GW-015

2nd Semi Annual GW Mon. Report

DATE: 2009



370 17th Street, Suite 2500 Denver, Colorado 80202 303-605-1893 - main 303-605-1957 - fax

November 17, 2009

Mr. Leonard Lowe Environmental Bureau Chief New Mexico Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, NM 87505

RE: 2nd 2009 Semi Annual Groundwater Monitoring Report DCP Linam Ranch Gas Plant (GW-015) Unit B, Section 6, Township 19 South, Range 37 East

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Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review one copy of the 2nd 2009 Semi Annual Groundwater Monitoring Report for the DCP Linam Ranch Gas Plant located in Lea County, New Mexico (Unit B Section 6, Township 19 South, Range 37 East).

The groundwater sampling and abandonment events were completed on September 24, 2009. The data indicate that the groundwater conditions remain stable. The next monitoring event is scheduled for the first half of 2010.

If you have any questions regarding the report, please call at 303-605-1695 or e-mail me <u>CECole@dcpmidstream.com</u>.

Sincerely,

DCP Midstream, LP

handler S. Cole.

Chandler E Cole. Senior Environmental Specialist

Enclosure

cc: Larry Johnson – OCD District Office, Hobbs Environmental Files

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

November 6, 2009

Mr. Chandler Cole DCP Midstream, LP 370 Seventeenth Street, Suite 2500 Denver, Colorado 80202

Subject: Report on 2009 Second Semi Annual Groundwater Monitoring Linam Ranch Gas Plant, Lea County, New Mexico **GW-015 Unit B, Section 6, Township 19 South, Range 37 East**

Dear Chandler:

This letter summarizes the activities completed and provides conclusions on the second 2009 semiannual groundwater-sampling program at the DCP Midstream, LP (DCP) Linam Ranch Gas Plant in Lea County New Mexico. The facility is located in New Mexico Oil Conservation Division (OCD) designated Unit B, Section 6, Township 19 South, Range 37 East (Figure 1). The coordinates are 32.6965 degrees north, 103.2883 degrees west. The facility is an active gas-processing plant.

Ongoing semiannual groundwater monitoring began in 1997. The 13 monitoring well locations are shown on Figure 2. Well MW-12 was abandoned in April 2009 because of safety concerns. Construction information for the wells is included in Table 1.

The sampling was completed on September 24, 2009. The activities completed included the measurement of fluid levels in all monitoring wells and the sampling of the wells that contained sufficient water and did not contain measurable free phase hydrocarbons (FPH).

These fluid measurements are summarized in Table 2 along FPH thicknesses and the resulting corrected groundwater elevations. Well MW-7 was dry. The water-table elevations for the wells containing FPH were calculated using the following formula:

 $GWE_{corr} = MGWE + (FPHT*PD)$: where

- MGWE is the actual measured groundwater elevation;
- FPHT is the measured free-phase hydrocarbon thickness; and
- PD is the free phase hydrocarbon density (assumed 0.81 based upon historic data).

The historic water-table elevation data are summarized in Table 3. Hydrographs for select wells are included on Figure 3. The water table declined in all wells except MW-3.

A water-table contour map for the September 2009 data was generated using the program Surfer[®] with its kriging option (Figure 4). Groundwater flow is toward the southeast. The groundwater gradient decreased to the southeast of the actual facility.

Mr. Chandler Cole November 6, 2009 Page 2

The historical FPH thickness values in MW-4 and MW-6 are graphed in Figure 5. The FPH thickness increased in both wells.

Ten wells were purged and sampled using the standard protocols for this site. Wells MW-4 and MW-6 were not sampled because they contained FPH. Well MW-7 was not sampled because it was dry.

The wells were purged using dedicated bailers until a minimum of three casing volumes of water were removed and the field parameters temperature, pH and conductivity had stabilized. The well purging forms are attached. The affected purge water was disposed of at the DCP Linam Ranch Facility.

Unfiltered samples were collected following purging using the same dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to the analytical laboratory using standard chain-of-custody protocols. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method SW846 8260B.

No duplicate sample was collected. Many of the bottles had defective septa, and zeroheadspace samples could not be collected. A matrix spike, matrix spike duplicate was collected from MW-2. The quality control evaluation can be summarized as follows:

- All of the samples were analyzed within the required holding times;
- The BTEX constituents in the trip blank were all below their method detection limits;
- All of the individual surrogate spikes were within their control limits;
- The method blank and blank spike evaluations were all acceptable;
- Some of the matrix spike and matrix spike duplicate results were outside of their respective control ranges but reanalysis was not warranted based upon the laboratory report

The quality control results indicate that the data is suitable for groundwater monitoring evaluation.

The analytical results are summarized in Table 4 and the laboratory report is attached. The constituents that exceed the potentially applicable New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are highlighted in Table 4. The samples from MW-5, MW-10 and MW-10d exceeded the benzene standard. There were no other exceedances. In addition, none of the down-gradient boundary wells 'MW-2, MW-8, MW-9 and MW-13 contained BTEX constituents above the method reporting limits.

Benzene isopleths generated by the Surfer[®] program using the kriging option are plotted on Figure 6 for the September 2009 data. Figure 6 indicates the following:

Mr. Chandler Cole November 6, 2009 Page 3

- 1. There appears to be two hydrocarbon source areas. The first area includes wells MW-4, MW-5 and MW-6. The second is associated with the MW-10/MW-10D cluster.
- 2. The dissolved-phase BTEX constituents that emanate from the MW-4, MW-5, MW-6 source attenuate to concentrations that are at or below the method reporting limits before encountering any boundary wells MW-2 and MW-8.
- 3. The elevated dissolved-phase BTEX constituents that are measured at MW-10 and MW-10D attenuate to concentrations that are below the method reporting limits before encountering down gradient wells MW-9 and MW-13.
- 4. The attenuation patterns described for above the two sources have remained constant since the middle of 2001.
- 5. There is an additional 1,000-foot buffer zone from the boundary wells discussed above and the down-gradient DCP property boundary at or near well MW-3 Figure 6).

The historical data for all wells is summarized in Table 5 for benzene, Table 6 for toluene, Table 7 for ethylbenzene and Table 8 for total xylenes. Figure 7 graphs the benzene concentration verses time relationship for MW-5. The benzene concentration rebounded in a manner that duplicates similar historic trends. This rebound has not affected the down-gradient concentrations as discussed in bullet 2 immediately above.

Time-benzene graphs for MW-10 and MW-10D are included in Figure 8. The benzene concentrations appear to be relatively stable in both wells. The dissolved-phase hydrocarbon plume does not appear to be expanding from this area based upon the nondetects in down-gradient wells MW-9 and MW-13 as discussed in bullet 3 above.

The above results, particularly the lack of detectable BTEX in the down-gradient wells, indicate that the plume is not expanding. Also, the land to the east that is owned by DCP provides an additional down-gradient buffer from the facility boundary to the property boundary as discussed in bullet 5 above.

AEC recommends no additional activities other than continued groundwater sampling be completed at this site. The next semi-annual groundwater-monitoring episode is scheduled for the first half of 2010. Do not hesitate to contact me if you have any questions or comments on this report or any other aspects of the projects.

Mechael H. Stewart

Michael H. Stewart, PE Principal Engineer

MHS/tbm attachment TABLES

Well	Well Elevation (Top of Casing)	Well Depth (TOC)	Well Diameter
	(feet)	(feet)	(inches)
MW-1	3718.29	54.20	2
MW-2	3714.80	50.50	2
MW-3	3715.50	55.30	2
MW-4	3720.46	54.13	4
MW-5	3721.53	55.20	4
MW-6	3720.99	54.10	4
MW-7	3728.57	62.50	2
MW-8	3714.18	58.30	4
MW-9	3720.48	59.10	2
MW-10	3720.76	65.00	4
MW-10D	3720.85	79.00	2
MW-11	3722.02	62.80	4
MW-13	3721.63	63.00	4

Table 1 – Linam Ranch Gas Plant Well Construction Summary

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с. 9 в с. 1 в с. 1 Well MW-12 plugged and abandoned 4/29/09

Well	Depth to Water	Depth to Product	Free Phase Hydrocarbon Thickness	Corrected Water Table Elevation
MW-1	46.07			3674.11
MW-2	44.74			3672.50
MW-3	47.78			3669.92
MW-4	48.06	47.4	0.66	3674.89
MW-5	47.89			3675.71
MW-6	50.82	48.62	2.20	3673.93
MW-7				DRY
MW-8	44.19			3671.99
MW-9	51.10			3671.38
MW-10	51.15			3671.75
MW-10D	52.32			3671.22
MW-11	52.21			3672.32
MW-13	52.74			3671.25

Table 2 –Linam Ranch Gas Plant September 2009 Gauging Data

All units are feet

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Table 3 - Linam Ranch Gas Plant Summary of Historic Groundwater Elevation Data

8/2/01	676.23 3675.37 3674.45 3674.19 3673.67 3673.76 3675.21 3675.41 3676.71 3676.99 3674.81	3672.80 3672.37 3672.41 3674.43 3672.68 3679.43 3674.05 3672.69	3669.96 3669.80 3669.59 3669.68 3669.51 3669.68 3669.48 3669.31	3674.80	3674.82	3674.15	3674.47 3673.36 3672.78 3672.04 3671.87 3671.61 3671.48 3672.56 3671.93 3674.66 3672.60 3671.26	3670.62	3671.06	3670.76	673.88 3673.31 3672.21 3671.81 3672.01 3671.88 3671.68 3672.06 3672.09 3672.47 3672.22 3671.79	3671.07	672.66 3672.34 3671.43 3671.05 3670.93 3670.80 3670.60 3670.94 3670.74 3671.04 3670.88 3670.58	4/29/09	
2/6/01	3676.99	3674.05	3669.48	3675.39	3675.24	3674.75	3672.60	3670.86	3671.36	3670.97	3672.22	3671.50	3670.88	9/15/08	
8/17/00	3676.71	3679.43	3669.68	3676.07	3675.66	3675.61	3674.66	3670.92	3671.53	3671.29	3672.47	3671.86	3671.04	4/30/08 9/15/08 4/29/09	
2/21/00	3675.41	3672.68	3669.51	3675.81	3675.84	3675.11	3671.93	3670.78	3671.24	3670.98	3672.09	3671.33	. 3670.74	9/28/07	
8/24/99	3675.21	3674.43	3669.68	3675.44	3675.47	3674.86	3672.56	3670.89	3671.39	3671.03	3672.06	3671.59	3670.94		
/17/96 4/24/96 1/22/97 8/15/97 1/22/98 7/20/98 2/9/99 8/24/99 2/21/00 8/17/00 2/6/01	, 3673.76	3672.41	3669.59	3674.45	3674.84	3673.84	3671.48	3670.67	3671.02	3670.78	3671.68	3671.00	3670.60	3/22/06 9/21/06 3/20/07	
7/20/98	3673.67	3672.37	3669.80	3673.76	3674.21	3673.59	3671.61	3670.90	3671.22	3670.99	3671.88	3671.18	3670.80	22/06 9/	
1/22/98	3674.19	3672.80	3669.96	3674.52	3674.74	3674.21	3671.87	3671.00	3671.33	3671.13	3672.01	3671.34	3670.93		
8/15/97	3674.63			3674.12	3673.96	3673.91	3672.04	3671.14	3671.41	3671.07	3671.81	3671.40	3671.05	3/15/05 9/29/05	
1/22/97	3674.45	3673.19	3670.47	3674.29	3674.35	3674.21	3672.78	3671.52	3671.78	3671.43	3672.21	3671.74	3671.43		
4/24/96	3675.37		3671.13 3670.47	\$675.50	\$675.51	\$676.37	3673.36	672.40	3672.75	3672.36	3673.31	3672.75	3672.34	4 8/17/04	
, 96//1/1	3676.23			3676.27	3676.23	3676.18	3674.47	3672.64	3673.08	3672.81	3673.88	3673.25	3672.66	3/16/04	
1/14/95			3671.30	3675.75	3676.62	3676.80		3672.46	3673.05	3672.91	3674.19	3673.32	3672.57	9/17/03	
5/17/95 1	3674.68	3673.49	3670.72	3675.43	3675.43	3674.87	3672.73	3671.88	3672.45 3673.05 3673.08 3672.75 3671.78 3671.41 3671.33 3671.22 3671.02 3671.39 3671.24 3671.53 3671.36 3671.36	3672.16 3672.91 3672.81 3672.36 3671.43 3671.07 3671.13 3670.99 3670.78 3671.03 3670.98 3671.29 3670.97 3670.76	3673.03 3674.19 30	3672.37 3673.32 3673.25 3672.75 3671.74 3671.40 3671.34 3671.18 3671.00 3671.59 3671.33 3671.86 3671.50 3671.07	3672.02 3672.57 3	3/8/03	
5/22/94	3676.28 3674.68	3682.29 3673.49	3671.47 3670.72 3671.30	3677.10 3676.96 3675.43 3675.75 3676.27 3675.50 3674.29 3674.12 3674.52 3673.76 3674.45 3675.44 3675.41 3675.81 3676.07 3675.39 3674.80	3677.65 3677.33 3675.43 3676.62 3675.51 3674.35 3673.96 3674.74 3674.21 3674.21 3674.84 3675.47 3675.84 3675.66 3675.66 3675.24 3674.82	3676.87 3676.70 3674.87 3676.80 3676.18 3676.37 3674.21 3673.91 3674.21 3673.59 3673.59 3673.84 3674.86 3675.11 3675.61 3674.75 3674.15	3674.83 3672.73	3672.89 3671.88 3672.46 3672.64 3672.40 3671.52 3671.14 3671.00 3670.90 3670.67 3670.67 3670.89 3670.78 3670.92 3670.86 3670.62	.,1					3/11/02 9/25/02	
12/1/92 5/22/94 5/17/95 11/14/95				3677.10	3677.65	3676.87								3/11/02	
Well	I-WM	MW-2	MW-3	MW-4	MW-5	MW~6	MW-8	6-WM	MW-10	MW-10D	MW-11	MW-12	MW-13	Well	

Well	3/11/02	3/11/02 9/25/02		3/8/03 9/17/03	3/16/04	8/17/04	3/15/05	3/16/04 8/17/04 3/15/05 9/29/05 3/22/06 9/21/06 3/20/07 9/28/07 4/30/08 9/15/08 4/29/09	3/22/06	9/21/06	3/20/07	9/28/07	4/30/08	9/15/08	4/29/09
MW-1	3674.04	3674.43	MW-1 3674.04 3674.43 3674.32 3673.80	3673.80	3674.30	3676.59	3682.86	3674.30 3676.59 3682.86 3684.83 3684.08 3682.25 3677.05 3677.62 3677.57 3675.05 3674.29	3684.08	3682.25	3677.05	3677.62	3677.57	3675.05	3674.29
MW-2	3672.07	3672.26	3672.07 3672.26 3672.21 3671.69	3671.69	3671.26	3679.10	3679.39	3671.26 3679.10 3679.39 3678.22 3676.04 3681.68 3674.88 3693.79 3693.74 3673.08 3672.78	3676.04	3681.68	3674.88	3693.79	3693.74	3673.08	3672.78
MW-3		3669.03	3669.14 3669.03 3669.06 3668.87	3668.87	3668.63	3669.00	3671.37	3668.63 3669.00 3671.37 3671.52 3671.63 3672.00 3671.45 3671.31 3671.26 3670.30 3669.92	3671.63	3672.00	3671.45	3671.31	3671.26	3670.30	3669.92
MW-4	3674.59	3675.13	MW-4 3674.59 3675.13 3674.60 3674.16	3674.16	3674.04	3675.77	3681.85	3674.04 3675.77 3681.85 3682.38 3682.04 3680.94 3677.98 3677.77 3676.48 3675.63 3675.14	3682.04	3680.94	3677.98	3677.77	3676.48	3675.63	3675.14
MW-5	3675.07	3674.99	3675.07 3674.99 3674.81 3674.32	3674.32	3674.32	3674.32	3680.24	3674.32 3674.32 3680.24 3680.65 3680.66 3680.23 3678.70 3677.03 3676.98 3675.93 3675.97	3680.66	3680.23	3678.70	3677.03	3676.98	3675.93	3675.97
MW-6	3674.30	3674.61	MW-6 3674.30 3674.61 3674.12 3673.55	3673.55	3673.07	3674.68	3680.13	3673.07 3674.68 3680.13 3677.46 3677.42 3677.37 3677.70 3677.21 3675.96 3674.92 3674.28	3677.42	3677.37	3677.70	3677.21	3675.96	3674.92	3674.28
MW-8	3671.51	3671.59	MW-8 3671.51 3671.59 3671.59 3670.71	3670.71	3670.67	3673.30	3676.74	3670.67 3673.30 3676.74 3677.01 3675.71 3677.09 3674.32 3681.16 3672.09 3672.47 3672.01	3675.71	3677.09	3674.32	3681.16	3672.09	3672.47	3672.01
9-WM	3670.61	3670.61	MW-9 3670.61 3670.61 3670.68 3670.48	3670.48	3670.15	3670.28	3673.36	3670.15 3670.28 3673.36 3673.66 3674.00 3673.41 3673.42 3672.65 3681.10 3672.20 3671.77	3674.00	3673.41	3673.42	3672.65	3681.10	3672.20	3671.77
MW-10	3671.10	3671.13	MW-10 3671.10 3671.13 3671.17 3670.87	3670.87	3670.52	3670.84	3674.42	3670.52 3670.84 3674.42 3674.35 3674.69 3674.13 3673.99 3673.14 3674.08 3672.69 3672.22	3674.69	3674.13	3673.99	3673.14	3674.08	3672.69	3672.22
MW-10D	3670.84	3670.81	MW-10D 3670.84 3670.81 3670.85 3670.46	3670.46	3670.28	3670.51	3673.72	3670.28 3670.51 3673.72 3674.03 3674.05 3673.75 3674.92 3672.70 3672.59 3672.31 3671.64	3674.05	3673.75	3674.92	3672.70	3672.59	3672.31	3671.64
MW-11	3672.02	3672.05	MW-11 3672.02 3672.05 3672.00 3671.49	3671.49	3671.02	3671.67	3675.45	3671.02 3671.67 3675.45 3675.54 3675.68 3675.30 3674.52 3673.80 3672.58 3673.15 3672.74	3675.68	3675.30	3674.52	3673.80	3672.58	3673.15	3672.74
MW-12	3671.01	3671.09	MW-12 3671.01 3671.09 3671.15 3670.81	3670.81	3670.36	3671.10	3674.97	3670.36 3671.10 3674.97 3674.46 3674.64 3674.52 NS	3674.64	3674.52	NS	NS	NS	NS	NS
MW-13	3670.50	3670.50	MW-13 3670.50 3670.50 3670.57 3670.32		3669.95	3670.31	3673.69	3669.95 3670.31 3673.69 3673.61 3673.56 3673.50 3677.05 3672.57 3672.50 3672.06 3671.60	3673.56	3673.50	3677.05	3672.57	3672.50	3672.06	3671.60

NS: Not sampled due to safety concerns. all units in feet

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Table 3 - Linam Ranch Gas Plant Summary of Historic Groundwater Elevation Data (continued)

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9/24/09	3674.11	3672.50	3669.92	3674.89	3675.71	3673.93	DRY	3671.99	3671.38	3671.75	3671.22	3672.32	3671.25	feet)
Well	I-WM	MW-2	MW-3	MW-4	3-WM	MW-6	MW-7	MW-8	MW-9	MW-10	MW-10D	I I-WM	MW-13	(all units in

Well	Benzene	Toluene	Ethylbenzene	Xylenes
NMWQCC	0.01	0.75	0.75	0.62
MW-1	< 0.002	<0.002	< 0.002	< 0.006
MW-2	< 0.002	< 0.002	< 0.002	< 0.006
MW-3	< 0.002	< 0.002	< 0.002	< 0.006
MW-4	FPH			
MW-5	0.0272	< 0.002	0.227	< 0.006
MW-6	FPH			
MW-7	DRY			
MW-8	< 0.002	< 0.002	< 0.002	< 0.006
MW-9	< 0.002	< 0.002	< 0.002	< 0.006
MW-10	1.07	0.126	0.148	0.154
MW-10d	0.103	0.0496	0.0127	0.0261
MW-11	< 0.002	< 0.002	< 0.002	< 0.006
MW-13	< 0.002	< 0.002	< 0.002	< 0.006
Trip Blank	< 0.002	< 0.002	< 0.002	< 0.006

Table 4 – Linam Ranch Gas Plant September 2009 Sampling Results

NMWQCC: New Mexico Water Quality Control Commission groundwater standards. Bolded cells exceed the NMWQCC standard

All units mg/l

FPH: Free phase hydrocarbons present so no samples collected

NS: Not sampled because of insufficient water.

MW-12 was plugged and abandoned in April 2009

Table 5 - Linam Ranch Gas Plant Summary of Historical Results for Benzene

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MW-13						<0.001	0.003	<0.001	<0.001	0.048	0.132	0.082	0.061	0.082	0.062	0.08	0.04	0.023	0.002	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.00046	<0.002	
MW-12						<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.002	0.001	0.003	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001							ncluded:
MW-11						<0.001	0.306	0.549	0.52	0.267	0.164	0.291	0.061	0.018	0.005	0.02	$0.00\dot{9}$	0.013	0.002	0.005	0.002	<0.001	<0.005	<0.001	0.003	0.0264	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.00046	<0.002	3) Modifiers are not included:
MW-10 MW-10D						0.096	0.125	0.841	8.14	0.365	0.221	<0.001	0.184	0.009	0.036	0.014	<0.005	<0.005	<0.001	0.002	<0.001	<0.005	<0.005	<0.001	0.011	0.107	0.0703	0.224	0.0537	0.0736	0.218	0.195	0.216	0.179	0.103	
MW-10						3.225	5.23	6.11	6.94	6.41	5.63	7.03	7.18	4.87	5.58	2.35	3.11	1.23	1.64	3.26	3.48	4.21	1.34	0.456	1.3	3.91	1.67	1.48	1.19	1.13	1.18	0.769	0.801	0.883	1.07	ty concerns:
MW-9-						<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.011	<0.005	0.014	0.036	<0.005	0.038	0.048	0.071	0.077	<0.005	<0.001	<0.001	0.0061	0.0029	0.0023	0.001	<0.001	<0.001	<0.002	<0.002	<0.002 <0.00046	<0.002	due to safe
8-WM				100.02	<0.001	<0.001							5		<0.001	<0.005	0.002	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002 <0.002	<0.002	<0.002	<0.002	after 9/06
MW-7	- Maria					<0.001									<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	< 0.001	<0.001	<0.001	<0.001	<0.001	<0.002				sampled
MW-6		7 0	40.0 4 Ci O	70.7	0.//	0.98															1.29	0.16														-12 Not
MW-3 MW-4 MW-5 MW-6 MW-7 MW-8		0000	00000	2000-0	0.300	0.090									0.137	0.068	<0.005	<0.005	<0.005	0.062	0.381	0.079	0.116	0.146	0.012	0.262	0.63	0.569	1.06	0.252	0.07375	0.0108	0.0469	0.0095	0.0272	alues are averaged: 2) MW-12 Not sampled af
MW-4			0.01	0.11	18.0	20.9														17.9	18.8	16.9	15.8	17.8	16.6	1										average
MW-3	100.02	<0.001				<0.001								<0.001	<0.001	<0.001	<0.005	<0.005	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	/alues are
MW-2		<0.001			-	<0.001									<0.005	<0.005	<0.001	<0.005	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	100.0>	<0.001	<0.001	<0.001	<0.001	<0.001				<0.002	uplicate v
MW-1	0.005	5100.0	C100.0	0.0000	9200.0	<0.002									<0.005		<0.001	<0.005	0.003	<0.001	<0.005					<0.001	0.0067	0.0028	0.0011	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	g/l and d
Date		500.0 1661/07/6	C100.0 2661/C/11	0000 0 0001/01/1	1/12/1994 0.009	5/17/1995 <0.002	11/14/1995	9661/21/1	4/24/1996	1/22/1997	8/15/1997	1/22/1998	7/20/1998	2/9/1999	8/25/1999 <0.005	2/22/2000 <0.005	8/18/2000	2/7/2001	8/2/2001	3/11/2002	9/25/2002	3/10/2003 <0.001	9/17/2003 <0.001	3/16/2004 <0.001	8/18/2004 <0.001	3/15/2005 <0.001	9/29/2005 0.0067	3/22/2006 0.0028	9/21/2006 0.0011	3/20/2007 <0.001	9/28/2007 <0.001	4/30/2008 < 0.002 < 0.002	9/15/2008 <0.002 <0.002	3&4/2009 <0.002 <0.002	9/24/2009 <0.002 <0.002	1) All units mg/l and duplicate values are averaged: 2) MW-12 Not sampled after 9/06 due to safety concerns:

Table 6 - Linam Ranch Gas Plant Summary of Historical Results for Toluene

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MW-13					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.00048	<0.002	
MW-12					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001							hobuloui
MW-11					<0.001	<0.001	0.004	<0.002	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.00048	<0.002	ton one soft
MW-10D					0.004	0.001	0.001	0.046	<0.005	<0.01	<0.001	0.014	<0.005	<0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	0.0444	0.0453	0.0614	0.0378	0.0563	0.0902	0.0677	0.0883	0.0772	0.0496	· 3) Madif
MW-10					0.052	0.001	0.863	<0.010	1.63	1.35	1.93	2.34	0.32	0.658	0.129	0.025	0.082	<0.02	0.178	<0.100	<0.100	0.006	<0.010	<0.020	0.303	0.39	0.254	0.197	0.212	0.246	0.0457	0.0508	0.230	0.126	
6-WW					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002<0.0048	<0.002 <0.002	due to cof
MW-8				<0.005	<0.001									<0.001	<0.005	<0.001	<0.005	<0.001	<0.001 <0.001	<0.001	<0.001	<0.005	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.002 <0.002	<0.002	<0.002	<0.002	o fto:: 0/0/
MW-6 MW-7 MW-8					<0.001									<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	< 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002			L	polocioo o
MW-6		0.023	0.020	0.0029	0.007															<0.050	<0.100														10 Not
MW-5		0.0034	0.0041	0.190	0.014									0.037	<0.005	<0.005	<0.005	<0.005	<0.001	< 0.050	<0.050	<0.001	<0.001	<0.005	<0.005	<0.0100	<0.0100	0.0069	<0.005	<0.001	<0.002	0.0008	<0.002	< 0.002	MANA (C.)
MW-4		8.0	8.2	10.0	1.35														<0.100	<0.100	<0.100	< 0.200	< 0.200	<0.100			-								200 BLOVE
MW-3 MW-4	0.0021				<0.001								<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	< 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	alies are
MW-2	<0.001				<0.001									<0.005	<0.005	< 0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001 <0.001	<0.001 <0.001	<0.001	<0.001 <0.001	<0.002 <0.002	<0.002	<0.002	<0.002 <0.002	hunlicate v
NW-I	0.0067	0.0015	0.0014	<0.001	<0.002									<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001	< 0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	p pue l/ou
Date	9/20/1991	11/3/1992	12/2/1992	1/12/1994	5/17/1995	11/14/1995	1/17/1996	4/24/1996	1/22/1997	8/15/1997	1/22/1998	7/20/1998	2/9/1999	8/25/1999	2/22/2000	8/18/2000	2/7/2001	8/2/2001	3/11/2002	9/25/2002	3/10/2003	9/17/2003	3/16/2004	8/18/2004 <0.00	3/15/2005	9/29/2005 <0.00	3/22/2006 <0.00	9/21/2006 <0.00	3/20/2007	9/28/2007 <0.001	4/30/2008 <0.002	9/15/2008 <0.002	3&4/2009 <0.002	9/24/2009 <0.002	1) All units multipud dimitesta volues are averanded. 2) MW, 12 Not sounded offer 0.06 due to softer, concerns. 2) Modifiers are not included

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MW-11 MW-12 MW-13					<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.00045	<0.002
MW-12					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001						
MW-11					<0.001	<0.001	0.002	<0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.002	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001	<0:001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.00045	<0.002
MW-10D					<0.001	<0.001	<0.001	1.170	<0.005	<0.01	<0.001	0.008	<0.005	0.001	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	0.001	0.0143	0.0061	0.0295	0.0075	<0.001	0.0212	0.0144	0.0235	0.0203	0.0127
MW-10		ŀ			0.049	<0.001	1.140	1.190	0.294	0.479	0.802	0.777	0.516	0.557	0.164	0.072	0.102	0.119	0.251	0.290	0.303	0.110	0.047	0.119	0.888	0.238	0.241	0.204	0.222	0.163	0.0851	0.0932	0.0859	0.148
6-WM					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002 <0.0045	<0.002
MW-8				<0.005	<0.001									<0.001	<0.005 <0.005	<0.001	<0.005 <0.005	<0.001	<0.001	<0.001	<0.001	<0.001 <0.005	<0.001	<0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001	<0.001 <0.001	<0.001 <0.001	<0.002 <0.002	<0.002	<0.002	<0.002
MW-3 MW-4 MW-5 MW-6 MW-7 MW-8					<0.001									<0.005	<0.005	<0.005 <0.00	<0.005	<0.005 <0.00	<0.001 <0.00	<0.005 <0.00	<0.005 <0.00	<0.001	<0.001 <0.001	<0.001 <0.001	<0.001	<0.001	<0.001	<0.001 <0.001	<0.001	<0.001	<0.002			
MW-6		0.051	0.058	0.096	0.087															0.134	0.148													
MW-5		0.003	0.0082	0.160	0.138									0.262	0.13	0.006	0.084	<0.005	0.097	0.588	0.072	0.182	0.241	0.081	0.309	0.267	0.239	0.407	0.1975	0.0374	0.182	0.2375	0.104	0.227
MW-4		0.7	0.53	0.5	<0.2														0.450	0.526	0.520	0.259	0.512	0.403										
MW-3	100 07	<0.001			<0.001								<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0022	<0.001	<0.002	<0.002	<0.002	<0.002
MW-2	100.02	<0.001			<0.001									<0.005	<0.005 <0.001	<0.001 <0.005	<0.005 <0.005	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	0.0022	<0.001	<0.002	<0.002	<0.002	<0.002
MW-1	100.0	100.0>	<0.001	0.0021	<0.002									<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.011			<0.001	<0.001	<0.002	<0.002	<0.002	<0.002
Date	1001/00/0	1661/07/6	_	1/12/1994	5/17/1995	11/14/1995	9661/21/1	4/24/1996	1/22/1997	8/15/1997	1/22/1998	7/20/1998	2/9/1999	8/25/1999	2/22/2000	8/18/2000	2/7/2001	8/2/2001	3/11/2002	9/25/2002	3/10/2003	9/17/2003	3/16/2004	8/18/2004	3/15/2005	9/29/2005	3/22/2006 0.0013	9/21/2006 <0.001	3/20/2007 <0.001 0.0022 0.0022	9/28/2007 <0.001 <0.001 <0.001	4/30/2008 <0.002 <0.002 <0.002	9/15/2008 <0.002 <0.002 <0.002	3&4/2009 <0.002 <0.002 <0.002	9/24/2009 <0.002 <0.002 <0.002

Table 8 - Linam Ranch Gas Plant Summary of Historical Results for Total Xylenes

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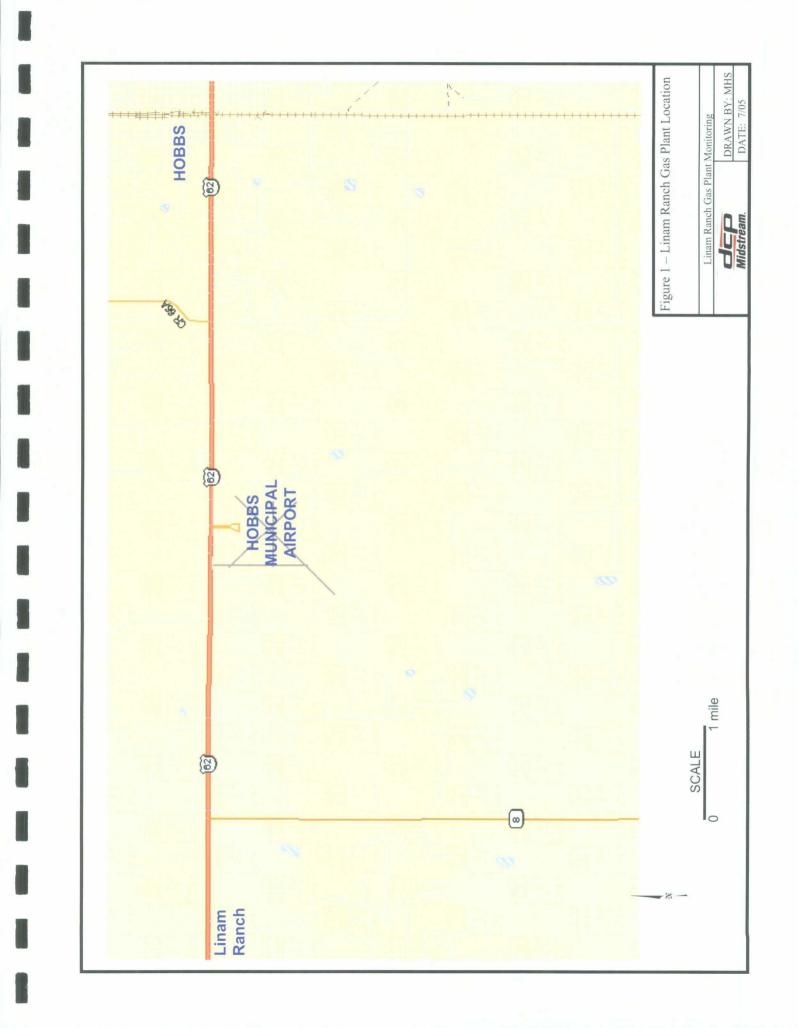
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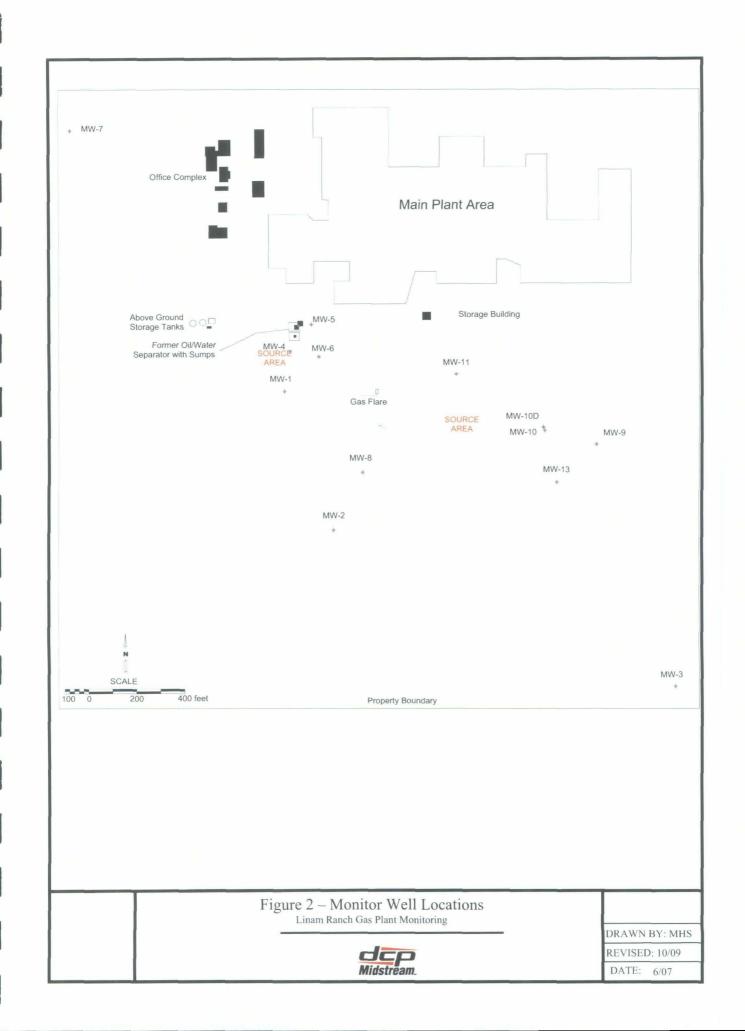
MW-13					<0.001	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.006	<0.006	<0.0014	<0.006	
MW-12					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001							ot included
MW-11					<0.001	0.013	0.031	<0.002	0.017	0.007	0.015	0.010	<0.001	<0.001	0.008	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	0.0115	<0.001	<0.001	<0.001	<0.001	<0.001	<0.006	<0.006	<0.0014	<0.006	fiers are n
MW-10 MW-10D MW-11 MW-12		-			0.008	0.011	0.047	0.076	<0.005	<0.01	<0.001	0.006	<0.005	0.002	<0.005	<0.005	<0.005	<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	0.0146	0.0119	0.0267	0.0205	<0.001	0.0375	<0.006	0.0347	0.0296	0.0261	is: 3) Modi
MW-10					0.169	0.406	1.050	0.127	8.97	0.453	0.635	0.606	0.372	0.359	0.124	0.038	0.086	<0.02	0.550	0.155	<0.100	0.044	0.023	0.071	1.09	0.353	0.304	0.238	0.279	0.213	0.05	0.0433	0.0759	0.154	fety concern
6-WM					<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.005	<0.005	<0.005	<0.001	<0.001	0.002	0.003	<0.005	0.012	0.004	0.0049	<0.001	<0.001	<0.001	0.0075	<0.001	0.05	<0.006 <0.006	<0.006 <0.0014	<0.006 <0.006	due to sa
MW-6 MW-7 MW-8				<0.005	<0.001									<0.001	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001 <0.001 0.0049	<0.001 <0.001 <0.001	<0.001 <0.001 <0.001	0.0015 <0.001 <0.001	<0.001 <0.001 0.0075	<0.001 <0.001 <0.001	<0.006 <0.006 0.05	<0.006	<0.006	<0.006	after 9/06
MW-7					<0.001									<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.005	<0.005	<0.001	<0.001	<0.00	<0.001	<0.001	<0.001	0.0015	<0.001	<0.001	<0.006				sampled
MW-6		0.120	0.120	0.210	0.181			-												0.058	<0.100														/-12 Not
MW-5		0.034	0.037	0.490	0.831									0.179	0.09	0.008	<0.005	<0.005	<0.001	0.112	<0.050	<0.001	0.005	<0.005	0.298	0.327	0.296	0.178	0.0221	<0.001	0.0039	0.3400	<0.006	<0.006	d: 2) MW
MW-3 MW-4 MW-5		1.8	1.3	1.3	11.4														0.166	<0.001 <0.100	0.151	<0.001 <0.200	<0.001 <0.200	<0.001 <0.100 <0.005											e average
MW-3	<0.001				<0.001								<0.001	<0.001	<0.001	<0.005	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.006	<0.006	<0.006	<0.006	values ar
MW-2	<0.001				<0.001									<0.005	<0.005	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.001 <0.001	<0.006 <0.006	<0.006 <0.006	<0.006 <0.006	<0.006 <0.006	duplicate
MW-I	<0.001	0.010	0.006	0.002	<0.002									0.006	0.006	0.011	<0.005	<0.001	<0.001	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.0081	<0.001	0.0017	<0.001	<0.001	<0.006	<0.006	<0.006	<0.006	mg/l and
Date	9/20/1991 <0.001	11/3/1992 0.010	12/2/1992 0.006	1/12/1994 0.002	5/17/1995 <0.002	11/14/1995	9661/21/1	4/24/1996	1/22/1997	8/15/1997	1/22/1998	7/20/1998	2/9/1999	8/25/1999	2/22/2000	8/18/2000 0.01	2/7/2001 <0.005	8/2/2001 <0.00	3/11/2002 <0.001	9/25/2002 <0.005	3/10/2003 <0.001	9/17/2003 <0.001	3/16/2004 <0.001	8/18/2004 < 0.001	3/15/2005 <0.001	9/29/2005 0.0081	3/22/2006 <0.001	9/21/2006 0.0017	3/20/2007 <0.001	9/28/2007 <0.001	4/30/2008 < 0.006	9/15/2008 <0.006	3&4/2009 <0.006	9/24/2009 < 0.006	1) All units mg/l and duplicate values are averaged: 2) MW-12 Not sampled after 9/06 due to safety concerns: 3) Modifiers are not included

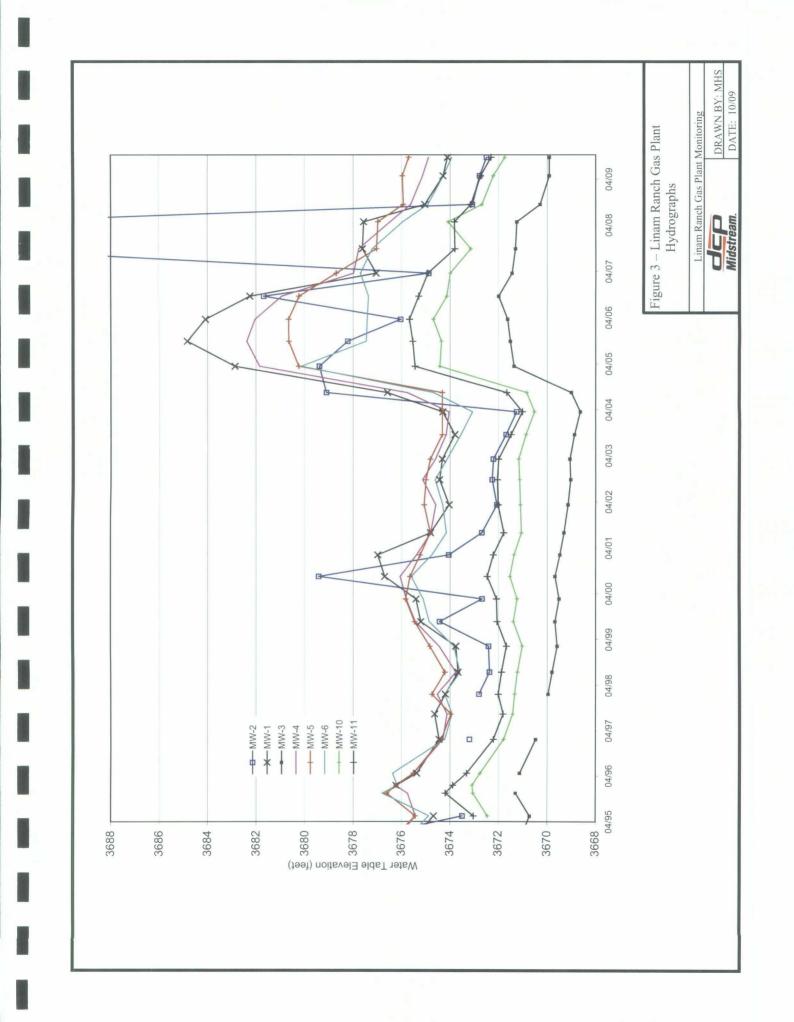
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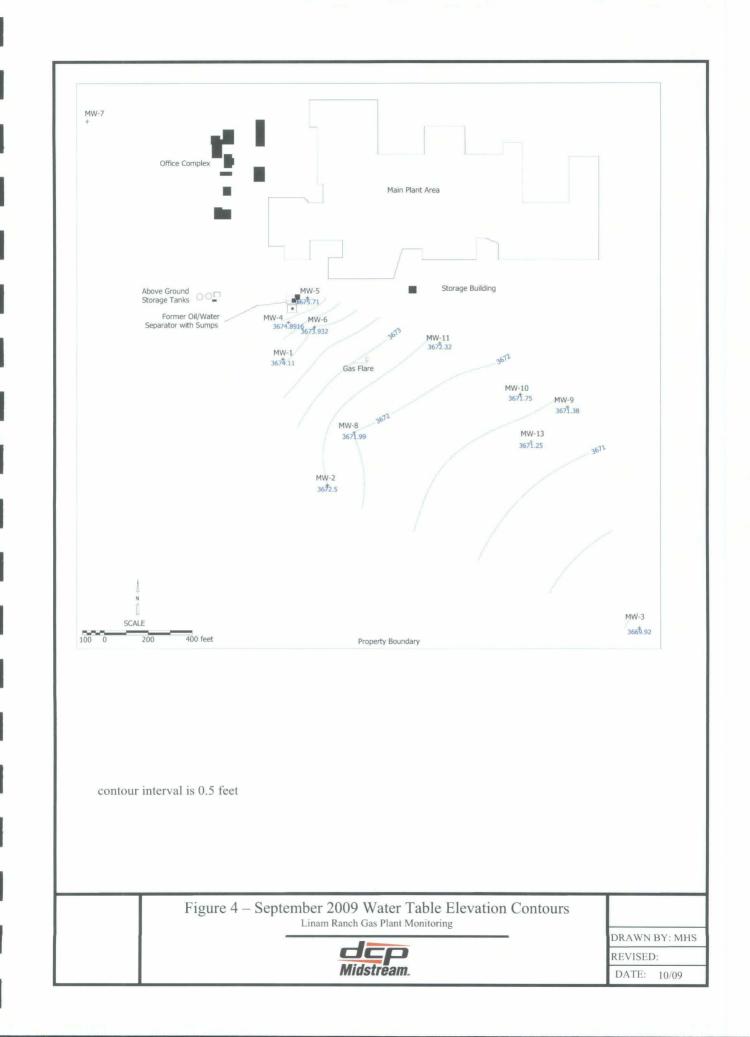
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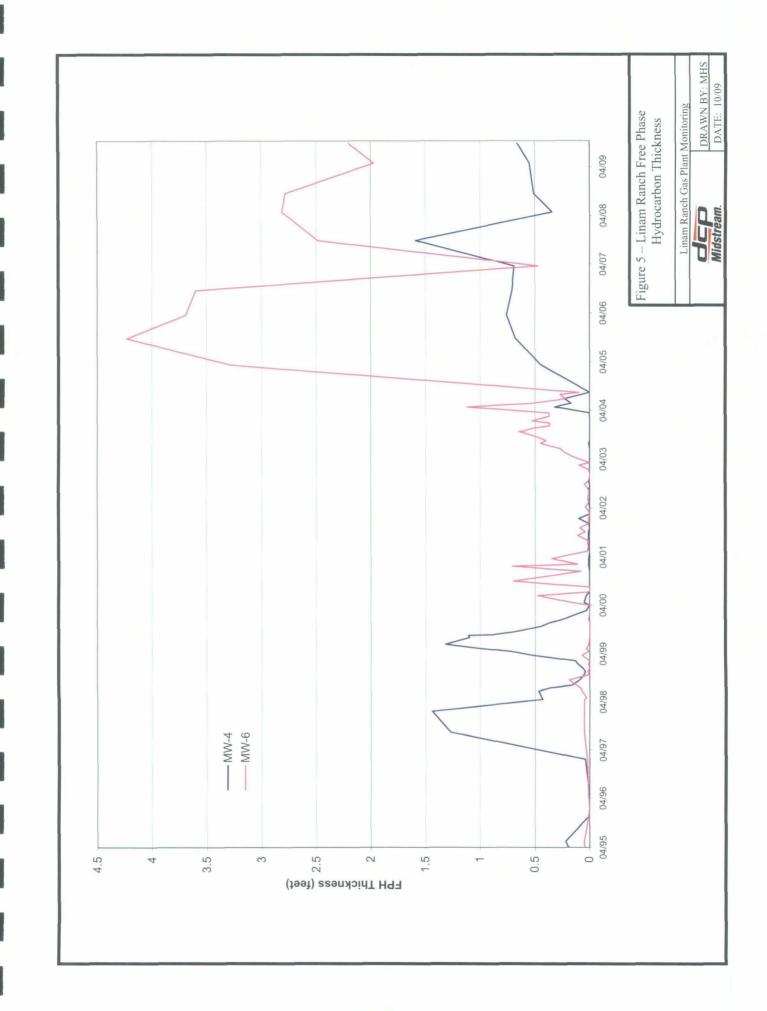
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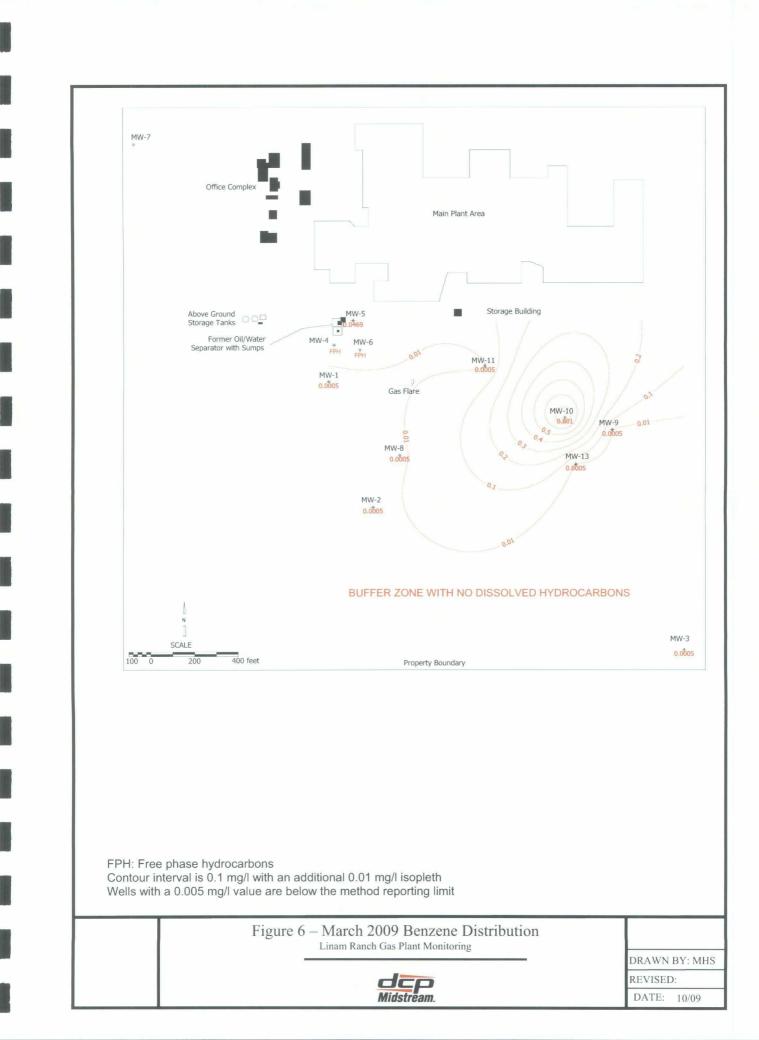


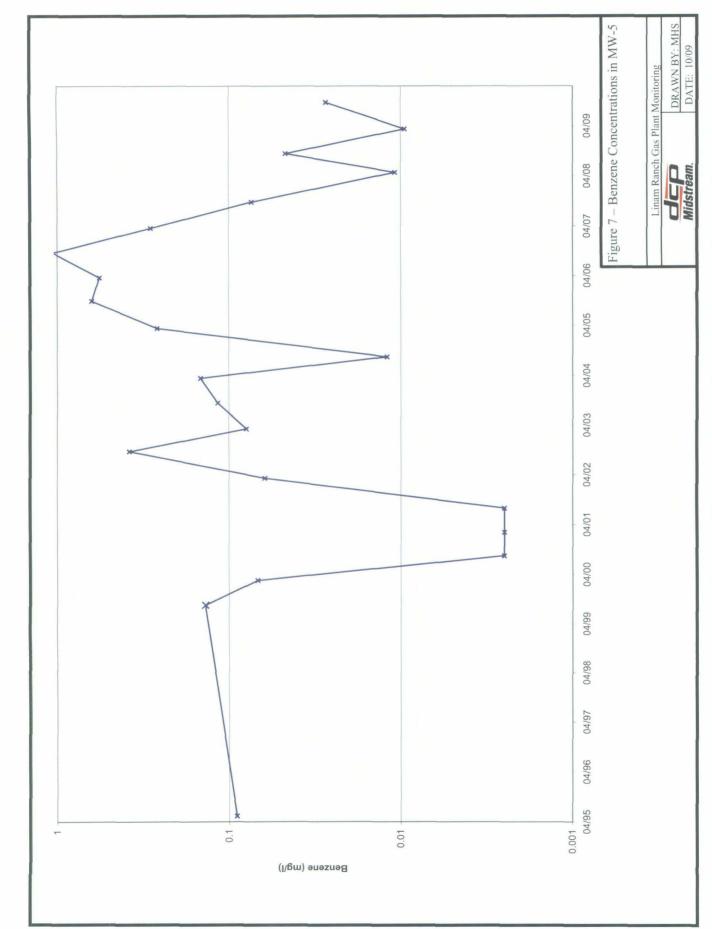


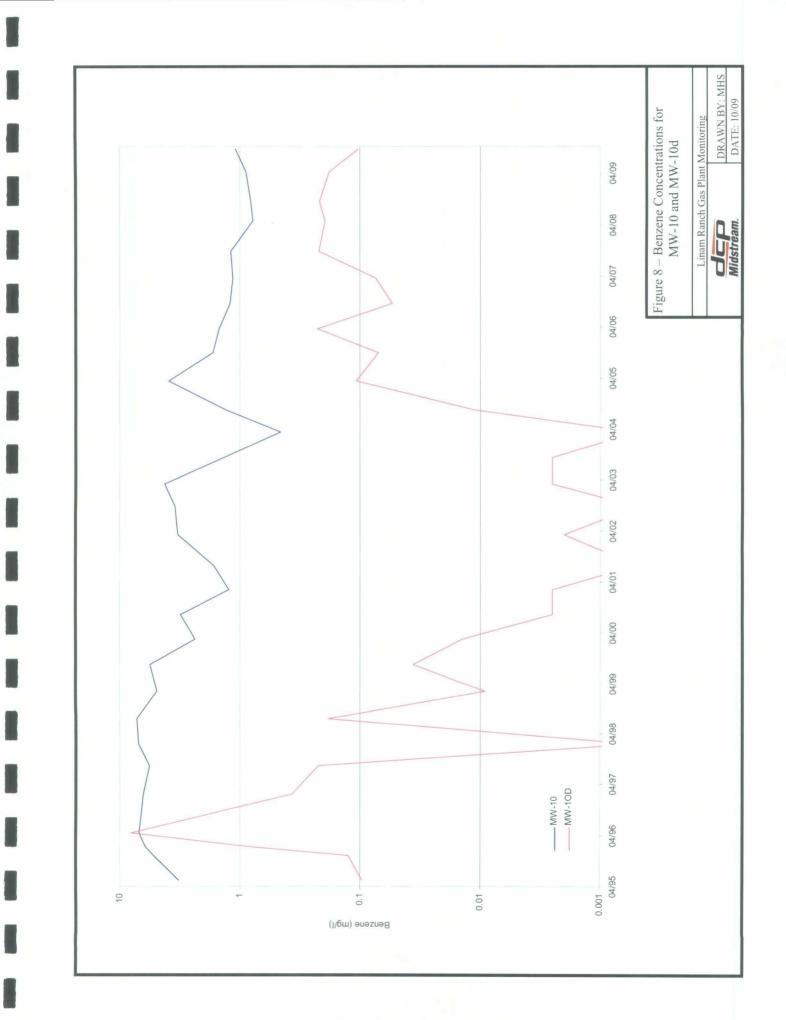












FIELD SAMPLING DATA AND LABORATORY ANALYTICAL REPORT

S	-		Midstream Ranch Gas				MW-1 9/24/2009
	-				S		A Taylor/M Stewart
	-						
PURGINO	G METHOD:		🗹 Hand Bai	led 🗌 Pu	mp If Pur	np, Type:	
SAMPLIN	G METHOD):	🗹 Disposab	le Bailer	Direct f	rom Disch	arge Hose 🛛 Other:
						RE SAMP	LING THE WELL:
⊴ Glove	s∐ Alcono	× ∐ Distil	led Water Rii	nse 🗌 C)ther:		· · · · · · · · · · · · · · · · · · ·
DISPOSA	L METHOD	OF PURG	E WATER:	⊡ Surface	e Discharg	e 🗌 Dru	ms 🔲 Disposal Facility
		/ELL:	54.20	Feet			
HEIGHT		COLUMN:	46.07 8.13	Feet		4.0	_Minimum Gallons to
WELL DI	AMETER:	2.0	Inch				purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME	TEMP. °C	COND. mS/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
<u> </u>	TOROLD	¥	moron	-			
	1.5	19.5	1.31	6.83			
	3.0	19.3	1.26	6.81			
	4.9	19.1	1.19	6.84			Sampled at: 1415
		<u></u>					
						*	
							· · · · · · · · · · · · · · · · · · ·
	<u> </u>		4.9	:Total Vol	(aal)		
SAMF	LE NO.:	Collected S	Sample No.:	MW-1	(941)		
		8260B	•				

	CLIENT:	DCP	Midstream	i, LP	_	WELL ID:	MW-2
S	ITE NAME:	Linam	Ranch Gas	s Plant	_	DATE:	9/24/2009
PRO	DJECT NO.				_	SAMPLER:	A Taylor/M Stewart
PURGIN	G METHOD	:	Hand Bai	led 🗆 Pu	imp If Pu	mp, Type:	
SAMPLIN	IG METHO	D:	🖸 Disposab	le Bailer	Direct	from Disch	arge Hose 🔲 Other:
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMP	LING THE WELL:
⊡ Glove	s 🗌 Alcond	ox 🗆 Distill	ed Water Ri	nse 🗆 🤇	Other:		
DISPOSA	L METHOE	OF PURG	E WATER:	☑ Surface	e Discharç	ge 🗆 Dru	ms 🔲 Disposal Facility
TOTAL D	EPTH OF V	VELL:	50.50	Feet			
	O WATER: OF WATER		44.74 5.76			2.8	Minimum Gallons to
		2.0					purge 3 well volumes
	VOLUME	TEMP.	COND.		DO		(Water Column Height x 0.49) PHYSICAL APPEARANCE AND
TIME	PURGED		<i>m</i> S/cm	рН	mg\L	Turb	REMARKS
							· · · · · ·
	1.3	19.2	0.42	7.26			
	2	18.2	0.41	7.36			Bailed down
							Sampled at: 1150
				<u>.</u>			
	-						
				• •			
	-						
					<u></u>	_	
L			2	:Total Vol		,	
	LE NO.:	Collected S	ample No.:	MW-2			
	YSES:	8260B					
COM	MENTS:	Collected s	ample for M	S/MSD eva	aluation		

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-			Midstream		-		MW-3
					•		9/24/2009
PRO	DJECT NO.	<u></u>	<u></u>	· · · ·	. 5	SAMPLER:	A Taylor/M Stewart
URGIN	G METHOD:		Hand Bai	led 🗌 Pu	mp If Pur	np, Type:	
							arge Hose 🔲 Other:
ESCRIE	BE EQUIPMI	ENT DECO	NTAMINATI	ON METH	DD BEFO	RE SAMPI	LING THE WELL:
Glove	s 🗌 Alcono	x 🛛 Distil	ed Water Ri	nse 🗆 C	Other:		
ISPOSA	AL METHOD	OF PURG	E WATER:	Surface	e Discharg	je 🗌 Dru	ms 🛯 Disposal Facility
OTAL D		/FII·	55-30	Feet	_		
EPTH T	EPTH OF W	001110	47.78	Feet			
	OF WATER			reet		3.7	_Minimum Gallons to purge 3 well volumes
	VOLUME		COND.	<u> </u>	DO		(Water Column Height x 0.49) PHYSICAL APPEARANCE AND
TIME	PURGED	°C		рН	mg\L	Turb	REMARKS
							·
 _ ·	1.3	19.3	0.37	7.72			· ·
	2.6	19.2	0.36	7.69			
	3.9	19.1	0.38	7.70			Sampled at: 1545
						2014 t	
						<u></u>	
		·					· ·
		_					
		<u>-</u>					
						, ,	
			3.9	:Total Vol	(gal)		· ·
SAMF	LE NO.:	Collected S	Sample No.:	MW-3			
ANA	LYSES:	8260B					
COM	MENTS:						

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	CLIENT:	DCP	Midstream	ı, LP	_	WELL ID:	MW-5
S	ITE NAME:	Linam	Ranch Gas	s Plant	_	DATE:	9/24/2009
PRO	DJECT NO.						A Taylor/M Stewart
					-		
PURGING	G METHOD:		🗹 Hand Ba	iled 🗆 Pu	ımp lf Pu	тр, Туре:	
SAMPLIN	IG METHOE	D:	🗹 Disposat	le Bailer] Direct	from Disch	arge Hose 🛛 Other:
DESCRIE	BE EQUIPMI	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMP	LING THE WELL:
⊡ Glove	s 🗆 Alcono	x 🛛 Distill	ed Water Ri	nse 🗌 (Other:		
					- Dischar		ms 🗵 Disposal Facility
					Dischar		
DEPTH T	EPTH OF W O WATER:		47.89	Feet			
HEIGHT	OF WATER	COLUMN:	7.31	Feet		14.3	
WELL DI	AMETER:	4.0	Inch				purge 3 well volumes (Water Column Height x 1.96)
TIME	VOLUME		COND.	· pH	DO	Turb	PHYSICAL APPEARANCE AND
	PURGED	°C	<i>m</i> S/cm		mg\L		REMARKS
	5.0	21.7	2.01	6.75			
	10.0	21.7	2.01	6.83			
	15.0	21.5	2.00	6.94			Compled et: 1450
	15.0	21.2	2.09	0.94			Sampled at: 1450
					<u> </u>		
				· · · ·			
	· · · · · ·						
· · · · ·							
	<u> </u>		15	:Total Vol	u (gal)		I
SAMP	LE NO.:	Collected S	· · · · · · · · · · · · · · ·	MW-5		L	
		8260B					
	MENTS:						

	CLIENT:	Duke En	ergy Field	Services		WELL ID:	MW-7
S			Ranch Gas				9/24/2009
PRC	DJECT NO.		F-114		. 9	SAMPLER:	J. Fergerson
							arge Hose 🔲 Other:
						RE SAMPI	ING THE WELL:
⊴ Glove	s∟ Alcono	x 🗋 Distill	led Water Ri	nse ∟ C)ther:		
DISPOSA	L METHOD	OF PURG	E WATER:	Surface	e Discharg	ge 🗌 Dru	ms 🔲 Disposal Facility
DEPTH T HEIGHT (O WATER:	COLUMN:	62.50 Dry at 58.28 #VALUE! Inch	Feet		#VALUE!	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME PURGED	TEMP. °C	COND. mS/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
11:41	0.0		-		-	-	Began Hand Bailing!
11:44	1.0	20.3	1.10	7.13	-		
11:50	2.0	19.9	1.10	7.26	-	-	
11:54	3.0	19.6	1.10	7.31	-	-	
. <u> </u>						1 	
							······································
		_	<u>.</u>				
0:13	:Total Time		3	:Total Vol		0.23	:Flow Rate (gal/min)
		Collected S BTEX (802	Sample No.:	• 090924	1200		
ANAL							

P. Barrow

	CLIENT:	DCP	Midstream	, LP	_	WELL ID:	MW-8
SI	TE NAME:	Linam	Ranch Gas	Plant	_	DATE:	9/24/2009
PRC	JECT NO.					SAMPLER:	A Taylor/M Stewart
PURGING	METHOD:		🗵 Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:	
SAMPLIN	G METHOD	D:	🗹 Disposab	le Bailer] Direct	from Disch	arge Hose 🛛 Other:
DESCRIB	E EQUIPMI	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPI	LING THE WELL:
Glove:	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗆 C	Other:		
DISPOSA	L METHOD	OF PURG	E WATER:	☑ Surface	e Discharg	ge 🗌 Dru	ms 🛯 Disposal Facility
TOTAL D	EPTH OF W	/ELL:	58.30	Feet			
DEPTH TO	O WATER:	COLUMNI	<u>44.19</u> 14.11	Feet		27.6	Minimum Gallons to
	METER:			reel		27.0	purge 3 well volumes
r	VOLUME	TEMP.	COND.		DO	F	(Water Column Height x 1.96) PHYSICAL APPEARANCE AND
TIME	PURGED	°C	m S/cm	pH ·	mg\L	Turb	REMARKS
	9.0	18.5	0.37	7.45			
	19.0	17.8	0.37	7.50			
	28.5	17.8	0.37	7.59			Sampled at: 1150
						• •	
i							
L			28.5	:Total Vol	(gal)		
	-	Collected S	ample No.:	MW-8	,,		
	-	8260B				<u> </u>	
COMM	IENTS:						

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c	SITE NAME:		[•] Midstream		-		MW-9 9/24/2009
	DJECT NO.						
PR	JECTNO.				- 3	SAMPLER:	A Taylor/M Stewart
URGIN	G METHOD:		Hand Bai	led 🗌 Pu	mp If Pur	mp, Type:	
AMPLIN	NG METHOD):	🖸 Disposab	le Bailer	Direct f	rom Discha	arge Hose 🔲 Other:
ESCRI	BE EQUIPMI	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMPL	ING THE WELL:
Glove	es 🗋 Alcono	x 🛛 Distil	led Water Ri	nse 🗌 C	Other:		
ISPOS	AL METHOD	OF PURG	E WATER:	☑ Surface	e Discharg	je 🗌 Drui	ms 📋 Disposal Facility
OTAL E	EPTH OF W	/ELL:	59.10	Feet			
EPTH 1	O WATER: OF WATER	COLUMN	51.10	Feet Feet		3.9	Minimum Gallons to
	AMETER:			1001		0.0	purge 3 well volumes
	VOLUME	TEMP.	COND.		DO		(Water Column Height x 0.49) PHYSICAL APPEARANCE AND
TIME	PURGED	_^o C	<i>m</i> S/cm	pН	mg\L_	Turb	REMARKS
	1.3	20	0.98	6.82			
	2.6	20.5	0.98	6.83			
	3.9	19.2	0.98	6.83			Sampled at: 1330
		<u></u>					
		<u> </u>	· ·				
		·····					· · · · · · · · · · · · · · · · · · ·
						-	
		L		I			
			3.9	:Total Vol	(gal)		
SAMF	PLE NO.:	Collected S	Sample No.:	MW-9			
ANA	LYSES:	8260B					
	MENTS:						

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	CLIENT:	DCF	Midstream	n, LP	_	WELL ID:	MW-10
S	ITE NAME:	Linam	Ranch Gas	s Plant	_	DATE:	9/24/2009
PR	DJECT NO.						A Taylor/M Stewart
PURGIN	G METHOD:	:	Hand Ba	iled 🗌 Pu	ump If Pu	mp, Type:	
SAMPLIN		D:	🗹 Disposat	ole Bailer [Direct	from Disch	arge Hose 🔲 Other:
DESCRIE	BE EQUIPM	ENT DECO	ΝΤΑΜΙΝΑΤΙ	ON METH	OD BEFO	RE SAMP	LING THE WELL:
☑ Glove	es 🗌 Alcono	ox 🛛 Distill	ed Water Ri	nse 🗌 (Other:		
DISPOSA	AL METHOD	OF PURG	E WATER:	Surfac	e Discharç	ge 🗌 Dru	ms 🗹 Disposal Facility
TOTAL D	EPTH OF V	VELL:	65.00	Feet			
DEPTH T	O WATER: OF WATER		51.15	Feet			
	OF WATER AMETER:			Feet		27.1	_Minimum Gallons to purge 3 well volumes
							(Water Column Height x 1.96)
TIME	VOLUME PURGED		COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
		0		· · · · · · · · · · · · · · · · · · ·			
	9.3	19.5	1.24	7.20			
	18.6	19.6	1.32	7.31			
	27.9	19.8	1.30	7.33			Sampled at: 1255
						· <u>·····</u> ·······	
···							
, <u> </u>							
	L		27.9	:Total Vol	(gal)		I
SAMP	LE NO.:	Collected S		MW-10			
	-	8260B					
	MENTS:						······································

	CLIENT:	DCF	^o Midstream	ı, LP	_	WELL ID:	MW-10d
S	ITE NAME:	Linam	Ranch Gas	Plant	_	DATE:	9/24/2009
PRO	DJECT NO.				- 5	SAMPLER:	A Taylor/M Stewart
							arge Hose 🔲 Other:
						RE SAMPI	LING THE WELL:
⊴ Glove	s 🗋 Alcono:	x ∐ Distil	led Water Ri	nse 🗋 (Other:		
DISPOSA	L METHOD	OF PURG	E WATER:	Surface	e Discharg	ge 🗌 Dru	ms 🗹 Disposal Facility
		ELL:	79.00	Feet			
	O WATER: OF WATER	COLUMN:	52.32 26.68	Feet		13.1	Minimum Gallons to
NELL DI	AMETER:	2.0	Inch		•		purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME	TEMP. °C	COND. mS/cm	pН		Turb	PHYSICAL APPEARANCE AND REMARKS
	FURGED	<u></u>			mg\L		
	4.5	19.5	0.92	7.24			
	9.0	19.8	0.93	7.15			
	13.5	19.9	0.91	7.17			Sampled at: 1245
		<u> </u>					
	· ·				 		
				· · · · · · · · · · · · · · · · · · ·			
					L	·	
			13.5	:Total Vol	(gal)		
	-		Sample No.:	MW-10D			
ANAI	-	8260B				···	· · · · · · · · · · · · · · · · · · ·
	MENTS:						

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PRO PURGING	JECT NO.		Ranch Gas	Plant	_	DATE	9/24/2009
PURGING							
	METHOD:				- 5	SAMPLER	A Taylor/M Stewart
			🖸 Hand Bai	led 🗌 Pu	imp If Pui	mp, Type:	
SAMPLIN	G METHOD):	Disposab	le Bailer [Direct 1	from Disch	arge Hose 🔲 Other:
ESCRIB	E EQUIPME	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
Gloves		x 🗌 Distil	led Water Ri	nse 🗌 (Other:		
ISPOSAL	L METHOD	OF PURG	E WATER:	Surface	e Discharg	ge 🗌 Dru	ims 🔲 Disposal Facility
OTAL DE	EPTH OF W	/ELL:	62.80	Feet			
	D WATER:	COLUMNE	52.21 10.59	Feet		20.7	Minimum Gallons to
	METER:			reel			purge 3 well volumes
			- 				(Water Column Height x 1.96)
TIME	VOLUME PURGED	TEMP. ° C	COND. mS/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	7.0	19.8	1.03	6.87			
	14.0	19.5	1.03	6.85			
	21.0	19.4	1.03	6.91			Sampled at: 1525
	·····						
							·····
					[]		
<u></u> I	A		21	:Total Vol	L		J,
SAMPL	E NO ·	Collected S	Sample No.:	MW-11	<u></u>		
ANAL	-	8260B					
COMM	-						

	CLIENT:	DCP	Midstream	ı, LP	-	WELL ID:	MW-13
S	ITE NAME:	Linam	Ranch Gas	s Plant	-	DATE:	9/24/2009
PRC	DJECT NO.			·	- 3	SAMPLER:	A Taylor/M Stewart
PURGINC	G METHOD:		☑ Hand Bai	led 🗌 Pu	imp If Pur	np, Type:	
SAMPLIN	G METHOD):	🗹 Disposab	le Bailer [Direct f	rom Disch	arge Hose 🔲 Other:
DESCRIE	E EQUIPMI	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
Glove	s 🗌 Alcono	x 🗋 Distill	led Water Ri	nse 🗌 (Other:		
DISPOSA	L METHOD	OF PURG	E WATER:	Surface	e Discharg	je 🗌 Dru	ms 🛯 Disposal Facility
	EPTH OF W	/ELL:	63.00	Feet			
	O WATER:		52.74 10.26	Feet		20.1	Minimum Gallons to
	AMETER:						purge 3 well volumes
TIME	VOLUME		COND.	рН	DÖ	Turb	(Water Column Height x 1.96) PHYSICAL APPEARANCE AND
	PURGED	°C	<i>m</i> S/cm		mg\L		REMARKS
	7.0	20	1.07				
	14.0	19.1	1.08				
	21.0	19.1	1.08				Sampled at: 1335
				·			
						<u></u>	
					ļ		
	<u> </u>		21	:Total Vol	(gal)		
			Sample No.:	MW-13			
	YSES:	8260B					

e-Hardcopy 2.0 Automated Report



10/23/09

Technical Report for

DCP Midstream, LLC

AECCOLI: DCP Midstream Linam Ranch

Accutest Job Number: T38370

Sampling Date: 09/24/09

Report to:

American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 27



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevano

Paul Canevaro Laboratory Director



Client Service contact: Georgia Jones 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004) OK (9103) UT(7132714700)

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Table of Contents

1.44

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Í

-1-

Section 1: Sample Summary	3
Section 2: Sample Results	4
2.1: T38370-1: MW-1	5
2.2: T38370-2: MW-2	6
2.3: T38370-3: MW-3	7
2.4: T38370-4: MW-5	8
2.5: T38370-5: MW-8	9
2.6: T38370-6: MW-9	10
2.7: T38370-7: MW-10	11
2.8: T38370-8: MW-10D	12
2.9: T38370-9: MW-11	13
2.10: T38370-10: MW-13	14
2.11: T38370-11: TRIP BLANK	15
2.11: T38370-11: TRIP BLANK	16
3.1: Chain of Custody	17
Section 4: GC/MS Volatiles - QC Data Summaries	21
4.1: Method Blank Summary	22
4.2: Blank Spike Summary	24
4.3: Matrix Spike/Matrix Spike Duplicate Summary	26



Sample Summary

DCP Midstream, LLC

Job No: T38370

AECCOLI: DCP Midstream Linam Ranch

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
T38370-1	09/24/09	14:15	09/25/09	AQ	Ground Water	MW-1
T38370-2	09/24/09	11:50	09/25/09	AQ	Ground Water	MW-2
T38370-2D	09/24/09	11:50	09/25/09	AQ	Water Dup/MSD	MW-2 MSD
T38370-2S	09/24/09	11:50	09/25/09	AQ	Water Matrix Spike	MW-2 MS
T38370-3	09/24/09	15:45	09/25/09	AQ	Ground Water	MW-3
T38370-4	09/24/09	14:50	09/25/09	AQ	Ground Water	MW-5
Т38370-5	09/24/09	11:50	09/25/09	AQ	Ground Water	MW-8
T38370-6	09/24/09	13:30	09/25/09	AQ	Ground Water	MW-9
T38370-7	09/24/09	12:55	09/25/09	AQ	Ground Water	MW-10
T38370-8	09/24/09	12:45	09/25/09	AQ	Ground Water	MW-10D
T38370-9	09/24/09	15:25	09/25/09	AQ	Ground Water	MW-11
T38370-10	09/24/09	13:35	09/25/09	AQ	Ground Water	MW-t3
T38370-11	09/24/09	00:00	09/25/09	AQ	Trip Blank Water	TRIP BLANK







Report of Analysis		



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No.

17060-07-0

2037-26-5

460-00-4

Report of Analysis Client Sample ID: MW-1 Lab Sample ID: T38370-1 Date Sampled: 09/24/09 AQ - Ground Water 09/25/09 Matrix: Date Received: Method: SW846 8260B Percent Solids: n/a Project: **AECCOLI: DCP Midstream Linam Ranch** File ID DF Analytical Batch Analyzed By Prep Date Prep Batch Run #1 Y0035851.D 1 09/29/09 JL n/a n/a VY2320 Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 71-43-2 Benzene ND 0.0020 0.00050 mg/l 108-88-3 Toluene ND 0.0020 0.00043 mg/l 100-41-4 Ethylbenzene ND 0.0020 0.00055 mg/l ND 1330-20-7 Xylene (total) 0.0060 0.0017 mg/l Surrogate Recoveries CAS No. Run# 1 Run# 2 Limits 1868-53-7 Dibromofluoromethane 104% 79-122%

101%

104%

85%

1.2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

J = Indicates an estimated value

75-121%

87-119%

80-133%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Page 1 of 1

Report of Analysis Page 1 of 1 Client Sample ID: MW-2 Lab Sample ID: T38370-2 Date Sampled: 09/24/09 Matrix: AQ - Ground Water Date Received: 09/25/09 Method: SW846 8260B Percent Solids: n/a Project: AECCOLI: DCP Midstream Linam Ranch File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 Y0035847.D 09/29/09 VY2320 1 JL n/a n/a Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 71-43-2 ND 0.0020 0.00050 mg/l Benzene 108-88-3 Toluene 0.00043 mg/l ND 0.0020 100-41-4 Ethylbenzene ND 0.0020 0.00055 mg/l 1330-20-7 Xylene (total) ND 0.0060 0.0017 mg/l CAS No. Surrogate Recoveries Run#1 Run# 2 Limits 1868-53-7 Dibromofluoromethane 107% 79-122% 17060-07-0 1,2-Dichloroethane-D4 105% 75-121% 2037-26-5 Toluene-D8 95%87-119% 460-00-4 4-Bromofluorobenzene 89% 80-133%

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit E = Indicates value exceeds calibration range J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Report of Analysis

Client Sam Lab Sampl Matrix: Method: Project:	e ID: T38370 AQ - G SW846	round Wat 8260B	er Midstream Lina	am Ranch	Date Sampled Date Received Percent Solids	: 09/25/09	
Run #1 Run #2	File ID Y0035852.D	DF 1	Analyzed 09/29/09	By JL	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2320
Run #1 Run #2	Purge Volume 5.0 ml						
Purgeable	Aromatics						
CAS No.	Compound		Result	RL	MDL Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		ND ND ND ND	0.0020 0.0020 0.0020 0.0060	0.00050 mg/l 0.00043 mg/l 0.00055 mg/l 0.0017 mg/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Limits		

100%

105%

98%

82%

ND = Not detected MDL - Method Detection Limit RL = Reporting LimitE = Indicates value exceeds calibration range

Dibromofluoromethane

4-Bromofluorobenzene

17060-07-0 1.2-Dichloroethane-D4

Toluene-D8

1868-53-7

2037-26-5

460-00-4

J = Indicates an estimated value

79-122%

75-121%

87-119%

80-133%

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound





Client Sam Lab Sampl Matrix: Method: Project:			am Ranch	Date Sampled Date Received Percent Solids	: 09/25/09	
Run #1	File ID DF Y0035857.D 1	Analyzed 09/29/09	By JL	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2320
Run #2	Y0035860.D 5	09/29/09	JL	n/a	n/a	VY2320
Run #1 Run #2	Purge Volume 5.0 ml 5.0 ml					
Purgeable	Aromatics					
CAS No.	Compound	Result	RL	MDL Units	Q	
71-43-2	Benzene	0.0272	0.0020	0.00050 mg/l	-	
108-88-3	Toluene	ND	0.0020	0.00043 mg/l		
100-41-4	Ethylbenzene	0.227 a	0.010	0.0027 mg/l		
1330-20-7	Xylene (total)	ND	0.0060	0.0017 mg/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
1868-53-7	Dibromofluoromethane	79%	91%	79-122%		
17060-07-0	1,2-Dichloroethane-D4	106%	91%	75-121%		
2037-26-5	Toluene-D8	97%	100%	87-119%		
460-00-4	4-Bromofluorobenzene	106%	110%	80-133%		

Report of Analysis

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit E = Indicates value exceeds calibration range J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

I

2037-26-5

460-00-4

Toluene-D8

4-Bromofluorobenzene

				Ropo	11 01 7 11	u1y515			Tage 1 01
Client Sam Lab Sample Matrix: Method: Project:	e ID:	SW846	Fround Wat 8260B	er Midstream Lin	am Ranch	Date R	ampled: eceived t Solids	: 09/25/09	
Run #1 Run #2	File ID Y00358	53.D	DF 1	Analyzed 09/29/09	By JL	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VY2320
Run #1 Run #2	Purge V 5.0 mł	'olume							
Purgeable A	Aromatic	s							
CAS No.	Compo	ound		Result	RL	MDL	Units	Q	
71-43-2	Benzen	e		ND	0.0020	0.00050	mg/l		
108-88-3	Toluen	е		ND	0.0020	0.00043			
100-41-4	Ethylbe	enzene		ND	0.0020	0.00055	mg/l		
1330-20-7	Xylene	(total)		ND	0.0060	0.0017	mg/l		
CAS No.	Surrog	ate Rec	coveries	Run# 1	Run# 2	Limit	s		
1868-53-7	Dibron	ofluore	omethane	92%		79-12	2%		
17060-07-0	1,2-Dic	:hloroet	hane-D4	95%		75-12	1%		
0008 00 =	Ch2 4								

104%

81%

Report of Analysis

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit E = Indicates value exceeds calibration range J = Indicates an estimated value

87-119%

80-133%

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound





Client Sample ID: MW-9 Lab Sample ID: T38370-6 Date Sampled: 09/24/09 Matrix: AQ - Ground Water Date Received: 09/25/09 Method: SW846 8260B Percent Solids: n/a Project: **AECCOLI: DCP Midstream Linam Ranch** File ID Prep Date Prep Batch Analytical Batch DF Analyzed By Run #1 Y0035854.D 09/29/09 JL n/a n/a VY2320 1 Run #2 Purge Volume 5.0 ml Run #1 Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units 0 ND 0.0020 0.00050 mg/l 71-43-2 Benzene 108-88-3 0.0020 0.00043 mg/l Toluene ND 100-41-4 Ethylbenzene ND 0.0020 0.00055 mg/l 0.0017 mg/l 1330-20-7 Xylene (total) ND 0.0060CAS No. Surrogate Recoveries Run# 1 Run#2 Limits Dibromofluoromethane 79-122% 1868-53-7 111% 17060-07-0 1.2-Dichloroethane-D4 106% 75-121% 2037-26-5 Toluene-D8 107% 87-119% 460-00-4 4-Bromofluorobenzene 87% 80-133%

ND = Not detectedMDL - Method Detection Limit RL = Reporting Limit

- E = Indicates value exceeds calibration range
- I = Indicates an estimated value
- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound



Page 1 of 1

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Report of Analysis

			ort of An	alysis			Page 1 of 1
Client Sam Lab Sample Matrix: Method: Project:	e ID: T38370-7 AQ - Groun SW846 826		nam Ranch	Date R	ampled: .eceived: t Solids:	09/25/09	
Run #1 Run #2	File ID DI Y0035964.D 10	•	By AP	Prep Da n/a	ite	Prep Batch n/a	Analytical Batch VY2324
Run #1 Run #2	Purge Volume 5.0 ml						
Purgeable	Aromatics						
CAS No.	Compound	Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	$1.07 \\ 0.126 \\ 0.148 \\ 0.154$	0.020 0.020 0.020 0.060	$\begin{array}{c} 0.0050 \\ 0.0043 \\ 0.0055 \\ 0.017 \end{array}$	mg/l mg/l mg/l mg/l		
CAS No.	Surrogate Recover	ries Run#1	Run# 2	Limi	ts		
1868-53-7 17060-07-0	Dibromofluorometh 1,2-Dichloroethane			79-12 75-12			

110%

133%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

2037-26-5

460-00-4

Toluene-D8

4-Bromofluorobenzene

E = Indicates value exceeds calibration range

J = Indicates an estimated value

87-119%

80-133%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis Client Sample ID: MW-10D Lab Sample ID: T38370-8 Date Sampled: 09/24/09 Matrix: AQ - Ground Water Date Received: 09/25/09 SW846 8260B Method: Percent Solids: n/a AECCOLI: DCP Midstream Linam Ranch Project: File ID DF Analyzed Prep Date Analytical Batch By Prep Batch Y0035858.D 09/29/09 Run #1 JL 1 n/a n/a VY2320 Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 71-43-2 0.103 Benzene 0.0020 0.00050 mg/l 108-88-3 Toluene 0.0496 0.0020 0.00043 mg/l 100-41-4 Ethylbenzene 0.0127 0.0020 0.00055 mg/l 1330-20-7 Xylene (total) 0.0261 0.0060 0.0017 mg/l CAS No. Surrogate Recoveries Run#1 Run# 2 Limits 1868-53-7 Dibromofluoromethane 98% 79-122% 17060-07-0 1,2-Dichloroethane-D4 108% 75-121% 2037-26-5 Toluene-D8 88% 87-119%

107%

Page 1 of 1

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ND = Not detectedMDL - Method Detection Limit RL = Reporting Limit

E = Indicates value exceeds calibration range

4-Bromofluorobenzene

460-00-4

J = Indicates an estimated value

80-133%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



			Repo	rt of An	alysis			Page 1 of 1
Client Sam Lab Sample Matrix: Method: Project:	e ID: T38370 AQ - G SW846	-9 round Wate 8260B	er Aidstream Lin	am Ranch	Date Sa Date Re Percent	ceived:	09/25/09	
Run #1 Run #2	File ID Y0035855.D	DF 1	Analyzed 09/29/09	By JL	Prep Dat n/a	e	Prep Batch n/a	Analytical Batch VY2320
Run #1 Run #2	Purge Volume 5.0 ml							
Purgeable A	Aromatics							
CAS No.	Compound		Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		ND ND ND ND	0.0020 0.0020 0.0020 0.0060	$0.00050 \\ 0.00043 \\ 0.00055 \\ 0.0017$	mg/l		
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Limits	5		
1868-53-7 17060-07-0	Dibromofluoro 1,2-Dichloroetl		93% 100%		79-122 75-121			

88%

95%

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit

E = Indicates value exceeds calibration range

Toluene-D8

4-Bromofluorobenzene

2037-26-5

460-00-4

J = Indicates an estimated value

87-119%

80-133%

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound





Report of Analysis Client Sample ID: MW-13 Lab Sample ID: T38370-10 Date Sampled: 09/24/09 Matrix: AQ - Ground Water Date Received: 09/25/09 SW846 8260B Method: Percent Solids: n/a Project: **AECCOLI: DCP Midstream Linam Ranch** File ID DF Analyzed Prep Date Prep Batch Analytical Batch By Run #1 Y0035856.D 1 09/29/09 JL n/a n/a VY2320 Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 71-43-2 Benzene ND 0.0020 0.00050 mg/l 108-88-3 Toluene ND 0.00043 mg/l 0.0020 100-41-4 Ethylbenzene ND 0.0020 0.00055 mg/l 1330-20-7 Xylene (total) ND 0.00600.0017 mg/l CAS No. Surrogate Recoveries Run#1 Run#2 Limits 1868-53-7 Dibromofluoromethane 86% 79-122% 17060-07-0 1,2-Dichloroethane-D4 .96% 75-121% 2037-26-5 Toluene-D8 100%87-119% 460-00-4 4-Bromofluorobenzene 113% 80-133%

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Page 1 of 1

460-00-4

		Repo	rt of An	alysis		Page 1 of 1
Client Sample Lab Sample Matrix: Method: Project:			am Ranch	Date Sample Date Receive Percent Solid	d: 09/25/09	
Run #1 Run #2	File ID DF Y0035846.D I	Analyzed 09/29/09	By JL	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2320
Run #1 Run #2	Purge Volume 5.0 ml					
Purgeable A	Aromatics					
CAS No.	Compound	Result	RL	MDL Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	0.0020 0.0020 0.0020 0.0060	0.00050 mg/l 0.00043 mg/l 0.00055 mg/l 0.0017 mg/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
1868-53-7 17060-07-0 2037-26-5	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	104% 108% 101%		79-122% 75-121% 87-119%		

83%

ND = Not detected MDL - Method Detection Limit RL = Reporting Limit E = Indicates value exceeds calibration range

4-Bromofluorobenzene

J = Indicates an estimated value

80-133%

- B = Indicates analyte found in associated method blank
- N = Indicates presumptive evidence of a compound







Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



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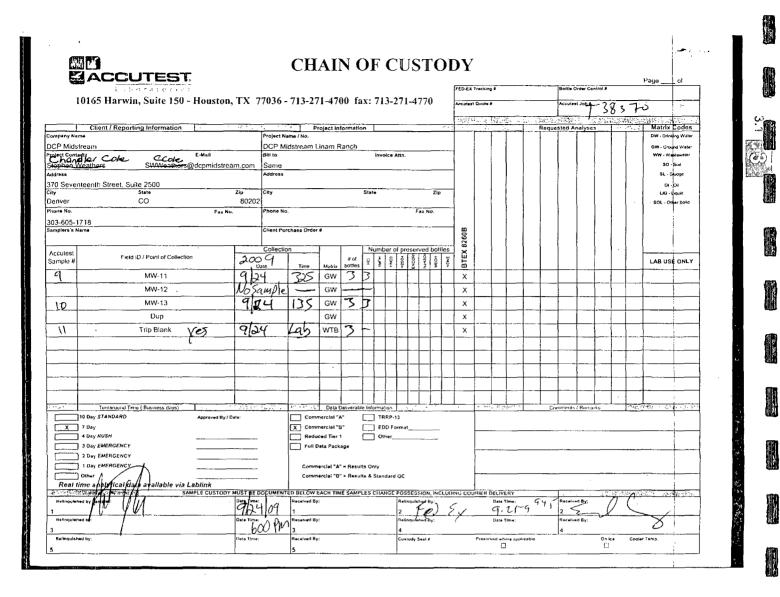
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T38370: Chain of Custody Page 2 of 4



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Accutest Job Number:		SAMPLE INSPECTION FORM	L
Color Temps: #1: #3: #4: #5: #6: #7: #8: Method of Delivery: FEDEX UPS Accutest Courier Greyhound Delivery Other Arbill Numbers: COCLER INFORMATION Sample INFORMATION TRIP Blank not (match index) Delivery Other Couries of seal massing or not intext Sample labels missing or illegible Do n COC does not intact index) Drup Blank not (match index) Drup Blank not (match index) Drup Blank not (match index) Chain of Custody not received Sample labels missing or illegible Do n COC does not intact index) Drup Blank not (match index) Drup Blank not (match index) Sample DT inclevered Sample labels missing or illegible Do n COC does not intact index) Drup Blank not (match index) Drup Blank not (match index) Sample DT inclevered Sample labels missing or requested analysis Number of Encores? Mumber of Encores? Manalysis unclear or missing Sample labels missing or requested analysis Number of Encores? Number of Encores? Summary of Discrepancies: TECHNICIAN SIGNATURE/DATE: Process Number of Encores? Number of Encores? INFORMATION AND SAMPLE LABELING VERIFIED BY: Corerecertive Aca	Acculest Job Number:	Client: DCP MilStream Dat	te/Time Received: 9-25-9 94
Method of Delivery: FEDEX_UPS Accutest Courier Greyhound Delivery Other Airtbill Numbers:	# of Coolers Received:/ Ther	mometer #:TR-1Tempera	nture Adjustment Factor: $4 \cdot 4$
Method of Delivery: FEDEZ UPS Accutest Courier Greyhound Delivery Other Airbill Numbers:	Cooler Temps: #1: 3 / #2:	#3: #4: #5: #6	: #7: #8:
COOLER INFORMATION SAMPLE INFORMATION The BLANK INFORMATION Custody seal mussing or not intact Sample containers received broken. The Blank on COC, but not received Custody with received in coder Sample Lobe son match label(s) The Blank not intact Chan of Custody not received Sample Job under or mussing Blank into intact Analyses undear or mussing Sample Job under or or ceaved Blank into intact Code not properly executed Sample Iob under or or ceaved Blank into intact Summary of Discrepancies: Sample received improperly executed Number of Encores? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Nerrores Scores? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Number of S035 kits? Nerrores Cocres Cocres Number of	Method of Delivery: FEDEX UPS		
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TECHNICIÂN SIGNATURE/DATE: 9.259 INFORMATION AND SAMPLE LABELING VERIFIED BY: 9.259 INFORMATION AND SAMPLE LABELING VERIFIED BY: 9.259 Client Representative Notified: Date: By Accutest Representative: Via: Client Instructions: Via:	Custody seal missing or not intact Temperature enteria not met Wet tee received in cooler CHAIN OF CUSTODY Chain of Custody not received Sample D/T unclear or missing Analyses unclear or missing COC not properly executed	Sample containers received broken VOC vials have headspace Sample labels missing or illegible ID on COC does not match label(s) D/T on COC does not match label(s) Sample/Bottles revd but no analysis on COC Sample listed on COC, but not received Bottles missing for requested analysis Insufficient volume for analysis	Trip Blank on COC but not received Trip Blank received but not on COC Trip Blank not intact Received Water Trip Blank Received Soil TB Number of Encores? Number of 5035 kits?
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	6	-9	. 130			1-3		1 2 3 4 5 5 7 8	<2 >12
	7	/10	. 125	<		1.2		1 <u>2</u> <u>3</u> <u>4</u> <u>5 <u>6</u> <u>7</u> <u>8</u></u>	<2 >12
	3	- 10 0	1245			1-2		$1 + \frac{2}{5} + \frac{3}{5} + \frac{4}{7} + \frac{3}{8} + \frac{4}{1}$	<2 >12
	9	- 1]	32.5	•••		1-3		1 2 3 4	12
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								5 6 7 8 1 2 3 4	<2 >12
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	1	ne 2: HCL 3: HNO3 4: H2SO4 5: N/	<u> </u>				<u> </u>	5 6 7 8	<2 >12

T38370: Chain of Custody Page 4 of 4



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Section 4



GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries

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Matrix Spike and Duplicate Summaries



Method Blank Summary

Method B Job Number: Account: Project:	lank Summa T38370 DUKE DCP Mi AECCOLI: DC	dstream	,	ich			Page 1 of 1	
Sample VY2320-MB	File ID Y0035845.D	DF 1	Analyzed 09/29/09	By JL	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2320	
The QC repor	ted here applies t	to the fo	ollowing sample	s:		Method: SW84	6 8260B	

T38370-1, T38370-2, T38370-3, T38370-4, T38370-5, T38370-6, T38370-8, T38370-9, T38370-10, T38370-11

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.50	ug/l
100-41-4	Ethylbenzene	ND	2.0	0.55	ug/l
108-88-3	Toluene	ND	2.0	0.43	ug/l
1330-20-7	Xylene (total)	ND	6.0	1.7	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
1868-53-7	Dibromofluoromethane	111%	79-12	2%	
17060-07-0	1,2-Dichloroethane-D4	104%	75-12	21%	
2037-26-5	Toluene-D8	102%	87-11	9%	
460-00-4	4-Bromofluorobenzene	86%	80-13	3%	

22 of 27 20 T38370

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Method Blank Summary

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Project:	AECCOLI: DCP Midstream Linam Ranch	
Account:	DUKE DCP Midstream. LLC	
Job Number:	138370	

Sample VY2324-MI	File ID DF B Y0035949.D 1	Analyzed 10/01/09	By AP	Pro n/a	ep Date	Prep Batch n/a	Analytical Batch VY2324
The QC rep	ported here applies to the f	ollowing sampl	les:			Method: SW84	6 8260B
T38370-7							
CAS No.	Compound	Result	RL	MDL	Units	Q	
71-43-2	Benzene	ND	2.0	0.50	ug/l		
100-41-4 108-88-3	Ethylbenzene Toluene	ND ND	2.0 2.0	$\begin{array}{c} 0.55 \\ 0.43 \end{array}$	ug/l		
1330-20-7	Xylene (total)	ND	6.0	0.43 1.7	ug/l ug/l		
CAS No.	Surrogate Recoveries		Limit	s			
1868-53-7	Dibromofluoromethane	90%	79-12	2%			
	1,2-Dichloroethane-D4	95%	75-12				
2037-26-5	Toluene-D8	109%	87-11				•
460-00-4	4-Bromofluorobenzene	126%	80-13	3%			

4.1.2



Page 1 of 1

Blank Spike Summary

Job Number: Account: Project:	T38370 DUKE DCP Mic AECCOLI: DCP	-		ich			0
Sample VY2320-BS	File ID Y0035843.D	DF 1	Analyzed 09/29/09	By JL	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2320
The QC repor	ted here applies to	o the foll	owing sample	s:]	Method: SW84	6 8260B

T38370-1, T38370-2, T38370-3, T38370-4, T38370-5, T38370-6, T38370-8, T38370-9, T38370-10, T38370-11

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)	25 25 25 75	20.2 21.2 21.1 69.8	81 85 84 93	76-118 75-112 77-114 75-111
CAS No.	Surrogate Recoveries	BSP	Lin	nits	

1868-53-7	Dibromofluoromethane	103%	79-122%
17060-07-0	1,2-Dichloroethane-D4	103%	75-121%
2037-26-5	Toluene-D8	101%	87-119%
460-00-4	4-Bromofluorobenzene	102%	80-133%



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Blank Spike Summary

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Job Numbe Account: Project:	r: T38370 DUKE DCP Midstream AECCOLI: DCP Mids		n Ranch				
Sample VY2324-BS	File ID DF Y0035947.D 1	Analy 10/01/		By AP	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2324
The QC rep	ported here applies to the f	ollowing sa	mples:			Method: SW84	6 8260B
T38370-7							
CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits		
71-43-2	Benzene	25	22.3	89	76-118		
100-41-4	Ethylbenzene	25	23.3	93	75-112		
108-88-3	Toluene	25	24.0	96	77-114		
1330-20-7	Xylene (total)	75	63.3	84	75-111		
CAS No.	Surrogate Recoveries	BSP	Li	mits			
1868-53-7	Dibromofluoromethane	90%	79	-122%			
17060-07-0	1,2-Dichloroethane-D4	97%		-121%			
2037-26-5	Toluene-D8	106%	87	-119%			
460-00-4	4-Bromofluorobenzene	120%	80	-133%			



4.2.2



Matrix Spike/Matrix Spike Duplicate Summary

D DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
848.D 1	09/29/09	JĹ	n/a	n/a	VY2320
849.D 1	09/29/09	JL	n/a	n/a	VY2320
847.D 1	09/29/09	JL	n/a	n/a	VY2320
5	5848.D 1 5849.D 1 5847.D 1	5848.D 109/29/095849.D 109/29/09	5848.D 1 09/29/09 JL 5849.D 1 09/29/09 JL	5848.D 1 09/29/09 JL n/a 5849.D 1 09/29/09 JL n/a	5848.D 1 09/29/09 JL n/a n/a 5849.D 1 09/29/09 JL n/a n/a

The QC reported here applies to the following samples:

Method: SW846 8260B

T38370-1, T38370-2, T38370-3, T38370-4, T38370-5, T38370-6, T38370-8, T38370-9, T38370-10, T38370-11

CAS No.	Compound	T38370-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)	ND ND ND ND	25 25 25 75	18.8 20.5 18.2 63.4	75* 82 73* 85	17.3 18.1 21.9 63.3	69* 72* 88 84	8 12 18* 0	76-118/16 75-112/12 77-114/12 75-111/12
CAS No.	Surrogate Recoveries	MS	MSD	T3	8370-2	Limits			
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	103% 109% 93% 83%	101% 101% 95% 85%	107 105 959 899	5% %	79-1229 75-1219 87-1199 80-1339	% %		



Page 1 of 1

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Matrix Spike/Matrix Spike Duplicate Summary Job Number: T38370

	100010
Account:	DUKE DCP Midstream, LLC
Project:	AECCOLI: DCP Midstream Linam Ranch

Sample T38383-2MS T38383-2MSD	File ID Y0035953.I Y0035954.I		Analyzed 10/01/09 10/01/09	By AP AP	Prep Date n/a	Prep Batch n/a	Analytical Batch VY2324 VY2324
T38383-2M3D T38383-2	Y0035954.1 Y0035952.1	-	10/01/09	AP AP	n/a n/a	n/a n/a	VY2324 VY2324

The QC reported here applies to the following samples:

Method: SW846 8260B

T38370-7

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CAS No.	Compound	T38383-2 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	22.7	91 94	22.8	91	0 3	76-118/16 75-112/12
100-41-4 108-88-3	Ethylbenzene Toluene	ND ND	25 25	$\begin{array}{c} 23.6\\ 23.8\end{array}$	94 95	$\begin{array}{c} 22.8\\ 23.9 \end{array}$	91 96	3 0	75-112/12
1330-20-7	Xylene (total)	ND	75	64.9	87	63.3	84	2	75-111/12
CAS No.	Surrogate Recoveries	MS	MSD	T38383-2		Limits			
1868-53-7	Dibromofluoromethane	89%	91%	88%		79-1229	%		
17060-07-0	1,2-Dichloroethane-D4	100%	99%	979	6	75-1219	%		
2037-26-5	Toluene-D8	105%	107%	109%		87-1199	%		
460-00-4	4-Bromofluorobenzene	115%	116%	121	%	80-1339	%		



Page 1 of 1

4.3.2