUNDWATER MONITORING REPORT

## JANUARY 2011

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DECHANT 1-31A (API 05-123-11685)  
REMEDATION # PENDING

### PETROLEUM DEVELOPMENT CORPORATION DJ BASIN

This report summarizes the results of recent groundwater sampling conducted by LT Environmental, Inc. (LTE), on behalf of Petroleum Development Corporation (PDC), at the Dechant 1-31A site located in the Denver Julesburg Basin (DJ Basin) of northeastern Colorado (Figure 1).

Prior to sampling, groundwater level measurements were collected from the monitoring wells and are summarized in Table 1. A site map illustrating well locations is presented on Figure 2. Following purging, groundwater samples were collected and then submitted under strict chain of custody protocol to Summit Scientific in Golden, Colorado for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260B. Analytical results from the groundwater samples are also presented in Table 1. The laboratory analytical report is attached.

LTE will continue to conduct quarterly groundwater monitoring events with the goal of observing four consecutive quarters of analytical results in compliance with applicable regulatory standards as set forth on Table 910-1 of the Colorado Oil and Gas Commission Rules.



**TABLE 1**  
**GROUNDWATER ANALYTICAL AND FIELD RESULTS**  
**DECHANT 1-31A API No. 05-05-123-11685**  
**WELD COUNTY**  
**PETROLEUM DEVELOPMENT CORPORATION**

Well Name	Date	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Xylenes (ug/L)	Depth to Water (ft btoc)
MW01	12/16/2009	<1.0	1.5	47	540	NM
	06/22/2010			Damaged - Not Sampled		
MW02	12/16/2009	62	1300	610	5600	NM
	06/22/2010			Damaged - Not Sampled		
MW03	12/16/2009	440	6000	960	12000	NM
	06/22/2010			Damaged - Not Sampled		
MW04	12/16/2009	<1.0	13	240	3000	NM
	06/22/2010	<1.0	<1.0	23	260	18.05
	09/17/2010	<1.0	<1.0	9.5	81	17.41
	12/09/2010	<1.0	<1.0	1.4	6.7	16.88
MW05	12/16/2009	140	1400	960	12000	NM
	06/22/2010			Damaged - Not Sampled		
MW07	12/16/2009	<1.0	<1.0	<1.0	<1.0	NM
	06/22/2010	<1.0	<1.0	<1.0	<1.0	21.45
	09/17/2010	<1.0	<1.0	<1.0	<1.0	20.83
	12/09/2010	<1.0	<1.0	<1.0	<1.0	20.32
MW08	12/16/2009	<1.0	<1.0	<1.0	<1.0	NM
	06/22/2010			Damaged - Not Sampled		
MW09	12/16/2009	<1.0	<1.0	<1.0	<1.0	NM
	06/22/2010	<1.0	<1.0	<1.0	<1.0	17.62
	09/17/2010	<1.0	<1.0	<1.0	<1.0	17.03
	12/09/2010	<1.0	<1.0	<1.0	<1.0	16.51
MW10	12/16/2009	310	1000	690	8700	NM
	06/22/2010	8.4	5.1	30	720	17.95
	09/17/2010	55	<1.0	45	280	17.36
	12/09/2010	34	<1.0	780	3700	16.83
MW11	01/18/2010	1.0	<1.0	4.9	<1.0	NM
	06/22/2010	<1.0	<1.0	<1.0	<1.0	18.70
	09/17/2010	<1.0	<1.0	<1.0	<1.0	18.16
	12/09/2010	<1.0	<1.0	<1.0	<1.0	17.55
MW12	01/18/2010	<1.0	<1.0	<1.0	<1.0	NM
	06/22/2010	<1.0	<1.0	<1.0	<1.0	18.85
	09/17/2010	<1.0	<1.0	<1.0	<1.0	18.25
	12/09/2010	<1.0	<1.0	<1.0	<1.0	17.69
MW13	01/18/2010	35	<1.0	230	73	NM
	06/22/2010	5.1	<1.0	290	<1.0	18.56
	09/17/2010	13	<1.0	160	<1.0	17.95
	12/09/2010	4.4	<1.0	160	<1.0	17.42
MW14	01/18/2010	<1.0	<1.0	<1.0	<1.0	NM
	06/22/2010	<1.0	<1.0	<1.0	<1.0	19.06
	09/17/2010	3.9	<1.0	180	25	18.49
	12/09/2010	<1.0	<1.0	3.8	<1.0	17.94
MW15	02/10/2010	240	<1.0	340	1600	NM
	06/22/2010	<1.0	<1.0	<1.0	<1.0	17.04
	09/17/2010			Not Found - Not Sampled		
	12/09/2010			Not Found - Not Sampled		
MW16	02/10/2010	44	<1.0	130	450	NM
	06/22/2010	<1.0	<1.0	4.4	12	16.72
	09/17/2010			Not Found - Not Sampled		
	12/09/2010			Not Found - Not Sampled		

**TABLE 1**  
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**DECHANT 1-31A    API No. 05-05-123-11685**  
**WELD COUNTY**  
**PETROLEUM DEVELOPMENT CORPORATION**

Well Name	Date	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Xylenes (ug/L)	Depth to Water (ft btoc)
<b>Basic Standards for Groundwater</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1400</b>	

Notes: < - less than                      ug/L - micrograms per Liter                      NA - Not Analyzed/Not Available  
ft btoc - feet below top of casing                      NM - Not measured                      API - American Petroleum Institute  
Basic Standards for Groundwater are taken from the Colorado Department of Health and Environment (CDPHE) -  
Water Quality Control Commission (WQCC) Regulation 41, May 2008  
Bold numbers indicate result equalled or exceeded standard.



