1R - 1728

REPORTS





DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605/2226 FAX

2008 DEC 5 PM 3 45

December 3, 2008

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

RE: 3rd Quarter 2008 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728) Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Price:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 3rd Quarter 2008 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East).

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me <u>swweathers@dcpmidstream.com</u>.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Principal Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office (Copy on CD) Environmental Files

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

November 26, 2008

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Summary of the Third Quarter 2008 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico (**1RP-1728**) Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the third quarter 2008 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP. The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed because of drilling refusal.

The area surrounding the release was an open excavation to an approximate depth of 10 feet when the monitoring was completed. The approximate excavation limits are shown on Figure 2. There was no visible hydrocarbon staining on the side walls or floor and there were no odors in the excavation. Wells MW-4 and MW-1 were intact and could be accessed by removing blank sections of the threaded PVC. Wells MW-2 and MW-3 were at ground surface approximately 5-to-10 feet south of the southern excavation boundary. Barricade fencing and tape was present around the excavation.

GROUNDWATER SAMPLING

Groundwater sampling was completed on September 17, 2008. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2.

FPH was measured at thicknesses of 0.08 feet (1 inch) in MW-1 and 0.02 feet (1/4 inch) in MW-2 using clear bailers. The historic FPH thickness values are summarized in Table 3. When present, the FPH is generally less than 1-inch thick.

Wells MW-3, MW-4, MW-5, MW-7 and MW-8 were purged and sampled using the standard protocols for this site using dedicated bailers. Purging continued until a minimum of three casing volumes of water was removed and the field parameters

6885 South Marshall St., Suite 3, Littleton, CO 80128 phone 303-948-7733 fax 303-948-7739

Mr. Stephen Weathers November 26, 2008 Page 2

temperature, pH and conductivity stabilized. MW-6 was obstructed at approximately 34 feet below ground surface. Two gallons (approximately one casing volume) of water were purged and the well was sampled. The well purging forms are attached. The affected purge water was disposed at the DCP Linam Ranch facility.

Unfiltered samples were collected upon stabilization using the dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to ACCUTEST Laboratories using standard chain-of-custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), chlorides and total dissolved solids (TDS).

The laboratory report is attached. Table 4 provides the results of the matrix spike/matrix spike duplicate evaluation. The QA/QC evaluation included:

- The container temperature was 4.9 degrees centigrade when received at the lab.
- The method blanks and blank spikes were all within their respective control limits.
- All of the individual surrogate spikes were within their control limits.
- The matrix spike and matrix spike duplicate results from MW-6 were within the control limits for all four constituents.

The above information indicates that the data is suitable for use as routine monitoring data.

RESULTS AND INTERPRETATIONS

The results and interpretations presented below are based upon all of the data collected to date. The laboratory analyses for the September 2008 sampling episode are summarized in Table 5. Table 6 summarizes all of the organic data collected during this project.

Groundwater Flow

Figure 3 includes hydrographs for the corrected water-table elevations for all site wells excepting MW-1 and MW-2. The water table declined across the site.

The resulting September 2008 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table exhibits a gradient to the southeast that is consistent with past monitoring events.

Mr. Stephen Weathers November 26, 2008 Page 3

Groundwater Chemistry

Examination of Table 5 shows that none of the BTEX constituents were detected. The benzene concentrations are plotted on Figure 5 along with the wells where FPH was measured. Comparison of Figure 4 with Figure 5 demonstrates that any dissolved-phase BTEX constituents are attenuating below the method reporting limits within the study area.

It is also important to note that:

- The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards; and
- The BTEX constituents have not been detected in down-gradient wells MW-6, MW-7 and MW-8.

The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of Table 5. The constituents that exceed these standards are bolded. The secondary (non-health-based) standards for chlorides and TDS were exceeded in the five wells that were sampled.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that:

- 1. Groundwater flow remains constant toward the southeast;
- 2. The presence of dissolved phase BTEX constituents is limited to the original release area as defined by MW-1 and MW-2;
- 3. The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is either stable or contracting;
- 4. The affected soils from the release area have been removed based on visual and olfactory observations.
- 5. The salts that are present in the groundwater did not originate from the DCP release. This conclusion is based upon two reasons. First, releases from these types of pipelines typically do not contain elevated chlorides or other salts. Second, and most importantly, the highest chlorides and TDS concentrations were measured in MW-3. MW-3 is upgradient from the DCP release based upon the consistent water table configuration measured over the duration of the project and the fact that the groundwater samples do not contain any detectable BTEX constituents.

Mr. Stephen Weathers November 26, 2008 Page 4

AEC recommends continued quarterly groundwater monitoring to evaluate any effects produced by the open excavation. The next groundwater-monitoring event is scheduled for the fourth quarter of 2008.

Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Muchael H. Stewart

Michael H. Stewart, P.E., C.P.G. Principal Engineer

TABLES

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Name	Date Installed	Stickup	Casing Diameter (inches)	Total Depth (btoc)	Screen Interval (ground)	Sand Interval
MW-1	2/06	3.17	2	43.05	19-39	17-39
MW-2	2/06	3.08	4	43.30	19-39	17-39
MW-3	2/06	3.21	2	43.00	19-39	17-39
MW-4	9/06	3.12	2	38.12	20-35	18-35
MW-5		Not in	stalled beca	use of dril	ling refusal	
MW-6	9/06	3.32	2	38.32	20-35	18-35
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	2	38.32	20-35	18-35

Table 1 – Summary of Monitoring Well Completions at the J-4-2 Site

All units are feet except as noted

btoc: Below top of casing

Well	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07	9/25/07	11/30/07
	×						
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86	3712.42
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34	3712.91
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50	3712.09
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98	3713.48
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56	3711.92
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87	3710.33
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06	3708.33

Гabl	le 2 - S	Summary of	Water	Tab	le El	evations	s for ⊧	the J	-4-2 S	Site
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Well	3/20/08	6/27/08	9/16/08
MW-1	3713.48	NM	NM
MW-2	3713.40	NM	NM
MW-3	3713.30	3713.09	3712.34
MW-4	3713.70	3713.13	3712.18
MW-6	3712.53	3712.20	3711.86
MW-7	3711.38	3710.95	3710.11
MW-8	3709.17	3708.78	3708.23
L	- 4		

Units are feet

Blank cells: wells not installed NM: Not measured because of probe malfunction. Measured using bailer

Date	MW-1	MW-2
02/15/06	0.00	0.57
09/25/06	0.00	0.15
12/21/06	0.09	0.13
03/14/07	0.07	0.10
06/26/07	0.09	0.00
09/25/07	0.09	0.03
11/30/07	0.00	0.00
03/20/08	0.00	0.00
06/27/08	0.04	0.01
09/16/08	0.08	0.02

Table 3 - Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

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Units are feet

Table 4 - Quality Assurance Evaluation for the September 2008 Data

	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chlorides
MS	108	108	106	103	99.4
MSD	106	105	102	102	

MW-6 Matrix Spike and Matrix Spike Duplicate Results

Units are percent recovery

MS:

matrix spike matrix spike duplicate MSD:

Well	Benzene	Toluene	Ethyl benzene	Total Xylene	Chlorides	Total Dissolved Solids
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62	250*	1,000*
MW-1	FPH	FPH	FPH	FPH	FPH	FPH
MW-2	FPH	FPH	FPH	FPH	FPH	FPH
MW-3	< 0.002	< 0.002	< 0.002	< 0.006	4,070	9,030
MW-4	< 0.002	< 0.002	< 0.002	< 0.006	1,440	4,570
MW-6	< 0.002	< 0.002	< 0.002	< 0.006	537	1,650
MW-7	< 0.002	< 0.002	< 0.002	< 0.006	1,180	3,730
MW-8	< 0.002	< 0.002	< 0.002	< 0.006	735	1,990

Table 5 - Summary of September 2008 Groundwater Sampling Results

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Notes: Units are mg/l,

MW-5 was not installed because of drilling refusal

FPH well not sampled, free phase hydrocarbons present

* Secondary (aesthetics) rather than primary (health-based) standards.

NMWQCC: New Mexico Water Quality Control Commission

Values above the NMWQCC standard are highlighted as bold text.

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1	2/06	0.139	0.326	0.34	0.31
	9/06	0.0418	0.0048	0.0247	0.0605
Dup	9/06	0.0555	0.0068	0.032	0.0782
	12/06	FPH	FPH	FPH	FPH
	3/07	FPH	FPH	FPH	FPH
	6/07	FPH	FPH	FPH	FPH
	9/07	0.0114	0.0029	0.0035	0.0978
	11/07	0.107	0.0243	0.0401	0.39
	3/08	0.042	0.0186	0.0177	0.260
Dup	3/08	0.031	0.0123	0.0107	0.170
MW-2	6/07	0.0262	0.0382	0.0404	0.335
	9/07	0.0045	< 0.001	0.0027	0.0471
	11/07	0.006	0.0033	0.0025	0.0613
Dup	11/07	0.0062	0.003	0.0023	0.0577
	3/08	0.188	0.0062	0.0262	0.125
MW-3	2/06	< 0.001	< 0.001	< 0.001	< 0.002
	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
Dup	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	0.0029	0.0053	0.0015	0.0097
Dup	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
Dup	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	0.0011J	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
Dup	6/08	< 0.002	< 0.002	< 0.002	0.0072
	9/08	< 0.002	< 0.002	< 0.002	< 0.006
<u>MW-4</u>	9/06	0.0086	0.00093J	0.0092	0.0061
	12/06	0.0295	0.0058	< 0.002	0.0075
Dup	12/06	0.0207	0.004	< 0.002	0.0054
	3/07	0.0044	0.0006	< 0.002	0.0032
	6/07	< 0.001	< 0.001	< 0.001	0.0025
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
	9/08	< 0.002	< 0.002	< 0.002	0.0041J

Table 6 – Summary of Organic Groundwater Data

Notes:

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Units are mg/l, MW-5 was not installed J modifiers are not included in this table

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-6	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
	9/08	< 0.002	< 0.002	< 0.002	< 0.006
MW-7	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	.12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	0.0027
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
_	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
	9/08	< 0.002	< 0.002	< 0.002	< 0.006
MW-8	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	<0.006
	9/08	< 0.002	< 0.002	< 0.002	< 0.006

Table 6 – Summary of Organic Groundwater Data (continued)

Notes:

Units are mg/l, J modifiers are not included in this table

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WELL SAMPLING DATA

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	CLIENT:	DC	P Midstre	am	_		MW-1
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PRC	DJECT NO.				S	AMPLER:	M. Stewart/A. Taylor
PURGINO	G METHOD	:	🗹 Hand Bai	iled 🗋 Pu	ımp lf Pu	mp, Type:	
SAMPLIN		D:	🗹 Disposab	le Bailer] Direct	from Disch	narge Hose 🗌 Other:
DESCRIE	BE EQUIPM	ENT DECO	ΝΤΑΜΙΝΑΤΙ	ON METH	OD BEFC	RE SAMF	PLING THE WELL:
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			40.05	F 4			
DEPTH T	O WATER:	VELL:	43.05 NM	Feet			
HEIGHT (OF WATER	COLUMN:		Feet			Minimum Gallons to
WELL DIA	AMETER:	4.0	Inch				purge 3 well volumes
		TEMP.	COND			· · ·	PHYSICAL APPEARANCE AND
	PURGED	°F	<u><i>m</i> S/cm</u>	pH	mg\L_	Turb	REMARKS
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	CLIENT:	DC	P Midstre	am	-	WELL ID:	MW-2
S	ITE NAME:	J42	(Pipeline L	eak)	_	DATE:	9/16/2008
PRO	DJECT NO.				S,	AMPLER:	M. Stewart/A. Taylor
PURGING	G METHOD	:	☑ Hand Ba	iled 🗌 Pu	mp If Pu	mp, Type:	· · · · · · · · · · · · · · · · · · ·
SAMPLIN		D:	☑ Disposat	ble Bailer] Direct	from Discl	harge Hose 🛛 Other:
DESCRIE	BE EQUIPM	ENT DECO	NTAMINAT	ION METH	OD BEFC	ORE SAMP	PLING THE WELL:
Glove	es 🗆 Alcono	x 🛛 Distill	ed Water R	inse 🗆 C	Other:		
TOTAL D DEPTH T HEIGHT WELL DI	DEPTH OF V TO WATER: OF WATER AMETER:	VELL: COLUMN: 2.0	43.30 NM Inch	Feet Feet Feet			Minimum Gallons to purge 3 well volumes (Water Column Height x 0 49)
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0:00	:Total Time	e (hr:min)	0	:Total Vol	(gal)	#DIV/0!	:Flow Rate (gal/min)
SAMF	PLE NO.:	Collected S	ample No.:				
ANA	LYSES:	0					
COM	MENTS:	Not sample	d 0.01 feet	of product of	on water f	able.	

	CLIENT:	DC	P Midstre	am	-	WELL ID:	MW-3		
S	ITE NAME:	J42	(Pipeline L	eak)	-	DATE:	9/16/2008		
PRO	OJECT NO.	IV=	<u></u>	<u>.</u>	S.	AMPLER:	M. Stewart/A. Taylor		
PURGIN	G METHOD		☑ Hand Ba	iled 🗌 Ρι	ımp lf Pu	mp, Type:			
SAMPLIN		D:	Disposat	le Bailer	Direct	from Discl	harge Hose 🗌 Other:		
DESCRIE		ENT DECO	NTAMINATI	ON METH	OD BEFC	ORE SAME	PLING THE WELL:		
기 Glove	es 🗋 Alcond	x □ Distill	ed Water Ri	nse 🗆 (Other:				
					o thom		·····		
TOTAL D	EPTH OF V	VELL:	43.00	Feet					
	O WATER:	COLUMN	27.05	Feet		7 0	Minimum Callana ta		
NELL DI	OF WATER	2.0	Inch	Feet		1.8	purge 3 well volumes		
							(Water Column Height x 0.49)		
TIME	VOLUME PURGED	TEMP. ° F	COND. <u>mS/cm</u>	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
	2.6	67.9	1.66	7.50					
	5.2	67.6	7.34	7.44	ļ				
······	7.8	67.3	8.21	7.49					
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	:Total Time	e (hr:min)	7.8	:Total Vol	(gal)		:Flow Rate (gal/min)		
SAMF	LE NO.:	Collected S	ample No.:	MW-3					
ANA	LYSES:	BTEX, chlo	rides, total c	lissolved s	olids				
COM	MENTS:	Collected d	luplicate sar	nple					
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	CLIENT:	DC	P Midstre	am	_ `	MW-4	
S	ITE NAME:	J42	(Pipeline L	eak)	_	DATE	:9/16/2008
PRO	DJECT NO.				S/	AMPLER	:M. Stewart/A. Taylor
PURGIN	G METHOD:	:	Hand Ba	iled 🗌 Pu	ımp lf Pu	mp, Type	:
SAMPLIN	IG METHOD	D:	🗹 Disposat	ole Bailer	Direct	from Disc	charge Hose 🗌 Other:
DESCRIE		ENT DECO	NTAMINAT	ON METH	OD BEFC	RE SAM	PLING THE WELL:
Glove	s 🗹 Alcono	x 🗹 Distill	ed Water R	inse 🗖 (Other:		
TOTAL D DEPTH T HEIGHT	EPTH OF W O WATER: OF WATER	VELL: COLUMN:	38.12 28.06 10.06	Feet Feet Feet		4.9	_Minimum Gallons to
WELL DI	AMETER:	2.0	Inch				purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME PURGED	TEMP. ° F	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
	1.7	72.3	4.06	7.71		 	Begin Hand Bailing
	3.4	69.4	4.02	7.68			
	5.1	69.4	4.00	7.73			
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······	:Total Time	• (hr:min)	5.1	:Total Vol	 (gal)		-I :Flow Rate (gal/min)
SAMF	LE NO.:	Collected S	ample No.:	MW-4		·	<u>v</u>
ANAI	LYSES:	BTEX, chlo	rides, total o	dissolved s	olids		
COM	MENTS:	, -		<u> </u>			
COMI	MENTS:						

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	CLIENT:	DC	P Midstre	am		WELL ID:	MW-6
S	ITE NAME:	J42	(Pipeline L	eak)	-	DATE:	9/16/2008
PRO	DJECT NO.		<u>.</u>	<u> </u>	- S/	AMPLER:	M. Stewart/A. Taylor
PURGING	G METHOD:	:	Hand Ba	iled 🗆 Pu	ımp lf Pu	mp, Type:	
SAMPLIN		D:	⊡ Disposat	le Bailer [Direct	from Disc	harge Hose 🗌 Other:
DESCRIE		ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAM	PLING THE WELL:
⊡ Glove	s 🗆 Alcono	ox 🛛 Distill	ed Water Ri	nse 🗆 (Other:		
TOTAL D DEPTH T HEIGHT (WELL DI/	EPTH OF W O WATER: OF WATER AMETER:	VELL: COLUMN: 2.0	38.32 28.10 10.22 Inch	Feet Feet Feet		5.0	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME	TEMP.	COND.		DO	Turb	PHYSICAL APPEARANCE AND
	PURGED	°F	<u><i>m</i> S/cm</u>		mg\L		REMARKS
	2.0	67.5	1.69	7.68			
· ·					ļ		
					ļ		·
			1				
<u> </u>				:			
	,						
					 		· · · · · · · · · · · · · · · · · · ·
ļ	·						
						· · · ·	
	:Total Time	e (hr:min)	2	:Total Vol	(gal)		:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	MW-6			
ANAL	YSES:	BTEX, chlo	rides, total o	lissolved s	olids	•	· · · · ·
COM	MENTS:	Obstruction	at 34 feet.	Bailed 2 a	allons and	sampled	. collected MS/MSD sample
0000							, compio

CLIENT: DC			P Midstre	am			MW-7		
S	ITE NAME:	J42	(Pipeline L	eak)	_	DATE:	9/16/2008		
PR	DJECT NO.				S.	AMPLER:	M. Stewart/A. Taylor		
PURGIN	G METHOD:		☑ Hand Bai	iled 🗌 Pu	ump lf Pu	mp, Type:			
SAMPLIN):	☑ Disposab	le Bailer	Direct	from Disch	narge Hose 🗌 🛛 Other:		
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	ORE SAMF	PLING THE WELL:		
⊡ Glove	s 🗌 Alcono	x 🛛 Distill	ed Water Ri	nse 🗆 (Other:				
TOTAL D DEPTH T HEIGHT VELL DI	EPTH OF W O WATER: OF WATER AMETER:	/ELL: COLUMN: 2.0	39.45 30.62 8.83 Inch	Feet Feet Feet		4.3	Minimum Gallons to purge 3 well volumes		
TIME	VOLUME	TEMP.	COND.	На	DO	Turb	PHYSICAL APPEARANCE AND		
	PURGED	° F	<u><i>m</i> S/cm</u>	7.54	<u>mg\L</u>		REMARKS		
	1.5	67.0	1.30	7.54			Begin Hand Bailing		
	3.0	67.0	1.30	7.50					
	4.5	07.0	1.50	1.00					
·									
		· · · · · · · · · · · · · · · · · · ·	·						
	:Total Time	e (hr:min)	4.5	:Total Vol	(gal)		:Flow Rate (gal/min)		
SAMF	LE NO.:	Collected S	ample No.:	MW-7	/				
ANA	LYSES:	BTEX, chlo	rides, total o	lissolved s	olids				
COM	MENTS:						· · · · · · · · · · · · · · · · · · ·		

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-8
S	ITE NAME:	J42	(Pipeline L	eak)	_	DATE:	9/16/2008
PRO	DJECT NO.			<u> </u>	S	AMPLER:	M. Stewart/A. Taylor
PURGIN	G METHOD:	:	Hand Ba	iled 🗌 Pu	ımp lf Pu	imp, Type:	
SAMPLIN	IG METHOE	D;	⊡ Disposat	ole Bailer] Direct	from Discl	harge Hose 🗌 Other:
DESCRIE		ENT DECO		ON METH	OD BEFC	ORE SAME	PLING THE WELL:
고 Glove	es 🗆 Alcono	x 🛛 Distill	ed Water R	inse 🗆 (Other:		
TOTAL D DEPTH T HEIGHT WELL DI	EPTH OF W O WATER: OF WATER AMETER:	VELL: COLUMN: 2.0	38.32 29.04 9.28 Inch	Feet Feet Feet		4.5	Minimum Gallons to purge 3 well volumes
	VOLUME	TEMP.	COND.		DO	Turk	(Water Column Height x 0.49) PHYSICAL APPEARANCE AND
	PURGED	°F	<i>m</i> S/cm	рн	mg\L		REMARKS
	1.5	68.5	1.87	7.63	<u> </u>	ļ	Began Hand Bailing
	3.0	67.3	1.86	7.61			
	4.5	67.6	1.85	7.67			
	1					<u> </u>	
- <u>-</u>		(hr:min)	4.5	Total Vol	(aal)		Elow Rate (gal/min)
					(941)	<u> </u>	
SAIVIE				<u>8-77171</u>			<u></u>
ANA	LYSES:	BIEX, chlo	rides, total o	SSOIVed S			
COM	MENTS:						

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10/01/08

Technical Report for

American Environmental Consulting

DCP Midstream- J42 Pipeline

Accutest Job Number: T23912

Sampling Date: 09/16/08

Report to:

American Environmental Consulting 6885 S. Marshall Suite 3 Littleton, CO 80439 mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 26



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 Canevard

Paul Canevaro Laboratory Director



Client Service contact: Agnes Vicknair 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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Sample Summary

Job No:

T23912

American Environmental Consulting

DCP Midstream- J42 Pipeline

Sample Number	Collected Date	Time By	Received	Matr Code	ix Type	Client Sample ID
T23912-1	09/16/08	17:50 AC	09/23/08	AQ	Ground Water	MW-3
T23912-2	09/16/08	18:30 AC	09/23/08	AQ	Ground Water	MW-4
T23912-3	09/16/08	17:30 AC	09/23/08	AQ	Ground Water	MW-6
T23912-4	09/16/08	17:10 AC	09/23/08	AQ	Ground Water	MW-7
T23912-5	09/16/08	17:00 AC	09/23/08	AQ	Ground Water	MW-8





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Sample Results

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Report of Analysis



460-00-4

Report of Analysis

Client Sam Lab Sampl Matrix: Method: Project:	ple ID: MW-3 e ID: T23912 AQ - C SW846 DCP M	2-1 Ground Wate 5 8260B 1idstream- J	er · 42 Pipeline	Date Sampled: 09/16/08 Date Received: 09/23/08 Percent Solids: n/a						
Run #1 Run #2	File ID Y0026990.D	DF 1	Analyzed 1 09/28/08 J	By IL	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VY1897		
Run #1 Run #2	Purge Volume 5.0 ml									
Purgeable	Aromatics									
CAS No.	Compound		Result	MQL	SDL	Units	Q			
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.00046 U 0.00048 U 0.00045 U 0.0014 U	0.0020 0.0020 0.0020 0.0020 0.0060	0.00046 0.00048 0.00045 0.0014	mg/l mg/l mg/l mg/l				
CAS No.	Surrogate Re	coveries	Run# 1	Run# 2	Limit	ts				
1868-53-7 17060-07-0 2037-26-5	Dibromofluoro 1,2-Dichloroe Toluene-D8	omethane ihane-D4	95% 114% 112%		73-12 61-13 80-12	6% 6% 5%				

122%

U = Not detected SDL - Sample Detection Limit MQL = Method Quantitation Limit E = Indicates value exceeds calibration range

4-Bromofluorobenzene

J = Indicates an estimated value

65-147%

- 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

Client Sample ID: MW-3 Lab Sample ID: T23912-1 Matrix: AQ - Ground Water DOD Million MO Din Million					Date Sampled: 09/16/08 Date Received: 09/23/08 Percent Solids: n/a					
Project:	DCP Midstream- J42	۲								
General Chemistry	7							······		
Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method		
Chloride	4070	100	0.18	mg/l	10	09/26/08 10:00	SS	SM 4500 CL C		
Solids, Total Dissol	ved 9030	100	3.6	mg/l	10	09/24/08 10:00	SS	SM 2540C		

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Page 1 of 1

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	-						

Client Sample ID:MW-4Lab Sample ID:T23912-2Matrix:AQ - Ground WaterMethod:SW846 8260BProject:DCP Midstream- J42 Pipeline					Date Sampled: 09/16/08 Date Received: 09/23/08 Percent Solids: n/a					
Run #1 Run #2	File ID Y0026991.D	DF 1	Analyzed 1 09/28/08	By IL	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VY1897		
Run #1 Run #2	Purge Volume 5.0 ml									
Purgeable	Aromatics			_						
CAS No.	Compound		Result	MQL	SDL	Units	Q			
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.00046 U 0.00048 U 0.00045 U 0.0014 U	0.0020 0.0020 0.0020 0.0060	0.00046 0.00048 0.00045 0.0014	mg/l mg/l mg/l mg/l				
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Limit	ts				

95%

114%

109%

114%

U = Not detected SDL - Sample Detection Limit MQL = Method Quantitation Limit

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

1868-53-7

2037-26-5

460-00-4

17060-07-0

- E = Indicates value exceeds calibration range
- J = Indicates an estimated value

73-126%

61-136%

80-125%

65-147%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

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	Report o		Page 1 of 1	
Client Sample ID:	MW-4			······································
Lab Sample ID:	T23912-2	Date Sampled:	09/16/08	
Matrix:	AQ - Ground Water	Date Received:	09/23/08	
		Percent Solids:	n/a	
Project:	DCP Midstream- J42 Pipeline			
General Chemistry	/		<u></u>	

Analyte	Result	MQL	SDL	Units	DF	Analyzed	Ву	Method
Chloride	1440	10	0.18	mg/l	10	09/26/08 10:00	SS	SM 4500 CL C
Solids, Total Dissolved	4570	40	3.6	mg/l	4	09/24/08 10:00	SS	SM 2540C



Report of Analysis
2037-26-5

460-00-4

Toluene-D8

4-Bromofluorobenzene

Report of Analysis

Client Samp	ole ID: MW-6									
Lab Sample	ID: T23912-3				Date Sa	mpled:	09/16/08			
Matrix:	AQ - Gro	und Water			Date R	eceived:	09/23/08			
Method:	SW846 82	260B	Percent Solids: n/a							
Project:	DCP Mid	stream- J4	2 Pipeline							
	File ID	DF	Analyzed I	Зу	Prep Da	te	Prep Batch	Analytical Batch		
Run #1	Y0026992.D	1	09/28/08 J	L	n/a		n/a	VY1897		
Run #2										
	Purge Volume									
Run #1	5.0 ml									
Run #2										
Purgeable A	Aromatics									
CAS No.	Compound		Result	MQL	SDL	Units	Q			
71-43-2	Benzene		0.00046 U	0.0020	0.00046	mg/l				
108-88-3	Toluene		0.00048 U	0.0020	0.00048	mg/l				
100-41-4	Ethylbenzene		0.00045 U	0.0020	0.00045	mg/l				
1330-20-7	Xylene (total)		0.0014 U	0.0060	0.0014	mg/l				
CAS No.	Surrogate Recov	veries	Run# 1	Run# 2	Limit	S				
1868-53-7	Dibromofluorom	ethane	96%		73-12	6%				
17060-07-0	1,2-Dichloroetha	ne-D4	115%		61-13	6%				

112%

117%

J = Indicates an estimated value

80-125%

65-147%

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



2.3 2

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Report of Analysis

									_
Client Sample ID: Lab Sample ID:	MW-6 T23912-3			Dat	e Sample	d: 09/16/08			
Matrix:	AQ - Ground Wa	iter		Dat	e Receive	d: 09/23/08			
Project:	DCP Midstream-		Per	cent Solid	ls: n/a				
General Chemistry									
Analyte	Result	MQL	SDL	Units	DF	Analyzed	By	Method	
Chloride	537	10	0.18	mg/l	10	09/26/08 10:00	SS	SM 4500 CL C	
Solids, Total Dissol	ved 1650	10	3.6	mg/l	1	09/24/08 10:00	SS	SM 2540C	

MQL = Method Quantitation Limit SDL = Sample Detection Limit



2.3

460-00-4

Report of Analysis

Client Sam Lab Sample Matrix: Method: Project:	ple ID: MW-7 e ID: T23912-4 AQ - Ground SW846 8260E DCP Midstrea	Water 5 1m- J42 Pipeline		Date Sar Date Rea Percent	npled: ceived: Solids:	09/16/08 09/23/08 n/a	
Run #1 Run #2	File ID DF Y0026993.D 1	Analyzed H 09/28/08 J	By IL	Prep Date n/a	e	Prep Batch n/a	Analytical Batch VY1897
Run #1 Run #2	Purge Volume 5.0 ml						· · · · · · · · ·
Purgeable A	Aromatics						
CAS No.	Compound	Result	MQL	SDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	0.00046 U 0.00048 U 0.00045 U 0.0014 U	0.0020 0.0020 0.0020 0.0060	0.00046 0.00048 0.00045 0.0014	mg/l mg/l mg/l mg/l		
CAS No.	Surrogate Recoverie	s Run# 1	Run# 2	Limits			
1868-53-7 17060-07-0 2037-26-5	Dibromofluoromethan 1,2-Dichloroethane-D Toluene-D8	ne 96% 4 113% 112%		73-126 61-136 80-125	9% 9% 9%		

117%

4-Bromofluorobenzene

J = Indicates an estimated value

65-147%

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



Lat the

Report of Analysis

Client Sample ID: Lab Sample ID: Matrix:	MW-7 T23912-4 AQ - Ground W	Dat Dat Per	e Sampleo e Receive cent Solid	d: 09/16/08 d: 09/23/08 ls: n/a				
Project:								
General Chemistry	,							<u>.</u>
Analyte	Resul	lt MQL	SDL	Units	DF	Analyzed	By	Method
Chloride	1180	10	0.18	mg/l	10	09/26/08 10:00	SS	SM 4500 CL C
Solids, Total Dissol	ved 3730	20	3.6	mg/l	2	09/24/08 10:00	SS	SM 2540C

MQL = Method Quantitation Limit SDL = Sample Detection Limit



Page 1 of 1

Report of Analysis

Client Sam Lab Sample Matrix: Method: Project:	ple ID: MW e ID: T239 AQ SW8 DCF	7-8 912-5 - Ground Wate 346 8260B P Midstream- J	r 42 Pipeline		Date Sa Date R Percent	ampled: eceived: t Solids:	09/16/08 : 09/23/08 : n/a	
Run #1 Run #2	File ID Y0026994.D	DF 1	Analyzed 1 09/28/08	By JL	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VY1897
Run #1 Run #2	Purge Volur 5.0 ml	ne						
Purgeable	Aromatics							
CAS No.	Compound		Result	MQL	SDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzer Xylene (tota	ne al)	0.00046 U 0.00048 U 0.00045 U 0.0014 U	0.0020 0.0020 0.0020 0.0020 0.0060	0.00046 0.00048 0.00045 0.0014	mg/l mg/l mg/l mg/l		
CAS No.	Surrogate	Recoveries	Run# 1	Run# 2	Limi	ts		
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromoflu 1,2-Dichlor Toluene-D8 4-Bromoflu	oromethane oethane-D4 } orobenzene	97% 114% 112% 116%		73-12 61-13 80-12 65-14	26% 86% 25% 17%		

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound





Report of Analysis

Client Sample ID: Lab Sample ID: Matrix:	MW-8 T23912-5 AQ - Ground Water			Date Date Pero	e Sample e Receive cent Solid	d: 09/16/08 d: 09/23/08 ls: n/a			
Project:	DCP Midstream- J42								
General Chemistry	· · · · · · · · · · · · · · · · · · ·								,
Analyte	Result	MQL	SDL	Units	DF	Analyzed	Ву	Method	
Chloride	735	10	0.18	mg/l	10	09/26/08 10:00	SS	SM 4500 CL C	
Solids, Total Dissol	ved 1990	10	3.6	mg/l	1	09/24/08 10:00	SS	SM 2540C	







Section 3

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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



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	Client Information	а <u>.</u>			·	-1-1	Facili	v Inform	ation	T						Anal	vtical Inf	ormation		<u>.</u>				
DCP Mi	dstream			-	Ame	rican	Envi	onment	al Cons	ultin	a. Ll	P			1	1		1			1		1	<u> </u>
Name 370 Sev	enteenth Street, SL	ilte 2	2500	Projec	t Name																		160B	
Address Denver	c0	803	202	Locati	lon											s ع							8	1
ity	State	Zip		Projec	:t/PO #:											Soli							Ê	
Stephen V	Veathers			ļ				DCP I	Midstre	am .	J42					l T	1			1	1			
end Report to hone #:	303.605.1718			FAX #	#:									1260B	sa	issolv							DFO	
				Colle	ection	·				Pn	ese	vati	on	8	orid,						ļ		NS NS	
Field ID /	Point of Collection		Date	τι	me	Sam e	pled	Matrix	# of bottles	ថ្	Had	FON	e e	BTE	Ē	10[<u> </u>			0	WS/	
4W-1		9	166	63	0	AE	Ċ	GW	3	x	1			x	x	x		1						
W-2		1					_	GW	3	x		T		х	x	x							<u> </u>	
WW-3		٩	16/08	55	0			GW	3	x	1	+		x	x	x	1			1		<u> </u>		
1W-4	·····	19	16/0	5 63	Ø			GW	3	x		T		x	x	x				1				
W-6		19	110	33	3			GW	3	x	1	+		х	x	x				1				
W-7		9	1KIOR	51	6			GW	3	x		+		x	x	X	1			1		1		<u> </u>
WW-8		न	16/15	50	20			GW	3	x		+		x	x	X		1						
Dup		11	tops.			1		GW	3	x		T		x	x	x			<u></u>			<u> </u>		<u> </u>
rip		T				1		GW	3	x	1	1		х	x	X				<u> </u>				
AS/MSD						$\overline{\mathbf{A}}$	· /	GW	· 6	x		1								1	1		x	
		1					-	_				T												
	Turnaround Information	- T				7		· .	Data	Deliv	erab	e in	form	ation			<u>.</u>	Comme	nts / Ren	narks		·	·	
21 Day 8	tandard	A	рргоче	d By:		N	J Red	liced			Cor	nmer	cial "	A"										
					l		J Fuil			$\overline{\Box}$	Сог	nmei	cial "	B*										
X 7 Dava E	MERGENCY					٦,	ил с	P		Ē	ASP	Cate	מחדע	R		Please	includ	e "Hold f	or Stev	ve Weat	hers" or	1 the sh	ipping la	abel.
	(Dave)					Ξ.	0	u.		F		- Eo		-		Accute	st to in	voice DO	CP Mid	stream,	Attn: St	eve We	athers	
	(Days)					<u> </u>	ibn De	necifui		L	Ota	#6	(1113 (1113											
unless grevig	usl approved.				1	<u>م</u> ،	annan fe	pecny				<i>m</i> 1	<u>(L)</u> :	·										
	Sampl	le Cu	stody m	ust be a	docume	nted b	elow e	ach time	sample	s char	nge p	0354	esion	Including	courier d	elivery.								
		9	22/01	רו ל	ഹ	Receiv 1	ed By:					Re	Hnqui	shed By:			Date Time			Received	By:			
Relingeshod	y Sampler:	ф(Time:			Receiv	ed By:					Re	lingul	shed By:	-		Date Time			Received E	ly:			
3 Relinguished by	v Samoler:	10.10	Time			3				·		4	*1.#							4				
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T23912: Chain of Custody Page 1 of 3

16 of 26 ACCUTEST. T23912 Laboratorios

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SAMPLE INSPECTION FORM

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ccutest Job Number: 723912 ale/Time Received: 9.23, 09	_ Client: N_ 10,57,864 M 2:20 # of Coolers Received:/	Project: <u>UCP MIDSTREAM</u> U42 Thermometer # <u>//O</u>
ooler Temps: #1: <u>4.</u> 9 #2:	#3:#4:#5:	#6: #7: #8:
lethod of Delivery: FEDEX UPS	Accutest Courier Greyhound	Delivery Other
rbill Numbers:	8643-9451-5023	
COOLER INFORMATION Custody seal missing or not intact Temperature criteria not met Wet ice received in cooler CHAIN OF CUSTODY Chain of Custody not received Sample D/T unclear or missing COC not properly executed unnimary of Discrepancies: Sample Muth	SAMPLE INFORMATION 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) 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 Sample received improperly preserved W65 Not ceceived but the set of	TRIP BLANK INFORMATION Trip Blank on COC but not received Trip Blank not intact Received Water Trip Blank Received Soil TB Number of Encores? Number of 5035 kits? Number of lab-filtered metals? LOCOPEL for Chaprick which
CHNICIAN SIGNATURE/DATE:	1174 1/2 9.23.26 ERIFIED BY: 2.27	
	• • CORRECTIVE ACTIO	\mathbf{NS} · · · · · · · · ·
lient Representative Notified:		Date:
y Accutest Representative:		Vla: Phone Email

T23912: Chain of Custody Page 2 of 3



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SAMPLE RECEIPT LOG

JOB #:	<u> </u>	23912		DATE/TIME	E RECEIVED:		9-23-08 9-20			
CLIENT:		DCP MIDSTREAM	<u></u>		INITIALS			17		
COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV		
t	1	MW-7	9.16.05	66	1000ML	1	10	1 2 3 4 5 6 7 8	<2	
1	1	↓	1)	HOME	2-4	VZ.	1 3 4 5 6 7 8	<2	
	2	MW-4.			1000mc	(10	(¹) 2 3 4 5 6 7 8	<2	
	\checkmark	4			HORL	2.4	VR.	1 3 4 5 8 7 8	<2	
	3	MW 6			1000nL	1	10	A 2 3 4 5 6 7 8	<2 .	
	\mathbf{V}	\checkmark			Home	2-4	VE	1 (2) 3 4 5 6 7 8	<2	
	4	MW7			locom L	t	10	(1) 2 3 4 5 6 7 6	<2	
	4	V			Home	2-4	VR.	1 <u>(2)</u> 3 4 5 6 7 8	<2	
	5	MW 8			1000 pet	1	10	C 2 3 4 · 5 6 7 8	<2	

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PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB; Subcontract EF: Encore Freezer

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T23912: Chain of Custody Page 3 of 3



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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

Job Number: Account: Project:	T23912 AECCOLI A DCP Midstre	merican eam- J42	Environmental Pipeline	Consultin	ng		
Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY1897-MB	Y0026987.D	1	09/28/08	JL	n/a	n/a	VY1897

The QC reported here applies to the following samples:

Method: SW846 8260B

T23912-1, T23912-2, T23912-3, T23912-4, T23912-5

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.46	ug/l
100-41-4	Toluene	ND ND	2.0	0.45	ug/1 ug/l
1330-20-7	Xylene (total)	ND	6.0	1.4	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	

1868-53-7	Dibromofluoromethane	91%	73-126%
17060-07-0	1,2-Dichloroethane-D4	106%	61-136%
2037-26-5	Toluene-D8	107%	80-125%
460-00-4	4-Bromofluorobenzene	113%	65-147%

20 of 26 **ACCUTEST.** T23912 Laboratories

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Blank Spike Summary

Job Number: Account: Project:	T23912 AECCOLI A DCP Midstr	Americar eam- J42	1 Environmental 2 Pipeline	Consultir	ıg			
Sample VY1897-BS	File ID Y0026985.I	DF D 1	Analyzed 09/28/08	By JL	Prep Date n/a	Prep Batch n/a	Analytical Batch VY1897	
The QC repor	ted here appl	ies to the	e following sam	ples:		Method: SW	/846 8260B	J

T23912-1, T23912-2, T23912-3, T23912-4, T23912-5

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	23.9	96	41-145
100-41-4	Ethylbenzene	25	24.8	99	49-135
108-88-3	Toluene	25	24.6	98	66-128
1330-20-7	Xylene (total)	75	73.3	98	67-122
CAS No.	Surrogate Recoveries	BSP	Li	nits	
1868-53-7	Dibromofluoromethane	86%	73	-126%	
17060-07-0	1,2-Dichloroethane-D4	95 %	61	-136%	
2037-26-5	Toluene-D8	103%	80	-125%	
460-00-4	4-Bromofluorobenzene	107%	65	-147%	

21 of 26 **ACCUTEST.** T23912 Laboratories

Matrix Spike/Matrix Spike Duplicate Summary

Account: Project:	AECCOLI American Environmental Consulting DCP Midstream- J42 Pipeline								
Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch		
T23912-3MS	Y0026995.D	1	09/28/08	JĹ	n/a	n/a	VY1897		
T23912-3MSD	Y0026996.D	1	09/28/08	JL	n/a	n/a	VY1897		
T23912-3	Y0026992.D	1	09/28/08	JL	n/a	n/a	VY1897		

The QC reported here applies to the following samples:

Method: SW846 8260B

T23912-1, T23912-2, T23912-3, T23912-4, T23912-5

CAS No.	Compound	T23912-3 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2.0 U	25	27.0	108	26.5	106	2	60-131/12
100-41-4	Ethylbenzene	2.0 U	25	26.9	108	26.2	105	3	58-127/13
108-88-3	Toluene	2.0 U	25	26.4	106	25.6	102	3	67-123/11
1330-20-7	Xylene (total)	6.0 U	75	78.5	105	76.5	102	3	62-125/14
CAS No.	Surrogate Recoveries	MS	MSD	T23	912-3	Limits			
1868-53-7	Dibromofluoromethane	103%	102%	96 %	6	73-1269	6		
17060-07-0	1,2-Dichloroethane-D4	121%	122%	115	%	61-136%	6		
2037-26-5	Toluene-D8	119%	118 %	112	%	80-1259	%		
460-00-4	4-Bromofluorobenzene	124%	121%	117	%	65-1479	%		



Page 1 of 1

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QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries

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• Matrix Spike Summaries





METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: T23912 Account: AECCOLI - American Environmental Consulting Project: DCP Midstream- J42 Pipeline

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits	
Chloride Solids, Total Dissolved	GP5725/GN15116 GN15105	1.0	<1.0 <10	mg/l mg/l	1000	994	99,4	92-107%	5.1
Associated Samples: Batch GN15105: T23912-1, T2 Batch GP5725: T23912-1, T2 (*) Outside of OC limits	23912-2, T23912-3, T2 3912-2, T23912-3, T23	23912-4, 1 3912-4, T2	23912-5 23912-5						জ

T23912 Laboratories

DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: T23912 Account: AECCOLI - American Environmental Consulting Project: DCP Midstream- J42 Pipeline

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits	
Chloride		T23909-2	mg/l	373	378	1.3	0-5%	 ഗ
Solids, Total Dissolved	GN15105	T23925-1	mg/l	354	347	2.0	0-15%	Ń
Associated Samples:								

Batch GN15105: T23912-1, T23912-2, T23912-3, T23912-4, T23912-5 Batch GP5725: T23912-1, T23912-2, T23912-3, T23912-4, T23912-5 (*) Outside of QC limits

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MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

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Login Number: T23912 Account: AECCOLI - American Environmental Consulting Project: DCP Midstream- J42 Pipeline

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits	
Chloride	GP5725/GN15116	T23909-2	mg/l	373	10	388	99.4	81-119%	сı С
Associated Samples: Batch GP5725: T23912-1, 7 (*) Outside of QC limits (N) Matrix Spike Rec. out	123912-2, T23912-3, T23 tside of QC limits	912-4, T2391	2-5					,	ত



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RECEIVED

DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605-2226 *FAX*

2008 AUG 29 AM 11 10

August 26, 2008

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

RE: 2nd Quarter 2008 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728) Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Price:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 2nd Quarter 2008 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East).

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me <u>swweathers@dcpmidstream.com</u>.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Sr. Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office (Copy on CD) Environmental Files

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

August 21, 2008

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Summary of the Second Quarter 2008 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico (1RP-1728) Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the second quarter 2008 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP. The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed because of drilling refusal.

GROUNDWATER SAMPLING

Groundwater sampling was completed on June 27, 2008. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2.

FPH was measured at thicknesses of 0.04 feet (1/2 inch) in MW-1 and 0.01 feet (1/8 inch) in MW-2. The historic FPH thickness values are summarized in Table 3. When present, the FPH is generally less than 1-inch thick.

Wells MW-3 through MW-8 were purged and sampled using the standard protocols for this site using dedicated bailers. Purging continued until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity stabilized. The well purging forms are attached. The affected purge water was disposed at the DCP Linam Ranch facility.

Unfiltered samples were collected upon stabilization using the dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to ACCUTEST Laboratories using standard chain-of-custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX).

Mr. Stephen Weathers August 21, 2008 Page 2

The laboratory analyses for the sampling episode are summarized in Table 4. The laboratory report is attached. Table 5 provides the quality assurance/quality control (QA/QC) information. The QA/QC evaluation includes:

- The container temperature was 2.1 degrees centigrade when received at the lab.
- All of the individual surrogate spikes were within their control limits.
- The benzene, toluene and ethylbenzene relative percentage difference (RPD) values for the MW-3 duplicates were not evaluated because they were below the method detection limits. The xylene RPD of 54.9 percent results from one value measured at the method reporting limit while the other value was below it.
- The matrix spike and matrix spike duplicate results from MW-6 were within the control limits for all four constituents.

The above information indicates that the data is suitable for use as routine monitoring data.

RESULTS AND INTERPRETATIONS

The results and interpretations presented below are based upon all of the data collected to date.

Groundwater Flow

Figure 3 includes hydrographs for the corrected water-table elevations for all site wells excepting MW-1 and MW-2. The water table declined uniformly across the site.

The resulting June 2008 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table exhibits a gradient to the southeast that is consistent with past monitoring events.

Groundwater Chemistry

The June 2008 data is summarized in Table 4. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of the table. Any constituents that exceed these standards are bolded. Examination of Table 4 shows that none of the BTEX constituents exceeded the standards in the wells that were sampled.

The data for all of the organic constituents are summarized in Table 6. Examination of Table 6 indicates the following:

- The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards.
- The BTEX constituents have never been detected in down-gradient wells MW-6, MW-7 and MW-8.

Mr. Stephen Weathers August 21, 2008 Page 3

CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that:

- 1. Groundwater flow remains constant toward the southeast;
- 2. The presence of dissolved phase BTEX constituents is limited to the original release area as defined by MW-1 and MW-2;
- 3. The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is either stable or contracting;
- 4. The conductivity values remain the highest in MW-3. This well is minimally impacted at best by the DCP release so the probable source of the salts lies upgradient.

AEC recommends continued quarterly groundwater monitoring. AEC also recommends the collection of samples for chloride and total dissolved solids evaluation during the next quarter.

The next groundwater-monitoring event is scheduled for the third quarter of 2008. Do not hesitate to contact me if you have any questions or comments on this letter.

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Sincerely. AMERICAN ENVIRONMENTAL CONSULTING, LLC

Michael H. Stewart, P.E., C.P.G. Principal Engineer

MHS/tbm attachments

TABLES

Name	Date	Stickup	Casing	Total	Screen	Sand
	Installed		Diameter	Depth	Interval	Interval
			(inches)	(btoc)	(ground)	
MW-1	2/06	3.17	2	43.05	19-39	17-39
MW-2	2/06	3.08	4	43.30	19-39	17-39
MW-3	2/06	3.21	2	43.00	19-39	17-39
MW-4	9/06	3.12	2	38.12	20-35	18-35
MW-5		Not in	stalled beca	use of drill	ling refusal	
MW-6	9/06	3.32	2	38.32	20-35	18-35
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	2	38.32	20-35	18-35

Table 1 – Summary of Monitoring Well Completions at the J-4-2 Site

All units are feet except as noted btoc: Below top of casing

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ŀ	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07	9/25/07	11/30/07
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86	3712.42
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34	3712.91
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50	3712.09
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98	3713.48
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56	3711.92
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87	3710.33
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06	3708.33

Table 2 - Summary of Water Table Elevations for the J-4-2 Site

	3/20/08	6/27/08
<u>MW-1</u>	3713.48	NM
MW-2	3713.40	NM
MW-3	3713.30	3713.09
MW-4	3713.70	3713.13
MW-6	3712.53	3712.20
MW-7	3711.38	3710.95
MW-8	3709.17	3708.78

Units are feet

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Blank cells: wells not installed

NM: Not measured because of probe malfunction.

Date	MW-1	MW-2
02/15/06	0.00	0.57
09/25/06	0.00	0.15
12/21/06	0.09	0.13
03/14/07	0.07	0.10
06/26/07	0.09	0.00
9/25/07	0.09	0.03
11/30/07	0.00	0.00
3/20/08	0.00	0.00
6/27/08	0.04	0.01
3/20/08 6/27/08	0.00 0.04	0.00

Table 3 - Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

Units are feet

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Well	Benzene	Tolueņe	Ethylbenzene	Total Xylene
NMWQCC	0.01	0.75	0.75	. 62
Groundwater Standard	0.01		0.70	0.02
				
MW-1	FPH	FPH	FPH	FPH
MW-2	FPH	FPH	FPH	FPH
MW-3	< 0.002	< 0.002	< 0.002	< 0.006
MW-3 (Dup)	< 0.002	< 0.002	< 0.002	0.0072
MW-4	< 0.002	< 0.002	< 0.002	0.0041J
MW-6	< 0.002	< 0.002	< 0.002	< 0.006
MW-7	< 0.002	< 0.002	< 0.002	< 0.006
MW-8	< 0.002	< 0.002	< 0.002	< 0.006
TRIP BLANK	< 0.002	< 0.002	< 0.002	< 0.006

Table 4 - Summary of June 2008 Groundwater Sampling Results

Notes: Units are mg/l,

MW-5 was not installed because of drilling refusal FPH well not sampled, free phase hydrocarbons present

Table 5 - Quality Assurance Evaluation for the June 2008 Data

MW-1 Duplicate Samples

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	Benzène	Toluene	Ethylbenzene	Total Xylenes
RPD (%)	NM	NM	NM	54.9
373 6 37 .				

NM: Not measured because the constituents were not detected

MW-6 Matrix Spike and Matrix Spike Duplicate Results

	Benzene	Toluene	Ethylbenzene	Total Xylenes
MS	110	98	100	97
MSD	114	102	104	102

Units are percent recovery MS: matrix spike

MSD: matrix spike duplicate

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1	2/06	0.139	0.326	0.34	0.31
	9/06	0.0418	0.0048	0.0247	0.0605
Dup	9/06	0.0555	0.0068	0.032	0.0782
	12/06	FPH	FPH	FPH	FPH
	3/07	FPH	FPH	FPH	. FPH
	6/07	FPH	FPH	FPH	FPH
	9/07	0.0114	0.0029	0.0035	0.0978
	11/07	0.107	0.0243	0.0401	0.39
	3/08	0.042	0.0186	0.0177	0.260
Dup	3/08	0.031	0.0123	0.0107	0.170
	6.10.7	0.00.00	0.0202	0.0404	0.005
<u>MW-2</u>	6/07	0.0262	0.0382	0.0404	0.335
	9/07	0.0045	<0.001	0.0027	0.0471
	11/07	0.006	0.0033	0.0025	0.0613
Dup	11/07	0.0062	0.003	0.0023	0.0577
	3/08	0.188	0.0062	0.0262	0.125
MW-3	2/06	< 0.001	< 0.001	<0.001	< 0.002
	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
Dup	3/07	< 0.002	< 0.002	< 0.002	. <0.006
	6/07	0.0029	0.0053	0.0015	0.0097
Dup	6/07	< 0.001	< 0.001	< 0.001	< 0.001
·	9/07	< 0.001	< 0.001	< 0.001	< 0.001
Dup	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	0.0011J	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
Dup	6/08	< 0.002	< 0.002	< 0.002	· 0.0072
MW-4	9/06	0.0086	0.00093J	0.0092	0.0061
	12/06	0.0295	0.0058	< 0.002	0.0075
Dup	12/06	0.0207	0.004	< 0.002	0.0054
	3/07	0.0044	0.0006	< 0.002	0.0032
	6/07	< 0.001	< 0.001	< 0.001	0.0025
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	0.0041J

Table 6 – Summary of Organic Groundwater Data

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Units are mg/l, FPH: No sample because FPH is present: MW-5 was not installed J modifiers are not included in this table Notes:

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-6	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
MW-7	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	0.0027
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006
MW-8	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
	6/08	< 0.002	< 0.002	< 0.002	< 0.006

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Table 6 – Summary of Organic Groundwater Data (continued)

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Notes:

Units are mg/l, J modifiers are not included in this table

FIGURES

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GROUNDWATER SAMPLING NOTES

AND LABORATORY ANALYTICAL REPORT

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-1
S	ITE NAME:	J42	(Pipeline L	eak)	_	DATE:	6/27/2008
PR	OJECT NO.				-	SAMPLER:	M. Stewart/A. Taylor
PURGIN	G METHOD	:	I Hand Bai	iled 🛛 Pu	mp If Pu	mp, Type:	
SAMPLIN		D:	🗹 Disposab	le Báiler] Direct	from Discha	arge Hose 📋 Other:
DESCRIE	BE EQUIPM	ENT DECO	ΝΤΑΜΙΝΑΤΙ	ON METH	OD BEFC	RE SAMPI	LING THE WELL:
⊡ Glove	es 🗌 Alcono	ox 🗌 Distill	ed Water Ri	nse 🗆 C	Other:		·
TOTAL D DEPTH T HEIGHT	EPTH OF V O WATER: OF WATER	VELL: COLUMN:	43.05 0.00 43.05	Feet Feet Feet		84.3	Minimum Gallons to
WELL DI	AMETER:	4.0	Inch	•			purge 3 well volumes
TIME		TEMP.	COND.	pН		Turb	PHYSICAL APPEARANCE AND
		F	-				
	0.0	-				-	
							· · · · · · · · · · · · · · · · · · ·
	<u> </u>						
0:00	:Total Time	e (hr:min)	0	:Total Vol	l(gal)	#DIV/0!	:Flow Rate (gal/min)
SAMF	PLE NO.:	Collected S	ample No.:			-	f
ANA	LYSES:						
COM	MENTS:	Not sample	d 0.04 feet o	of product of	on water t	able.	······

C:\DCP-J42\Purge & Sample

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	CLIENT:	DC	P Midstre	am	WELL ID: MW-2				
S	TE NAME:	J42	(Pipeline L	eak)	_	DATE:	6/27/2008		
PR	OJECT NO.				-	SAMPLER:	M. Stewart/A. Taylor		
PURGIN	G METHOD):	☑ Hand Ba	iled 🗌 Pu	mp If Pu	mp, Type:	· · · · · · · · · · · · · · · · · · ·		
SAMPLIN	NG METHO	D:	Disposat	le Bailer] Direct	from Discha	arge Hose 🛛 Other:		
DESCRI	BE EQUIPM	IENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPI	LING THE WELL:		
Glove	es 🗆 Alcono	ox 🗋 Distil	led Water Ri	nse 🗆 C	Other:	·			
TOTAL D DEPTH T HEIGHT WELL DI	DEPTH OF N O WATER: OF WATER AMETER:	WELL: R COLUMN: 2.0	43.30 0.00 43.30 Inch	Feet Feet Feet		21.2	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME	TEMP.	COND. mS/cm	рН	DO ma\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
		· · · · ·							
ļ	<u> </u>								
0:00	_:Total Tim	e (hr:min)	0	:Total Vol	(gal)	#DIV/0!	:Flow Rate (gal/min)		
SAMF	PLE NO.:	Collected S	Sample No.:				<u></u>		
ANA	LYSES:	0					. <u></u>		
COM	MENTS:	Not sample	ed 0.01 feet o	of product of	on water t	able.			

	CLIENT:	DC	P Midstre	am	WELL ID: MW-3				
SI	ITE NAME:	J42	(Pipeline Le	eak)	_	DATE:	6/27/2008		
PRC	JECT NO.				_ 5	SAMPLER:	M. Stewart/A. Taylor		
PURGING SAMPLIN DESCRIB ☑ Glove	PURGING METHOD: Image: Ima								
TOTAL DEPTH OF WELL:43.00FeetDEPTH TO WATER:26.30FeetHEIGHT OF WATER COLUMN:16.70FeetWELL DIAMETER:2.0InchTIMEVOLUMETEMP.COND.DHCOND.DH				Feet Feet Feet		8.2	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME PURGED	TEMP. ° F	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
14:07	0.0	-	-				Begin Hand Bailing		
14:12	2.7	7.1	1.89						
14:17	5.4	7.0	7.35			-	Instrument malfunction		
14:22	8.1	6.4	8.34		-		Instrument malfunction		
ļ									
			-				·		
						•	· · · · · · · · · · · · · · · · · · ·		
0:15	:Total Time	e (hr:min)	8.1	:Total Vol	(gal)	0.54	:Flow Rate (gal/min)		
SAMP	LE NO.:	Collected S	ample No.:	MW-3					
ANAL	YSES:	BTEX							
COMN	ENTS:		<u></u>			·			

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-4
. S	ITE NAME:	J42	(Pipeline L	eak)	_	DATE:	6/27/2008
PRO	DJECT NO.				-	SAMPLER:	M. Stewart/A. Taylor
PURGINO	3 METHOD.		☑ Hand Bai	led 🗆 Pu	imp (f Pui	mp. Type:	
		۲۰	🗆 Nana Ba	le Bailer í	Direct 1	from Disch	arge Hose
⊡ Glove	S M Alcono		ed water Ri		Juler.		
TOTAL D	EPTH OF W	/ELL:	38.12	Feet			
DEPTH T	O WATER:	00111141	27.11	Feet		5.4	Minimum Online to
	OF WATER	COLUMN: 2.0	11.01	Feet		5.4	_ Minimum Galions to purge 3 well volumes
							(Water Column Height x 0.49)
TIME	VOLUME PURGED	TEMP. ° F	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
13:43	0.0	-	-	-	-		Begin Hand Bailing
13:46	2.0	70.9	4.29	6.81	-		
13:49	4.0	69.1	4.18	6.75	-	-	
13:54	6.0	68.1	4.18	6.74			
				· · · · ·			
							<u>.</u>
0:11	:Total Time	e (hr:min)	6	:Total Vol	(gal)	0.54	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	MW-4			<u></u>
ANAL	YSES:	BTEX					
COM	MENTS:						

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SITE NAME: J42 (Pipeline Leak) DATE: 6/27/2008 PROJECT NO.		CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-6
PROJECT NO. SAMPLER: M. Stewart/A. Taylor PURGING METHOD: Image: Stewart/A. Taylor PURGING METHOD: Image: Stewart/A. Taylor SAMPLING METHOD: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor SAMPLING METHOD: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor SAMPLING METHOD: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor SAMPLING METHOD: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor SAMPLEN: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor SAMPLEN: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor Collected Sample No: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor PURGEN Other: Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor TOTAL DEPTH OF WELL: 38.32 Feet Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor TIME PURGED Image: Stewart/A. Taylor Image: Stewart/A. Taylor Image: Stewart/A. Taylor <t< td=""><td>S</td><td>ITE NAME:</td><td>J42</td><td>(Pipeline Le</td><td>eak)</td><td>-</td><td>DATE:</td><td>6/27/2008</td></t<>	S	ITE NAME:	J42	(Pipeline Le	eak)	-	DATE:	6/27/2008
PURGING METHOD:	PRO	DJECT NO.					SAMPLER:	M. Stewart/A. Taylor
SAMPLING METHOD: Disposable Bailer Direct from Discharge Hose Other: SAMPLING METHOD: Disposable Bailer Direct from Discharge Hose Other: DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL: Distilled Water Rinse Other: TOTAL DEPTH OF WELL: 38.32 Feet DEFTH TO WATER: 27.76 Feet DEPTH TO WATER: 20.0 Inch purge 3 well volumes WelL, DIAMETER: 20.0 Inch purge 3 well volumes WelL, DIAMETER: 20.0 Inch purge 3 well volumes WelL, DIAMETER: 20.0 Inch PHYSICAL APPERARNCE AND TIME VOLUME TEMP. COND. pH mgL Turb PHYSICAL APPERARNCE AND 14:16 0.0 - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - - 14:23 4.0 68.7 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 1.0 1.0 1.0				🖂 Hand Bai		imp If Dui	mp Type:	
SAMPLING METHOD: Disposable baller Disposable bal			¬.			⊐ Direct f	inp, Type. From Disch	
Bescribe Equipment Decontration for the Hob Beroke Same Ling Intermet. Gloves Alconox Distilled Water Rinse Other: TOTAL DEPTH OF WELL: 38.32 Feet 27.76 Feet DEPTH TO WATER: 2.0 Inch Durge 3 well volumes (Water Column Height x 0.49) TIME VOLUME TEMP. COND. pH DO PURGED °F mS/cm pH DO REMARKS 14:16 0.0 - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - 14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 1.0 1.0 1.0 1.0 1.0 1.0 14:27 6.0 68.0 1.66 7.27 - - 14:27 1.0 1.0 1.0 1.0 1.0 1.0 14:27 1.0 1.0 1.0<			ט. באד מהמס	➡ DISPUSAD				
B Gloves II Alconox II Distilled water Rinse Distilled water Rinse Distilled water Rinse TOTAL DEPTH OF WELL: 38.32 Feet 27.76 Feet DEPTH TO WATER COLUMN: 10.56 Feet 5.2 Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49) TIME VOLUME TEMP: COND. pH DO PHYSICAL APPEARANCE AND REMARKS 14:16 0.0 - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - 14:23 4.0 68.7 1.68 7.33 - 14:27 6.0 68.0 1.66 7.27 - 14:27 6.0 68.0 1.66 7.27 - 14:27 1.0 1.0 1.0 1.0 1.0 11:27 1.0 6.0 1.66 7.27 - - 11:27 1.0 6 1.0 1.0 1.0 1.0 11:27 1.0 1.0 1.0 1.0 1.0 1.0 1.0							RE SAMIF	LING THE WELL.
TOTAL DEPTH OF WELL: 38.32 Feet DEPTH TO WATER: 27.76 Feet 5.2 Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49) WELL DIAMETER: 2.0 Inch DO Turb PHYSICAL APPEARANCE AND REMARKS 14:16 0.0 - - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - - 14:23 4.0 68.7 1.68 7.33 - - 14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 12.1 13.1 14.1 14.1 14.1 14.1 14.1 14:27 6.0 68.0 1.66 7.27 - - - <	⊡ Glove	s 🗆 Alconc	ox ∟ Distili	ed water Ri	nse 🗆 (Jther:		
TIME VOLUME TEMP. PURGED COND. m S/cm pH DO mg/L Turb PHYSICAL APPEARANCE AND REMARKS 14:16 0.0 - - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - - 14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -	TOTAL D DEPTH T HEIGHT (WELL DIA	EPTH OF V O WATER: OF WATER AMETER:	VELL: COLUMN: 2.0	38.32 27.76 10.56 Inch	Feet Feet Feet		5.2	_Minimum Gallons to purge 3 well volumes
TIME VOLOME Fem. COND. pH mg/L Turb PHTSICAL APPEARANCE AND REMARKS 14:16 0.0 - - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - - 14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - </td <td></td> <td></td> <td></td> <td>COND</td> <td></td> <td></td> <td></td> <td>(Water Column Height x 0.49)</td>				COND				(Water Column Height x 0.49)
14:16 0.0 - - - Begin Hand Bailing 14:19 2.0 69.3 1.73 7.38 - - 14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 1.0 1.0 1.0 1.0 1.0 1.0 14:27 1.0 1.0 1.0 1.0 1.0 1.0 1.0 14:27 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	TIME	PURGED	° F	<i>m</i> S/cm	pН	mg\L	Turb	REMARKS
14:19 2.0 69.3 1.73 7.38 - - 14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 1.0 1.0 1.0 1.0 1.0 1.0 14:27 1.0 1.0 1.0 1.0 1.0 1.0 14:27 1.0 1.0 1.0 1.0 1.0 1.0 14:27 1.	14:16	0.0	-	-	-	-	-	Begin Hand Bailing
14:23 4.0 68.7 1.68 7.33 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 68.0 1.66 7.27 - - 14:27 6.0 6 1 1 1 1 14:27 6 1 1 1 1 1 14:27 6 1 1 1 1 1 14:27 6 1 1 1 1 1 1 14:27 6 1	<u>14:19</u>	2.0	69.3	1.73	7.38	-	-	
14:27 6.0 68.0 1.66 7.27 - 14:27 6.0 68.0 1.66 7.27 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14:23	4.0	68.7	1.68	7.33		-	
Image: Second state of the se	14:27	6.0	68.0	1.66	7.27	-		· · · · · · · · · · · · · · · · · · ·
Image: Solution of the second seco								
Image: Second state of the se								
O:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX								
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX								
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX								
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX								
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX								
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX								
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX						·		
0:11 :Total Time (hr:min) 6 :Total Vol (gal) 0.54 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX COMMENTS: Collected MS/MSD cample								·
SAMPLE NO.: Collected Sample No.: MW-6 ANALYSES: BTEX COMMENTS: Collected MS/MSD comple	0:11	:Total Time	e (hr:min)	6	:Total Vol	(gal)	0.54	:Flow Rate (gal/min)
ANALYSES: BTEX	SAMP	LE NO.:	Collected S	ample No.:	MW-6			
COMMENTS: Collected MS/MSD comple	ANAL	YSES:	BTEX					
	COM	MENTS:	Collected N	IS/MSD sam	nple			

	CLIENT:	DC	P Midstre	am	_	WELL ID: MW-7			
S	ITE NAME:	J4 <u>2</u>	(Pipeline Le	eak)	_	DATE:	6/27/2008		
PRO	DJECT NO.				S	SAMPLER:	M. Stewart/A. Taylor		
PURGING	G METHOD):	☑ Hand Bai ☑ Disposab	led □ Pu le Bailer [ımp If Pur ∃ Direct f	np, Type: rom Disch	arge Hose 🔲 Other:		
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:		
☑ Glove	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗆 (Other:				
TOTAL D DEPTH T HEIGHT	EPTH OF W O WATER: OF WATER	VELL: COLUMN:	<u>39.45</u> 29.78 9.67	Feet Feet Feet		4.7	_Minimum Gallons to		
WELL DI	AMETER:	2.0	Inch				purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME PURGED	TEMP. ° F	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
13:52	0.0				-	-	Begin Hand Bailing		
13:56	2.3	69.3	1.45	7.27	-	· -			
14:00	4.6	68.4	1.46	7.20	_				
14:04	6.9	68.0	1.46	7.21					
 						<u></u>			
ļ									
·									
						··			
·	-								
0:12	:Total Time	e (hr:min)	6.9	:Total Vol	(gal)	0.57	:Flow Rate (gal/min)		
SAMP ANAI	LE NO.: YSES:	Collected S BTEX	Sample No.:	MW-7					
COM	MENTS:								

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	CLIENT:	DC	P Midstre	am	_	MW-8	
S	ITE NAME:	J42	(Pipeline Le	eak)	_	DATE:	6/27/2008
PRO	DJECT NO.				- 5	SAMPLER:	M. Stewart/A. Taylor
PURGIN	G METHOD	:	☑ Hand Bai	led 🗆 Pu	ımp If Pur	mp, Type:	
SAMPLIN		D:	Disposab	le Bailer [Direct f	from Disch	arge Hose 🔲 Other:
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
⊡ Glove	es 🗆 Alcond	x 🛛 Distill	ed Water Ri	nse 🗆 (Other:		
TOTAL D DEPTH T HEIGHT WELL DI,	EPTH OF V O WATER: OF WATER AMETER:	VELL: COLUMN: 2.0	38.32 28.54 9.78 Inch	Feet Feet Feet		4.8	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME	TEMP. °F	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
13:23	0.0	-	· -	-	-	-	Began Hand Bailing
13:26	2.3	69.3	2.02	7.25		-	
13:29	4.6	68.5	2.02	7.27		-	
13:33	6.9	67.7	1.97	7.22	-	· _	
 		<u> </u>					
		- <u>-</u>					
<u> </u>					· -		
		· <u> </u>					
							·
0:10	:Total Time	e (hr:min)	6.9	:Total Vol	l(gal)	0.69	I :Flow Rate (gal/min)
SAMP	PLE NO.:	Collected S	Sample No.:	MW-8			
ANAI	LYSES:	BTEX					
COM	MENTS:						



07/08/08

Technical Report for

American Environmental Consulting

DCP Midstream- J42 Pipeline

Accutest Job Number: T22826

Sampling Date: 06/27/08

Report to:

American Environmental Consulting 6885 S. Marshall Suite 3 Littleton, CO 80439 mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 19

and/or state specific certification programs as applicable.



she in Accordance

 Test results contained within this data package meet the requirements
 Image: Second secon

Paul K Canevard

Paul Canevaro Laboratory Director

Client Service contact: Agnes Vicknair 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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Sample Summary

American Environmental Consulting

Job No: T22826

DCP Midstream- J42 Pipeline

Sample Number	Collected Date	Time By	Received	Matr Code	ix Type	Client Sample ID
T22826-1	06/27/08	12:00	07/02/08	AQ	Ground Water	MW-3
T22826-2	06/27/08	12:30	07/02/08	AQ	Ground Water	MW-4
T22826-3	06/27/08	11:40	07/02/08	AQ	Ground Water	MW-6
T22826-3D	06/27/08	11:40	07/02/08	AQ	Water Dup/MSD	MW-6 MSD
T22826-3S	06/27/08	11:40	07/02/08	AQ	Water Matrix Spike	MW-6 MS
T22826-4	06/27/08	11:15	07/02/08	AQ	Ground Water	MW-7
T22826-5	06/27/08	10:50	07/02/08	AQ	Ground Water	MW-8
T22826-6	06/27/08	00:00	07/02/08	AQ	Ground Water	DUP
T22826-7	06/27/08	00:00	07/02/08	AQ	Trip Blank Water	TRIP BLANK







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Sample Results

Report of Analysis



			Repo	ort of A	naiysis			Page 1 of 1
Client Sar Lab Samp Matrix: Method: Project:	nple ID: MW-3 ble ID: T2282 AQ - (SW840 DCP M	6-1 Ground Wa 5 8260B Midstream	ater - J42 Pipeline		Date S Date R Percen	ampled: .eceived t Solids		
Run #1 Run #2	File ID F0092358.D	DF 1	Analyzed 07/04/08	By LJ	Prep Da n/a	ate	Prep Batch n/a	Analytical Batch VF2998
Run #1 Run #2	Purge Volume 5.0 ml	:						
Purgeable	Aromatics							
CAS No.	Compound		Result	RL	MDL	Units	Q	

0.0020 0.00046 mg/l ND 71-43-2 Benzene 0.00048 mg/l 0.0020 108-88-3 Toluene ND 0.00045 mg/l 0.0020 100-41-4 Ethylbenzene ND 0.0060 0.0014 mg/l 1330-20-7 Xylene (total) ND Run# 2 Limits CAS No. Surrogate Recoveries Run#1 1868-53-7 Dibromofluoromethane 102% 73-126% 95% 17060-07-0 1,2-Dichloroethane-D4 61-136% 99% 80-125% 2037-26-5 Toluene-D8 65-147% 460-00-4 4-Bromofluorobenzene 106%

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





Report of Analysis

File IDDFAnalyzedByPrep DatePrep BatchAnalyticalRun #1F0092359.D107/04/08LJn/an/aVF2998Run #2.	t Sample ID: M Sample ID: T2 ix: A(od: SV ct: D(ent San b Samp atrix: othod: oject:	ID: MW-4 D: T22826-2 AQ - Ground SW846 8260B DCP Midstrea	Water 3 am- J42 Pipeline		Date Sampled: 06/27/08 Date Received: 07/02/08 Percent Solids: n/a				
	File ID 1 F0092359. 2	n #1 n #2	le ID DF 0092359.D 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Bate VF2998		
Purge Volume Run #1 5.0 ml Run #2	Purge Volu 1 5.0 ml 2	n #1 n #2	arge Volume 0 ml							

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00046	mg/l	
108-88-3	Toluene	ND	0.0020	0.00048	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00045	mg/l	
1330-20-7	Xylene (total)	0.0041	0.0060	0.0014	mg/l	J
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s	
1868-53-7	Dibromofluoromethane	103%		73-12	6%	
17060-07-0	1,2-Dichloroethane-D4	93%)	61-13	6%	
2037-26-5	Toluene-D8	98%	1	80-12	5%	
460-00-4	4-Bromofluorobenzene	114%	a.	65-14	7%	

MDL - Method Detection Limit ND = Not detected 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

460-00-4

·			Керо	ort of A	marysis		Page 1 of 1
Client Sar Lab Samp Matrix: Method: Project:	nple ID: MW- ble ID: T228 AQ - SW8 DCP	6 26-3 Ground W 46 8260B Midstream	ater - J42 Pipeline		Date Samj Date Rece Percent So	pled: 06/27/08 ived: 07/02/08 blids: n/a	
Run #1 Run #2	File ID F0092360.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998
Run #1 Run #2	Purge Volum 5.0 ml	ie					
Purgeable	Aromatics						
CAS No.	Compound		Result	RL	MDL U	nits Q	

CAS No. Compound Result RL MDL Units 71-43-2 Benzene ND 0.0020 0.00046 mg/l 108-88-3 ND 0.0020 0.00048 mg/l Toluene 100-41-4 Ethylbenzene ND 0.0020 0.00045 mg/l 1330-20-7 Xylene (total) ND 0.0060 0.0014 mg/l CAS No. Run#1 Run# 2 Limits Surrogate Recoveries 1868-53-7 103% 73-126% Dibromofluoromethane 17060-07-0 1,2-Dichloroethane-D4 94% 61-136% 2037-26-5 **Toluene-D8** 98% 80-125%

118%

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

4-Bromofluorobenzene

J = Indicates an estimated value

65-147%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Report of Analysis

			Repo	rt oi A	Inalysis		Page 1 of 1
Client Sar Lab Samp Matrix: Method: Project:	nple ID: MW-7 ble ID: T2282 AQ - (SW840 DCP M	6-4 Ground Wa 5 8260B Aidstream	ater - J42 Pipeline		Date Sampled Date Received Percent Solid	1: 06/27/08 1: 07/02/08 s: n/a	
Run #1 Run #2	File ID F0092361.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998
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 0.0020 0.0060	0.00046 mg/l 0.00048 mg/l 0.00045 mg/l 0.0014 mg/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	103% 94% 98% 122%	e verte la companya de la companya d	73-126% 61-136% 80-125% 65-147%

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

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N = Indicates presumptive evidence of a compound



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108-88-3

100-41-4

1330-20-7

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Toluene

Ethylbenzene

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

			Repo	ort of An	alysis		Page 1 of 1
Client Sam Lab Samp Matrix: Method: Project:	nple ID: MW-8 ole ID: T2282 AQ - SW84 DCP I	8 Ground Wa 6 8260B Midstream	ater - J42 Pipeline		Date Samj Date Rece Percent So	oled: 06/27/08 ived: 07/02/08 olids: n/a	
Run #1 Run #2	File ID F0092362.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998
Run #1 Run #2	Purge Volume 5.0 ml	;					
Purgeable	Aromatics						
CAS No.	Compound		Result	RL	MDL U	nits Q	
71-43-2	Benzene		ND	0.0020	0.00046 m	g/l	

0.0020

0.0060

Run# 2

ND

ND

ND

Run# 1

104%

94%

98%

127%

0.0020 0.00048 mg/l

0.00045 mg/l 0.0014 mg/l

Limits

73-126%

61-136%

80-125%

65-147%

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



			Repo	rt of A	nalysis		Page 1 of 1
Client Sar Lab Samp Matrix: Method: Project:	nple ID: DU ble ID: T22 AQ SW3 DC	2 826-6 - Ground W. 346 8260B ? Midstream	ater - J42 Pipeline		Date Sample Date Receive Percent Solie	ed: 06/27/08 ed: 07/02/08 ds: n/a	
Run #1 Run #2	File ID F0092363.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998
Run #1 Run #2	Purge Volut 5.0 ml	ne					
Purgeable	Aromatics						
CAS No.	Compound		Result	RL	MDL Unit	s Q	

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00046	mg/l	
108-88-3	Toluene	ND	0.0020	0.00048	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00045	mg/l	
1330-20-7	Xylene (total)	0.0072	0.0060	0.0014	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
1868-53-7	Dibromofluoromethane	102%	*	73-12	26%	
17060-07-0	1,2-Dichloroethane-D4	90%	3	61-13	36%	
2037-26-5	Toluene-D8	100%		80-12	25%	
460-00-4	4-Bromofluorobenzene	123%		65-14	17%	

MDL - Method Detection Limit ND = Not detectedRL = 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					
Client San Lab Samj Matrix: Method: Project:	mple ID: TRI ple ID: T223 AQ SW8 DCF	P BLANK 326-7 Trip Blank 46 8260B Midstream	: Water - J42 Pipeline		Date Sample Date Receive Percent Solie	ed: 06/27/08 ed: 07/02/08 ds: n/a	
Run #1 Run #2	File ID F0092347.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998
Run #1 Run #2	Purge Volun 5.0 ml	ne					
Purgeable	e Aromatics						

CAS NO.	Compound	Result	KL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00046	mg/l	
108-88-3	Toluene	ND	0.0020	0.00048	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00045	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0014	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	5	
1868-53-7	Dibromofluoromethane	103%	7	73-126	6%	
17060-07-0	1,2-Dichloroethane-D4	102%		61-136	6%	
2037-26-5	Toluene-D8	100%	1	80-125	5%	
460-00-4	4-Bromofluorobenzene	121%		65-147	7%	

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





Section 3

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Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



•			Fre 22: 73:	sh Ponds 35 Route 2-329-020	Corpor 130, D 0 FA	ate Vil ayton, 1 X: 732	lage, NJ (2-329	Buildi 8810 -3499/	ng B /3480		IT.		Accutest Accutest	Job #: Quote #:	T2	2824	>		
Client Information	n	· · · · ·	Facil	ty Inform	nation			<u></u>			Analy	rtical Info	rmation		<u> </u>	1		1	
DCP Midstream		Arr	ierican Envi	ronment	al Cons	ulting	<u>, LP</u>		4									1	
ame 370 Seventeenth Street, S	uite 2 <u>500</u>	Project Nam	¢ 											}				260B	
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T22826: Chain of Custody Page 1 of 3



08 #:		T2285	56		DATE/TIME	RECEIVEL	712	/2006	10:04
CLIENT:		DCP MIDS1	TREAM		INITIALS			E	
COOLER#	SAMPLE ID	EIELD ID	DATE	MATRIX	VOL	BOTILE #	LOCATION	PRESERV	Ha
-	-	MW-3	27-Jun-08	GW	40mL	e	VREF	1.2.3.4.5.6	U, <2, >12, 🔞
-	2	MW-4	27-Jun-08	GW	40mL	3	VREF	1, @ 3, 4, 5, 6	U, <2, >12, 86
-	3	MW-6	27-Jun-08	GW	40mL	თ	VREF	1, 2, 3, 4, 5, 6	U, <2, >12, 🕅
~	4	7-WM	27-Jun-08	ВW	40mL	e	VREF	1, 203, 4, 5, 6	U, <2. >12,7815
-	5	8-WW	27-Jun-08	GW	40mL	e	VREF	1, (2) 3, 4, 5, 6	U, <2, >12, MG
-	g	DUP	27-Jun-08	ВW	40mL	ę	VREF	1, 23, 4, 5, 6	u <2, >12, (19
۰. ۲۰۰	. 7	Trip	AN	ТB	40mL	2	VREF	1,62,3,4,5,6	U, <2, >12, NA
								1, 2, 3, 4, 5, 6	U, <2, >12, NA
								1, 2, 3, 4, 5, 6	U, <2, >12, NA
								1, 2, 3, 4, 5, 6	U. <20512, NA
	/							1, 2, 3, 4, 5, 6	U, <2, >12, NA
								1, 2, 3, 4, 5, 6	U, <2, >12, NA
						25		1, 2, 3, 4, 5, 6	U, <2, >12, NA
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T22826: Chain of Custody Page 2 of 3



Rev 8/13/01 ewp

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NOI	# of Coolers Received: /	#5: #6:	Greyhound Delivery Other	TRIP BLANK INFORMATION	Trip Blank on COC but not received	Trip Blank received but not on COC	E Trip Blank not intact	(s) Received Water Trip Blank	ells) Received Sou TB	alysis Number of Encores?	Number of 5035 kits?	ed Number of lab-filtered metals?		VERIFIED BY:	• • • • • • • • • • • • • • • • •	Date:	Via: Phone Email			
 SAMPLE VERIFICAT	Le Client: JUP Nastrea	#3: #4:	UPS Accutest Counter 8 (58-9996 - 308	SAMPLE INFORMATION	Sample containers rcvd broken	VOC vials have headspace	Sample labels missing or fliegible	ID on COC does not match label(Bottles revel but no analysis on C	Bottles missing for requested and	Insufficient volume for analysis	Sample rovd improperly preserve		l'vantmel	CORRECTIVE ACTI					
	Accutest Job Number: 10052 Date/Time Received: 7/2/05	Cooler Temps: #1: 21 #2:	Method of Delivery: FEDEX	COOLER INFORMATION	Custody seal missing or not intact	Chain of Custody not received	Temperature criteria not met	Wet ice received in cooler	CHAIN OF CUSTODY	Sample D/T unclear or missing	Analyses unclear or missing	COC not properly executed		TECHNICIAN SIGNATURE/DATE:	• • • • • • • •	Client Representative Notified:	By Accutest Representative:	Client Instructions:		i:\mwalker\torm\samplemanagement

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T22826: Chain of Custody Page 3 of 3





Section 4

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

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Method B Job Number: Account: Project:	lank Sumr T22826 AECCOLI A DCP Midstre	Page 1 of 1					
Sample VF2998-MB	File ID F0092345.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998
The QC repor	ted here applie	es to the	e following sam	ples:		Method: SW	J /846 8260B

T22826-1, T22826-2, T22826-3, T22826-4, T22826-5, T22826-6, T22826-7

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)	ND ND ND ND	2.0 2.0 2.0 6.0	0.46 0.45 0.48 1.4	ug/l ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries		Limi	ts		
1000 50 7		1000/	. 70 10	00/		

1868-53-7	Dibromofluoromethane	102%	73-126%
17060-07-0	1,2-Dichloroethane-D4	101%	61-136%
2037-26-5	Toluene-D8	101%	80-125%
460-00-4	4-Bromofluorobenzene	119%	65-147%



4.1

Blank Spike Summary

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Blank Spil Job Number: Account: Project:	ke Summa T22826 AECCOLI A DCP Midstre	t ry Americar eam- J42	n Environmental 2 Pipeline	·	Page 1 of 1			
Sample VF2998-BS	File ID F0092343.D	DF 1	Analyzed 07/04/08	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2998	4.2 4.2
The QC repor	ted here appli	es to the	e following sam	ples:		Method: SW	/846 8260B	J

T22826-1, T22826-2, T22826-3, T22826-4, T22826-5, T22826-6, T22826-7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP % Limits
71-43-2	Benzene	25	27.9	112 41-145
100-41-4	Ethylbenzene	25	25.9	104 49-135
108-88-3	Toluene	25	26.4	106 66-128
1330-20-7	Xylene (total)	75	77.9	104 67-122
CAS No.	Surrogate Recoveries	BSP	Li	mits

0110 110.	Surregule receiver to	201	
1868-53-7	Dibromofluoromethane	104%	73-126%
17060-07-0	1,2-Dichloroethane-D4	102%	61-136%
2037-26-5	Toluene-D8	98%	80-125%
460-00-4	4-Bromofluorobenzene	104%	65-147%



Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	T22826	-

Project:	DCP Midstream- J42 Pipeline
Account:	AECCOLI American Environmental Consulting

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T22826-3MS	F0092364.D	1	07/04/08	LJ	n/a	n/a	VF2998
T22826-3MSD	F0092365.D	1	07/04/08	LJ	n/a	n/a	VF2998
T22826-3	F0092360.D	1	07/04/08	LJ	n/a	n/a	VF2998

The QC reported here applies to the following samples:

Method: SW846 8260B

T22826-1, T22826-2, T22826-3, T22826-4, T22826-5, T22826-6, T22826-7

CAS No.	Compound	T22826-3 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	27.4	110	28.4	114	4	60-131/12
100-41-4	Ethylbenzene	ND	25	24.6	98	25.4	102	. 3	58-127/13
108-88-3	Toluene	ND	25	25.1	100	26.0	104	. 4	67-123/11
1330-20-7	Xylene (total)	ND	75	72.8	97	76.6	102	5	62-125/14
CAS No.	Surrogate Recoveries	MS	MSD	T22	826-3	Limits		•	
1868-53-7	Dibromofluoromethane	105%	101%	103	%	73-126%)		
17060-07-0	1,2-Dichloroethane-D4	94%	88%	94%)	61-136%)		
2037-26-5	Toluene-D8	97%	97%	98%	,)	80-125%)		
460-00-4	4-Bromofluorobenzene	107%	108%	118	%	65-147%)		







KECEIVED

DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605-2226 FAX

2008 FIRY 23 AM 10 16

May 21, 2008

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

RE: 1st Quarter 2008 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release (1RP-1728) Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Price:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 1st Quarter 2008 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East).

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me <u>swweathers@dcpmidstream.com</u>.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Sr. Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office (Copy on CD) Environmental Files

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

April 30,2008

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202



Re: Summary of the First Quarter 2008 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico (1RP-1728) Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the first quarter 2008 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP. The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed because of drilling refusal.

GROUNDWATER SAMPLING

Groundwater sampling was completed on March 20, 2008. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2.

No FPH was measured in any well during this sampling event for the second consecutive quarter. The historic FPH thickness values are summarized in Table 3.

All of the wells were purged and sampled using the standard protocols for this site. Purging of all wells except MW-2 was completed using dedicated bailers. MW-2 was purged with a submersible pump. Purging continued until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity stabilized. The well purging forms are attached. The affected purge water was disposed at the DCP Linam Ranch facility. Mr. Stephen Weathers April 30, 2008 Page 2

Unfiltered samples were collected upon stabilization using the dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to ACCUTEST Laboratories using standard chain-of-custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX).

The laboratory analyses for the sampling episode are summarized in Table 4. The laboratory report is attached. Table 5 provides the quality assurance/quality control (QA/QC) information. The QA/QC evaluation includes:

- The sample container temperature was 2.4 degrees centigrade when received at the lab.
- All of the individual surrogate spikes were within their control limits.
- The relative percentage difference (RPD) values for the MW-1 duplicates exceeded 10 percent.
- The matrix spike and matrix spike duplicate results from MW-8 were within the control limits for all four constituents.

The above information indicates that the data is suitable as monitoring data.

RESULTS AND INTERPRETATIONS

The results and interpretations presented below are based upon all of the data collected to date.

Groundwater Flow

Figure 3 includes hydrographs for the corrected water-table elevations for all site wells. The water table exhibited substantial increases in all wells.

The resulting March 2008 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table exhibits a gradient to the southeast that is consistent with past monitoring events.

Groundwater Chemistry

The March 2008 data is summarized in Table 4. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of the table. Any constituents that exceed these standards are bolded. Examination of Table 4 shows that benzene in MW-1 and MW-2 were the only constituents that exceed the standards.

The data for all of the organic constituents are summarized in Table 6. Examination of Table 6 indicates the following:

Mr. Stephen Weathers April 30, 2008 Page 3

- The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards.
- The benzene concentration in MW-1 decreased back to its historic range between the fourth quarter 2007 and first quarter 2008 sampling events.
- The benzene concentration in MW-2 increased substantially between the two sampling events to its highest recorded concentration.
- The BTEX constituents in MW-3 were not detected at 0.002 mg/l.
- Benzene in MW-4 remained below the 0.002 mg/l method reporting limit.
- The BTEX constituents have never been detected in down-gradient wells MW-6, MW-7 and MW-8.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that:

- 1. Groundwater flow is constant toward the southeast with the exception of an small area surrounding MW-2;
- 2. The presence of dissolved phase BTEX constituents is limited to the original release area as defined by MW-1 and MW-2;
- 3. The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is either stable or contracting;
- 4. The conductivity values remain the highest in MW-3. This well is minimally impacted at best by the DCP release so the probable source of the salts lies upgradient.

AEC recommends continued quarterly groundwater monitoring to verify continuance of the trends discussed above until the FPH has been absent for 1 year. AEC also recommends the collection of samples for chloride and total dissolved solids evaluation during the next quarter.

The next groundwater-monitoring event is scheduled for the second quarter of 2008. Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Mechael H. Stewart

Michael H. Stewart, P.E., C.P.G. Principal Engineer

MHS/tbm attachments

TABLES

Name	Date	Stickup	Casing	Total	Screen	Sand
	Installed		Diameter	Depth	Interval	Interval
			(inches)	(btoc)	(ground)	
MW-1	2/06	3.17	2	43.05	19-39	17-39
MW-2	2/06	3.08	4	43.30	19-39	17-39
MW-3	2/06	3.21	2	43.00	19-39	17-39
MW-4	9/06	3.12	2	38.12	20-35	18-35
MW-5		Not in	stalled beca	use of dril	ling refusal	
MW-6	9/06	3.32	2 ·	38.32	20-35	18-35
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	2	38.32	20-35	18-35

Table 1 – Su	mmary of M	onitoring	Well Co	ompletions	at the .	I-4-2 Site
	2			1		

All units are feet except as noted btoc: Below top of casing

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	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07	9/25/07	11/30/07
		4					
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86	3712.42
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34	3712.91
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50	3712.09
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98	3713.48
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56	3711.92
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87	3710.33
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06	3708.33

Table 2 - Summary of Water Table Elevations for the J-4-2 Site

	3/20/08
MW-1	3713.48
MW-2	3713.40
MW-3	3713.30
MW-4	3713.70
MW-6	3712.53
MW-7	3711.38
MW-8	3709.17

Units are feet Blank cells: wells not installed

Date	MW-1	MW-2			
02/15/06	0.00	0.57			
09/25/06	0.00	0.15			
12/21/06	0.09	0.13			
03/14/07	0.07	0.10			
06/26/07	0.09	0.00			
9/25/07	0.09	0.03			
11/30/07	0.00	0.00			
3/20/08	0.00	0.00			
Units and foot					

Table 3 - Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

Units are feet

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Well	Benzene	Toluene	Ethylbenzene	Total Xylene
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62
MW-1	0.042	0.0186	0.0177	0.260
DUP	0.031	0.0123	0.0107	0.170
MW-2	0.188	0.0062	0.0262	0.125
MW-3	< 0.002	< 0.002	< 0.002	< 0.006
MW-4	< 0.002	< 0.002	< 0.002	< 0.006
MW-6	< 0.002	< 0.002	< 0.002	< 0.006
MW-7	< 0.002	< 0.002	< 0.002	< 0.006
MW-8	< 0.002	< 0.002	< 0.002	< 0.006
TRIP BLANK	< 0.002	< 0.002	< 0.002	< 0.006

Table 4 - Summary of March 2008 Groundwater Sampling Results

Notes: Units are mg/l, MW-5 was not installed because of drilling refusal
Table 5 - Quality Assurance Evaluation for the March 2008 Data

MW-1 Duplicate Samples

,	Benzene	Toluene	Ethylbenzene	Total Xylenes	
RPD (%)	30%	41%	49%	42%	

MW-8 Matrix Spike and Matrix Spike Duplicate Results

	Benzene	Toluene	Ethylbenzene	Total Xylenes
MS	112	94	95	95
MSD	118	99	103	99

Units are percent recovery

MS: matrix spike

MSD: matrix spike duplicate

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
				2	
MW-1	2/06	0.139	0.326	0.34	0.31
	9/06	0.0418	0.0048	0.0247	0.0605
Dup	9/06	0.0555	0.0068	0.032	0.0782
	12/06	FPH	FPH	FPH	FPH
	3/07	FPH	FPH	FPH	FPH
	6/07	FPH	FPH	FPH	FPH
	9/07	0.0114	0.0029	0.0035	0.0978
	11/07	0.107	0.0243	0.0401	0.39
	3/08	0.042	0.0186	0.0177	0.260
	3/08	0.031	0.0123	0.0107	0.170
MW-2	6/07	0.0262	0.0382	0.0404	0.335
	9/07	0.0045	< 0.001	0.0027	0.0471
	11/07	0.006	0.0033	0.0025	0.0613
Dup	11/07	0.0062	0.003	0.0023	0.0577
	3/08	0.188	0.0062	0.0262	0.125
MW-3	2/06	< 0.001	< 0.001	< 0.001	< 0.002
	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
Dup	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	0.0029	0.0053	0.0015	0.0097
Dup	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	0.0011J	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	<0.002	< 0.002	< 0.006
MW-4	9/06	0.0086	0.00093J	0.0092	0.0061
	12/06	0.0295	0.0058	< 0.002	0.0075
Dup	12/06	0.0207	0.004	< 0.002	0.0054
	3/07	0.0044	0.0006	< 0.002	0.0032
	6/07	< 0.001	< 0.001	< 0.001	0.0025
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006

Table 6 – Summary of Organic Groundwater Data

Notes: Units are mg/l, FPH: No sample because FPH is present: MW-5 was not installed

J modifiers are not included in this table

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-6	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	. 9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006
<u>MW-7</u>	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	0.0027
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
	3/08	< 0.002	< 0.002	< 0.002	<0.006
MW-8	9/06	< 0.002	< 0.002	< 0.002	<0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	<0.001	< 0.001
	9/07	< 0.001	< 0.001	<0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	<0.006
	3/08	< 0.002	< 0.002	< 0.002	< 0.006

Table 6 – Summary of Organic Groundwater Data (continued)

Notes:

Units are mg/l, J modifiers are not included in this table

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GROUNDWATER SAMPLING NOTES

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GROUNDWATER SAMPLING FIELD DATA FORM

CLIENT: DCP Midstream, LLC		LOCATION	: J-42	and Contraction and Contraction of C	
WELL NAME: MW-1				n na sena se	e go i
Sampled By: M. Stewart			Date Purged	l: 3/20/2008	3
Weather During Sampling: Fair			Date Sample	ed: 3/20/2008	3
Well Diameter: 2.0"			Time Sampl	ed: 4:15 pm	
EVACUATION DATA					
Description of Measuring Point:	Top of PVC	. *	Analyses: BTEX 8260	/ DUP	
Total Depth of Well:	43.00 ft.			201	
Depth to Water from Measuring Point:	26.97 ft.				·
Height of Water Column:	16.03 ft.	<i>x</i>			
Single Casing Volume of Water:	2.67 gal/cv				
Volume to Purge Prior to Sampling:	8.00 gal				
Volume Purged Prior to Sampling:	~8.0 gal				
Method of Purging/Equipment: Hand B	ailed / Dedicated	l Bailer	Flow Rate:	n/a	
Method of Sampling/Equipment: Dedica	ted Bailer		Flow Rate:	n/a	
FIELD PARAMETERS		2	3	4	5
рН	6.92	6.99	6.98		
Temperature	20.3	20.2	20.2		
Conductance mS/cm	6.250	6.290	6.300		
Turbidity	J ^{**}				
PID / COD / DO / TOC					
					· · · · ·
NOTES:					

AEC American Environmental Consulting, LLC

GROUNDWATER SAMPLING FIELD DATA FORM

CLIENT: DCP Midstream, LLC		LOCATION	: J-42		in the second se
WELL NAME: MW-2	and a second				- 1 - 4 -
Sampled By: M. Stewart			Date Purged	: 3/20/2008	
Weather During Sampling: Fair			Date Sample	d: 3/20/2008	
Well Diameter: 2.0"			Time Sample	ed: 5:00 pm	
EVACUATION DATA				And Although 1	
Description of Measuring Point:	Top of PVC		Analyses: BTEX 8260		
Total Depth of Well:	43.00 ft.				
Depth to Water from Measuring Point:	27.32 ft.				•
Height of Water Column:	15.68 ft.				
Single Casing Volume of Water:	10.45 gal/cv				
Volume to Purge Prior to Sampling:	8.00 gal				
Volume Purged Prior to Sampling:	32.0 gal				
Method of Purging/Equipment: 12-volt	pump/bailer		Flow Rate:		
Method of Sampling/Equipment: Bailer			Flow Rate:	n/a	
FIELD PARAMETERS		2	3	4	5
pH	6.80	6.82	6.85		
Temperature °C	20.7	20.6			
Conductance mS/cm	5.910	6.170	6.300		
Turbidity					
PID / COD / DO / TOC					
NOTES:		.,			

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GROUNDWATER SAMPLING FIELD DATA FORM

CLIENT: DCP Midstream, LLC		LOCATION	: J-42		
WELL NAME: MW-3	·····································			بر کر اور اور اور اور اور اور اور اور اور او	and the second s
Sampled By: M. Stewart			Date Purged	: 3/20/2008	}
Weather During Sampling: Fair			Date Sample	d: 3/20/2008	3
Well Diameter: 2.0"			Time Sample	ed: 3:50 pm	
EVACUATION DATA		an ta shi An ta shi			
Description of Measuring Point:	Top of PVC		Analyses: BTEX 8260		
Total Depth of Well:	43.00 ft.				
Depth to Water from Measuring Point:	26.09 ft.				
Height of Water Column:	16.91 ft.				
Single Casing Volume of Water:	2.8 gal/cv				
Volume to Purge Prior to Sampling:	8.0 gal				
Method of Purging/Equipment: Hand B	ailed / Dedicated	d Bailer	Flow Rate: 1	n/a	
Method of Sampling/Equipment: Dedica	ited Bailer		Flow Rate: 1	n/a	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume	ated Bailer	2	Flow Rate: 1	n/a 4	5
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH	1 6.79	2 6.80	Flow Rate: 1 3 6.78	n/a 4	5
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C	1 6.79 20.1	2 6.80 20.3	Flow Rate: 1	n/a 	5
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm	1 6.79 20.1 12.3	2 6.80 20.3 14.4	Flow Rate: 1 3 6.78 20.4 14.6	n/a 	
Method of Sampling/Equipment:DedicaFIELD PARAMETERSCasing VolumepHpHTemperature°CConductancemS/cmTurbidityNTU/FT.	1 6.79 20.1 12.3	2 6.80 20.3 14.4 	Flow Rate: 1 3 6.78 20.4 14.6 	n/a 	5
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FTU PID / COD / DO //TOC T	1 6.79 20.1 12.3	2 6.80 20.3 14.4 	Flow Rate: 1	n/a 	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FTU PID / COD / DO //TOC Image: Colored and the second and	1 6.79 20.1 12.3	2 6.80 20.3 14.4 	Flow Rate: 1	n/a 	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/ETU PID / COD / DO //TOC Image: Construction of the second s	1 6.79 20.1 12.3	2 6.80 20.3 14.4 	Flow Rate: 1	n/a 	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FTU PID / COD / DO //TOC Market and	1 6.79 20.1 12.3	2 6.80 20.3 14.4 	Flow Rate: 1	n/a 	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FIL PID / COD / DO //TOC ************************************	1 6.79 20.1 12.3	6.80 20.3 14.4 	Flow Rate: 1	n/a 	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FII PID / COD / DO //TOC	1 6.79 20.1 12.3	6.80 20.3 14.4 	Flow Rate: 1	n/a 	
Method of Sampling/Equipment: Dedica FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FTN PID / COD / DO //TOC	atted Bailer 1 6.79 20.1 12.3	6.80 20.3 14.4 	Flow Rate: 1	n/a 	

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GROUNDWATER SAMPLING FIELD DATA FORM

CLIENT: DCP Wildstream, EEC		LOCATION	: J-42		rient -
WELL NAME: MW-4					
Sampled By: M. Stewart			Date Purged	: 3/20/2008	3
Weather During Sampling: Fair			Date Sample	d: 3/20/2008	3
Well Diameter: 2.0"			Time Sample	ed: 3:50 pm	
EVACUATION DATA		Alter Annual Constant			
Description of Measuring Point:	Top of PVC		Analyses: BTEX 8260		
Total Depth of Well:	38.00 ft.		· · · ·		
Depth to Water from Measuring Point:	26.54 ft.				
Height of Water Column:	11.46 ft.				
Single Casing Volume of Water:	1.91 gal/cv				
Volume to Purge Prior to Sampling:	5.73 gal				
Volume Purged Prior to Sampling:	~6.0 gal				
Method of Purging/Equipment: Hand B	ailed / Dedicate	d Bailer	Flow Rate:	n/a	
Method of Sampling/Equipment: Dedica	ated Bailer		Flow Rate:	n/a	·
FIELD PARAMETERS		2	3		5
FIELD PARAMETERS Casing PH pH	1 6.92	2 6.98	3 7.00		5
FIELD PARAMETERS Casing PH PH Temperature C	1 6.92 20.0	2 6.98 19.0	3 7.00 19.8	4 	
FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance -mS/cm	1 6.92 20.0 3.960	2 6.98 19.0 4.130	3 7.00 19.8 4.190	 	
FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FT	1 6.92 20.0 3.960 J	2 6.98 19.0 4.130 	3 7.00 19.8 4.190 	 	
FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FT PID / COD / DO / TOC	1 6.92 20.0 3.960	2 6.98 19.0 4.130 	3 7.00 19.8 4.190 	 	
FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance mS/cm Turbidity NTU/FT PID / COD / DO / TOC Image: Conductance	1 6.92 20.0 3.960	2 6.98 19.0 4.130 	3 7.00 19.8 4.190 	 	
FIELD PARAMETERS Casing pH pH Temperature °C Conductance mS/cm Turbidity NTU/FT PID / COD / DO / TOC	1 6.92 20.0 3.960	2 6.98 19.0 4.130 	3 7.00 19.8 4.190 		
FIELD PARAMETERS Casing PH PH Temperature °C Conductance mS/cm Turbidity NTU/FT PID / COD / DO / TOC	I 6.92 20.0 3.960 J	2 6.98 19.0 4.130 			
FIELD PARAMETERS Casing Volume pH pH Temperature °C Conductance -mS/cm Turbidity NTU/FT PID / COD / DO / TOC - NOTES: -	1 6.92 20.0 3.960	2 6.98 19.0 4.130 	3 7.00 19.8 4.190 		

Forms/monitor/gwsampling2

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GROUNDWATER SAMPLING FIELD DATA FORM

CLIENT: DCP Midstrean	ı, LLC		LOCATION	: J-42		
WELL NAME: MW-6						
Sampled By: M. Stewart				Date Purged	: 3/20/2008	
Weather During Sampling: Fa	uir			Date Sample	d: 3/20/2008	
Well Diameter: 2.0"			11124	Time Sample	ed: 2:55 pm	
EVACUATION DATA		- Toler				
Description of Measuring Poin	t: 1	Top of PVC		Analyses: BTEX 8260 /	MS-MSD	
Total Depth of Well:	3	8.00 ft.				
Depth to Water from Measuri	ng Point: 2	27.43 ft.				
Height of Water Column:]	10.57 ft.				
Single Casing Volume of Wate	r: 1	1.76 gal/cv				
Volume to Purge Prior to Sam	pling:	5.28 gal				
Volume Purged Prior to Samp	ling:	-6.0 gal				
Method of Purging/Equipmen	t: Hand Bai	led / Dedicated	Bailer	Flow Rate:	n/a	
Method of Sampling/Equipme	nt: Dedicate	d Bailer		Flow Rate:	n/a	
FIELD PARAMETERS	Casing Volume	1 .	2	3	4	5
рН	pH	7.19	7.21	7.19		
Temperature	°C	19.7	19.7	19.7		
Conductance	mS/cm	2.140	2.010	1.950		
Turbidity	NTU/FTU					
PID / COD / DO / TOC						
NOTES:						
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GROUNDWATER SAMPLING FIELD DATA FORM

WELL NAME: MW-7					
Sampled By: M. Stewart			Date Purged	: 3/20/2008	
Weather During Sampling: Fair			Date Sample	d: 3/20/2008	
Well Diameter: 2.0"			Time Sample	ed: 2:35 pm	
EVACUATION DATA					63.5° .
Description of Measuring Point:	Top of PVC		Analyses: BTEX 8260		
Total Depth of Well:	40.00 ft.				
Depth to Water from Measuring Poin	t: 29.35 ft.			·	
Height of Water Column:	10.65 ft.				
Single Casing Volume of Water:	1.76 gal/cv			· · · · · · · · · · · · · · · · · · ·	
Volume to Purge Prior to Sampling:	5.32 gal				
Volume Purged Prior to Sampling:	~6.0 gal				
Method of Purging/Equipment: Hand	Bailed / Dedicated	Bailer	Flow Rate: 1	ı/a	
Method of Sampling/Equipment: Dec	licated Bailer		Flow Rate: 1	ı/a	
FIELD PARAMETERS	ng me	2	3	4	5
pH	7.05	7.05	7.08		
Temperature	19.1	19.7	19.7	·	
Conductance mS/c	m 3.960	3.970	3.960		
Turbidity NTU/I		·			
PID / COD / DO / TOC					
and the second					

Forms/monitor/gwsampling2

GROUNDWATER SAMPLING FIELD DATA FORM

CLIENT: DCP Midstream, LLC LOCATION: J-42 14 WELL NAME: MW-8 Sampled By: M. Stewart **Date Purged:** 3/20/2008 **Date Sampled:** 3/20/2008 Weather During Sampling: Fair Well Diameter: 2.0" Time Sampled: 2:15 pm EVACUATION DATA Analyses: Top of PVC **Description of Measuring Point: BTEX 8260** 38.00 ft. **Total Depth of Well:** Depth to Water from Measuring Point: 28.15 ft. Height of Water Column: 9.85 ft. Single Casing Volume of Water: 1.64 gal/cv Volume to Purge Prior to Sampling: 4.92 gal Volume Purged Prior to Sampling: ~5.5 gal Method of Purging/Equipment: Hand Bailed / Dedicated Bailer Flow Rate: n/a Method of Sampling/Equipment: Dedicated Bailer Flow Rate: n/a 4 Casing-1 S. 3 5 FIELD PARAMETERS 2 Volume pH 7.09 7.08 7.12 pН ------19.7 19.6 Temperature 20.1 °C -----Conductance 2.370 2.350 2.340 mS/cm ---Turbidity NTU/FTU --------___ ---PID / COD / DO / TOC ----___ Tatomy Parallel NOTES:

Forms/monitor/gwsampling2

e-Hardcopy 2.0 **Automated Report**



04/03/08

Technical Report for

DCP Midstream, LLC

DEFS J-4-2

DCP Midstream J42

Accutest Job Number: T21483

Sampling Date: 03/20/08

Report to:

American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 27



3-2006

Ron Martino Laboratory Manager

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.

Client Service contact: Agnes Vicknair 713-271-4700

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.



Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com



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Sample Summary

DCP Midstream, LLC

Job No: T21483

DEFS J-4-2 Project No: DCP Midstream J42

Sample Number	Collected Date	Time By	Received	Matr Code	іх Туре	Client Sample ID	
T21483-1	03/20/08	16:15 AEC	03/25/08	AQ	Ground Water	MW-1	
T21483-2	03/20/08	00:00 AEC	03/25/08	AQ	Ground Water	MW-2	
T21483-3	03/20/08	15:25 AEC	03/25/08	AQ	Ground Water	MW-3	
T21483-4	03/20/08	15:50 AEC	03/25/08	AQ	Ground Water	MW-4	
T21483-5	03/20/08	14:55 AEC	03/25/08	AQ	Ground Water	MW-6	
T21483-5D	03/20/08	14:55 AEC	03/25/08	AQ	Water Dup/MSD	MW-6 MSD	A
T21483-5S	03/20/08	14:55 AEC	03/25/08	AQ	Water Matrix Spike	MW-6 MS	
T21483-6	03/20/08	14:35 AEC	03/25/08	AQ	Ground Water	MW-7	
T21483-7	03/20/08	14:15 AEC	03/25/08	AQ	Ground Water	MW-8	
T21483-8	03/20/08	00:00 AEC	03/25/08	AQ	Ground Water	DUP	
T21483-9	03/20/08	00:00 AEC	03/25/08	AQ	Trip Blank Water	TRIP BLANK	•





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Sample Results

Report of Analysis



Report of Analysis									
Client Sam Lab Samp Matrix: Method: Project:	nple ID: le ID:	MW-1 T2148 AQ - (SW840 DEFS	3-1 Ground Wate 5 8260B J-4-2	r		Date Sa Date R Percent	ampled: eceived: t Solids:	03/20/08 03/25/08 n/a	
Run #1 Run #2	File ID B01328	318.D	DF 1	Analyzed 03/27/08	By NAZ	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VB1658
Run #1 Run #2	Purge 5.0 ml	Volume							
Purgeable	Aromati	cs							
CAS No.	Comp	ound		Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4 1330-20-7	Benze Toluer Ethyll Xylen	ne ne oenzene e (total)		0.0416 0.0186 0.0177 0.260	0.0020 0.0020 0.0020 0.0060	0.00046 0.00048 0.00045 0.0014	mg/l mg/l mg/l mg/l		
CAS No.	Surro	gate Re	coveries	Run# 1	Run# 2	Limi	ts		

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		73-126%
17060-07-0	1,2-Dichloroethane-D4	: 89% .		61-136%
2037-26-5	Toluene-D8	96%		80 -125%
460-00-4	4-Bromofluorobenzene	98%		65-147%

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



Report of Analysis							Page 1 of 1		
Client San Lab Samp Matrix: Method: Project:	mple ID: MV ple ID: T2 AQ SW DE	V-2 1483-2 9 - Ground Wa 7846 8260B FS J-4-2	ater	Date Sampled: 03/20. Date Received: 03/25. Percent Solids: n/a			,		
Run #1 Run #2	File ID B0132819.I	DF D 1	Analyzed 03/27/08	By NAZ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1658		
Run #1 Run #2	Purge Volu 5.0 ml	me				<u></u>			
Purgeable	e Aromatics						_		

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.188	0.0020	0.00046	mg/l	
108-88-3	Toluene	0.0062	0.0020	0.00048	mg/l	
100-41-4	Ethylbenzene	0.0262	0.0020	0.00045	mg/l	
1330-20-7	Xylene (total)	0.125	0.0060	0.0014	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts	
1868-53-7	Dibromofluoromethane	92%		73-12	26%	
17060-07-0	1,2-Dichloroethane-D4	84%		61-13	36%	
2037-26-5	Toluene-D8	96%		80-12	25%	
460-00-4	4-Bromofluorobenzene	98%		65-14	17%	

MDL - Method Detection Limit

ND = Not detectedRL = Reporting Limit

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E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



	Report of Analysis							
Client Sample ID:MW-3Lab Sample ID:T2148Matrix:AQ - CMethod:SW846Project:DEFS			AW-3 721483-3 AQ - Ground Water 5W846 8260B DEFS J-4-2			Date Sample Date Receive Percent Solic		
Run #1 Run #2	File ID B013282	20.D	DF 1	Analyzed 03/27/08	By NAZ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1658
Run #1 Run #2	Purge V 5.0 ml	olume						

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.0020	0.00046	mg/l	
108-88-3	Toluene	ND ·	0.0020	0.00048	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00045	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0014	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s	
1868-53-7	Dibromofluoromethane	94%		73-12	6%	
17060-07-0	1,2-Dichloroethane-D4	90%		61-13	6%	
2037-26-5	Toluene-D8	94%		80-12	5%	
460-00-4	4-Bromofluorobenzene	100%		65-14	7%	

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



1330-20-7

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

	Page 1 of 1							
Client Sam Lab Sampl Matrix: Method: Project:	apie ID: MW-4 le ID: T2148 AQ - SW84 DEFS	4 33-4 Ground Wat 6 8260B 5 J-4-2	Date Sampled: 03/20/08 Date Received: 03/25/08 0B Percent Solids: n/a					
Run #1 Run #2	File ID B0132830.D	DF 1	Analyzed 03/28/08	By NAZ	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VB1659
Run #1 Run #2	Purge Volum 5.0 ml	e .		-				
Purgeable	Aromatics							
CAS No.	Compound	е.,	Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenzene		ND ND ND	0.0020 0.0020 0.0020	0.00046 0.00048 0.00045	mg/l mg/l mg/l		

0.0060

Run# 2

0.0014 mg/l

Limits

73-126%

61-136%

80-125%

65-147%

ND

Run#1

100%

97%

94%

98%

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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Client San Lab Sam Matrix: Method: Project:	mple ID: M ole ID: T2 A(SV D)	W-6 21483-5 Q - Ground Wa V846 8260B EFS J-4-2	ater		Date Sample Date Receive Percent Solie	d: 03/20/08 ed: 03/25/08 ds: n/a	
Run #1 Run #2	File ID B0132844.	DF D 1	Analyzed 03/28/08	By NAZ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1660
Run #1. Run #2	Purge Vol 5.0 ml	ume					
Purgeable	e Aromatics						

CAS NO.	Compound	Result	RL	MDL Units	Q
71-43-2	Benzene	ND	0.0020	0.00046 mg/l	
108-88-3	Toluene	ND	0.0020	0.00048 mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00045 mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0014 mg/l	
CAS No	Surrogate Recoveries	Run# 1	Run# 2	Limits	
0115 110.	8				
1868-53-7	Dibromofluoromethane	95%	4.4.	73-126%	
1868-53-7 17060-07-0	Dibromofluoromethane 1,2-Dichloroethane-D4	95% 91%	N	73-126% 61-136%	
1868-53-7 17060-07-0 2037-26-5	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	95% 91% 95%	ĸ	73-126% 61-136% 80-125%	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	95% 91% 95% 96%		73-126% 61-136% 80-125% 65-147%	

n

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





	Page 1 of 1							
Client San Lab Samp Matrix: Method: Project:	nple ID: MW-7 ble ID: T21483 AQ - G SW846 DEFS	3-6 Fround Wate 8260B J-4-2	er		Date Sample Date Receive Percent Solic	d: 03/20/08 xd: 03/25/08 ls: n/a		
Run #1 Run #2	File ID B0132831.D	DF 1	Analyzed 03/28/08	By NAZ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1659	
Run #1 Run #2	Purge Volume 5.0 ml							
Purgeable	Aromatics							
CAS No.	Compound		Result	RL	MDL Unit:	s Q		

71-43-2	Benzene	ND	0.0020	0.00046 mg/l
108-88-3	Toluene	ND	0.0020	0.00048 mg/l
100-41-4	Ethylbenzene	ND	0.0020	0.00045 mg/l
1330-20-7	Xylene (total)	ND	0.0060	0.0014 mg/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		73-126%
17060-07-0	1,2-Dichloroethane-D4	100%		61-136%
2037-26-5	Toluene-D8	97%		80-125%
460-00-4	4-Bromofluorobenzene	102%		65-147%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

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E = Indicates value exceeds calibration range

- J = Indicates an estimated value
- B = Indicates analyte found in associated method blank





	Report of Analysis									
Client Sam Lab Sample Matrix: Method: Project:	ple ID: MW-8 e ID: T21483- AQ - GI SW846 DEFS J	7 round Wate 8260B -4-2	r .		Date Sampled: 03/20/08 Date Received: 03/25/08 Percent Solids: n/a			· ·		
Run #1 Run #2	File ID B0132832.D	DF 1	Analyzed 03/28/08	By NAZ	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VB1659		
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	0.00046 0.00048 0.00045 0.0014	mg/l mg/l mg/l mg/l				
CAS No.	Surrogate Reco	overies	Run# 1	Run# 2	Limit	ts				
1868-53-7 17060-07-0	Dibromofluoro 1,2-Dichloroeth	methane ane-D4	100% 101%		73-12 61-13	6% 6%				

98%

98%

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

E = Indicates value exceeds calibration range

2037-26-5

460-00-4

Toluene-D8

4-Bromofluorobenzene

J = Indicates an estimated value

80-125%

65-147%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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				Repo	rt of A	nalysis		Page 1 of 1
Client San Lab Samp Matrix: Method: Project:	mple ID:	DUP F21483 AQ - C SW846 DEFS	3-8 Fround Wat 8260B J-4-2	er		Date Sampled Date Received Percent Solid	1: 03/20/08 1: 03/25/08 s: n/a	
Run #1 Run #2	File ID B013283	3.D	DF 1	Analyzed 03/28/08	By NAZ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1659
Run #1 Run #2	Purge V 5.0 ml	olume						
Durgashla	Aromatia							·······

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.0310	0.0020	0.00046	mg/l	
108-88-3	Toluene	0.0123	0.0020	0.00048	mg/l	
100-41-4	Ethylbenzene	0.0107	0.0020	0.00045	mg/l	
1330-20-7	Xylene (total)	0.170	0.0060	0.0014	mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its	
1868-53-7	Dibromofluoromethane	100%		73-1	26%	
17060-07-0	1,2-Dichloroethane-D4	96%		61-1	36%	
2037-26-5	Toluene-D8	95%		80-1	25%	
460-00-4	4-Bromofluorobenzene	96%	-	65-1	47%	

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

E = Indicates value exceeds calibration range

- J = Indicates an estimated value
- B = Indicates analyte found in associated method blank





108-88-3

100-41-4

1330-20-7

CAS No.

1868-53-7

17060-07-0

2037-26-5

460-00-4

Toluene

Ethylbenzene

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

		Report of Analysis											
Client San Lab Samp Matrix: Method: Project:	nple ID: TRI le ID: T21 AQ SW8 DEI	P BLANK 183-9 - Trip Blank 146 8260B 18 J-4-2	Water		Date Sa Date R Percen	ampled: eceived: t Solids:	03/20/08 03/25/08 n/a						
Run #1 Run #2	File ID B0132834.D	DF 1	Analyzed 03/28/08	By NAZ	Prep Da n/a	ite	Prep Batch n/a	Analytical Batch VB1659					
Run #1 Run #2	Purge Volur 5.0 ml	ne											
Purgeable	Aromatics												
CAS No.	Compound		Result	RL	MDL	Units	Q						
71-43-2	Benzene		ND	0.0020	0.00046	mg/l							

0.0020

0.0020

0.0060

Run# 2

0.00048 mg/l

0.00045 mg/l

0.0014 mg/l

Limits

73-126%

61-136% 80-125%

65-147%

n

ND

ND

ND

Run#1

97%

99%

93%

94%

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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Section 3

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Misc. Forms

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Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody

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T21483 Laboratories

Fresh Ponds Comparts Village, Balding B Product Job 18 Tresh Ponds Comparison B Sand Report to: Tresh Ponds Comparison B Sand Report to: Tresh Ponds Comparison B Sand Report to: Ponds E Sand Report to: Ponds E Sand Report to: Ponds E <th>د ه م . </th> <th></th> <th></th> <th></th> <th></th> <th></th> <th>DY</th> <th>тс</th> <th>US</th> <th>FC</th> <th>1 01</th> <th>HAIN</th> <th>CI</th> <th></th> <th></th> <th></th> <th>189</th>	د ه م . 						DY	тс	US	FC	1 01	HAIN	CI				189
Clink Understand Der Midstream Anelta Environmental Consulting, LP Name Anelta Environmental Consulting, LP Anelta Environmental Consulting, LP Anelta Environmental Consulting, LP Name Anelta Environmental Consulting, LP Index Index Index 370 Soventeenth Street, Suite 2500 Location Index Index Index Being Construction Index Index Index Index Index Stephen Weathers Zip ProjectPO # DCP MidstreamJ42 Index	21483	ng B 3480	Fresh Ponds Corporate Village, Building 2235 Route 130, Dayton, NJ 08810 732-329-0200 FAX: 732-329-3499/3														
DCP Midstream American Environmental Consulting, LP Name Project Name Project Name Address Project Name Project Name Dervor CO 80202 City Stata 2jp Project ND #: DCP Midstream.J42 Stata 2jp Project ND #: Dervor CO 80202 City Stata 2jp Project ND #: DCP Midstream.J42 Stata Send Report to: Project ND #: DCP Midstream.J42 Send Report to: Dervor Collection Preservation. MW-1 I(L) S GW 3 X X MW-2 I(L) S GW 3 X X MW-3 I(L) S GW 3 X X I MW-4 I(L) S GW 3 X X I MW-3 I(L) S GW 3 X X I MW-4 I(L) S GW 3 X X I MW-7<	na catan na na katang kata	mation	Informa	nalytical Ir	Ап	4	12.46.43	2013-	394)-é		nation	ty inform	Facili		1 1985 (5185)	Client Information	
Name Project Name 370 Soventeenth Street, Suite 250 Location Address Location Denvor C0 Stab Zip Stab Zip Stab Zip Stab Zip Project/PO 8: DCP Midstream.Jd2 Sand Report to: Phone 6: Phone 6: 303.605.1718 Field ID / Point of Collection Date MW-1 If [A] Sand Report to: Project Name WW-2 Go W MW-3 If 22,5 GW 3 X MW-4 If 52,5 GW 3 X MW-4 If 52 GW 3 X MW-6 If 16,5 GW 3 X MW-7 If 4,55 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>j, LP</td><td>ulting</td><td>al Cons</td><td>ronment</td><td>erican Envi</td><td>Am</td><td></td><td>eam</td><td>DCP Mids</td></t<>									j, LP	ulting	al Cons	ronment	erican Envi	Am		eam	DCP Mids
	8												e	Project Nam			arne
Deriver CO 80202 City State Zip Project/PO #: DCP Midstream.J42 The state of the state	826													Location	Inte 2500	eenth Street, St	ddiress
Chry Statu Zip Projector 0: DCP Midstream.J42 Top	L L L L L L L L L L L L L L L L L L L														80202	CO	Denver
Sand Report to: Phone #: 333.605.1716 FAX #: Output									42	əamJ	Midstre	DCP	:	Project/PU #	21p	thers	Stephen Wea
Collection Preservation X	0.50						2608							FAX #:		3.605.1718	end Report to: hone #: <u>3</u>
Field ID / Point of Collection Date Time Sampled Matrix # bottles 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 / 2 /							×	tion	serva	Pre				Collection			
MW-1 I(1)S GW 3 X X X MW-2 GW 3 X X X X X X MW-3 /52.5 GW 3 X<	0 0 0 W	0 0	<u> </u>	0	•	0	BTE	H2So4	NaOH HNO3	μ	# of bottles	Matrix	Sampled By	Time	Date	nt of Collection	Field ID / Po
MW-2 GW 3 X X Image: Constraint of the state of the sta							x			x	3	GW		1613			/W-1
MW-3 //525 GW 3 X X Image: Construction of the strength of the strengt of the strength of the strength of the strengt							х			X	3	GW					AVV-2
MW-4 I (5 ⁴) Gw 3 X X X MW-6 I (15 ⁵) Gw 3 X X X MW-7 I (15 ⁵) Gw 3 X X X MW-7 I (15 ⁵) Gw 3 X X X MW-8 I (15 ⁵) Gw 3 X X X MW-8 I (15 ⁵) Gw 3 X X X Dup ODCC0 Gw 3 X X X Trip Gw 3 X X X X MS/MSD I (15 ⁵) Gw 6 X X X I to ay I (15 ⁵) Gw 6 X X X I to ay I (15 ⁵) Gw 6 X X X I to ay I (15 ⁵) FULL CLP ASP Category B Commercial "A" Please include "Hold for Steve Weathers" on the shipping lat Accutest to invoice DCP Midstream, Attn: Steve Weathers Rulein plovid Life plov Sample Cutlody must be documented below each ti							x			X	3	GW		1525			/W-3
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T21483: Chain of Custody Page 1 of 4



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T21483: Chain of Custody Page 2 of 4



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T21483: Chain of Custody Page 3 of 4



T21483: 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

• Matrix Spike and Duplicate Summaries


Method Blank Summary

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121483
DUKE DCP Midstream, LLC
DEFS J-4-2

Sample VB1658-MB	File ID B0132805.D	DF 1	Analyzed 03/27/08	By NAZ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1658			
The QC report	ed here appli	es to the fo	llowing samp	les:		Method: SW8	346 8260B			
T21483-1, T214	T21483-1, T21483-2, T21483-3									

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.46	ug/l
100-41-4	Ethylbenzene	ND	2.0	0.45	ug/l
108-88-3	Toluene	ND	2.0	0.48	ug/l
1330-20-7	Xylene (total)	ND	6.0	1.4	ug/l

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	73-126%
17060-07-0	1,2-Dichloroethane-D4	98 %	61-136%
2037-26-5	Toluene-D8	94%	80-125%
460-00-4	4-Bromofluorobenzene	95%	65-147%

Page 1 of 1





Method Blank Summary

2037-26-5 Toluene-D8

4-Bromofluorobenzene

460-00-4

Job Number:	121483
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB1659-MB	B0132829.D	1	03/27/08	NAZ	n/a	n/a	VB1659
							•

80-125%

65-147%

The QC reported here applies to the following samples:

Method: SW846 8260B

T21483-4, T21483-6, T21483-7, T21483-8, T21483-9

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	71-43-2 Benzene 100-41-4 Ethylbenzene 108-88-3 Toluene 1330-20-7 Xylene (total)		2.0	0.46	ug/l
100-41-4			2.0	0.45	ug/l
108-88-3			2.0	0.48	ug/l
1330-20-7			6.0	1.4	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
1868-53-7	Dibromofluoromethane	99%	73-12	26%	
17060-07-0	1,2-Dichloroethane-D4	101%	61-13	86%	

97%

96%

21 of 27 ACCUTEST. T21483 Laboratories

Page 1 of 1

Method Blank Summary

Job Numbe Account: Project:	er: T21483 DUKE DCP DEFS J-4-2	Midstream,	LLC					
Sample VB1660-ME	File ID B B0132838.D	DF 1	Analyzed 03/28/08	By NAZ	Prep D n/a	Date	Prep Batch n/a	Analytical Batch VB1660
The QC rep T21483-5	ported here applie	es to the fol	llowing sam	ples:			Method: SV	V846 8260B
CAS No.	Compound		Result	RL	MDL	Units	Q	
71 43 2	Ronzono		ND	2.0	0.46	ua/l		



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71-43-2	-43-2Benzene10-41-4Ethylbenzene18-88-3Toluene130-20-7Xylene (total)		2.0	0.46	ug/l
100-41-4			2.0	0.45	ug/l
108-88-3			2.0	0.48	ug/l
1330-20-7			6.0	1.4	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
1868-53-7	Dibromofluoromethane	101%	73-12	26%	
17060-07-0	1,2-Dichloroethane-D4	99%	61-13	36%	
2037-26-5	Toluene-D8	98%	80-12	25%	
460-00-4	4-Bromofluorobenzene	98%	65-14	17%	

22 of 27 T21483 Laboratories

Page 1 of 1

Blank Spike Summary Job Number: T21483

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Account: Project:	DUKE DCP DEFS J-4-2	DUKE DCP Midstream, LLC DEFS J-4-2										
Sample VB1658-BS	File ID B0132803.D	DF 4 1 0	Analyzed 03/27/08	By NAZ]	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1658				
							· · · · ·					
The QC rej	ported here applie	es to the follo	owing san	nples:			Method: SW	/846 8260B				
T21483-1,	T21483-2, T21483	-3										
CAS No.	Compound		Spike	BSP	BSP %	Limite						
CAS NO.	Compound		ug/1	ug/1	/0	Limits						
71-43-2	Benzene		25	29.0	116	41-145						
100-41-4	Ethylbenzene		25	25.6	102	49-135						
108-88-3	Toluene		25	25.6	102	66-128						
1330-20-7	Xylene (total)		75	77.9	. 104	67-122						

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	73-126%
17060-07-0	1,2-Dichloroethane-D4	91%	61-136%
2037-26-5	Toluene-D8	92%	80-125%
460-00-4	4-Bromofluorobenzene	96%	65-147%



Page 1 of 1

Blank Spike/Blank Spike Duplicate Summary Job Number: T21483

Account: DUKE DCP Midstream, LLC DEFS J-4-2 Project:

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Sample VB1659-BS ^a VB1659-BSD ²	File ID B0132826.D B0132827.D	DF 1 1	Analyzed 03/27/08 03/27/08	By NAZ NAZ	P n. n.	rep Date /a /a	Prep n/a n/a	Batch	Analytical Ba VB1659 VB1659	3tch
The QC repor	ted here appli	es to the fol	lowing sam	ples:			Metl	nod: SW	/846 8260B	
T21483-4, T21	483-6, T21483	8-7, T21483-	8, T21483-9	9						
CAS No. Co	ompound		Spike ug/l	BSP ug/l	BSP %	BSD ug/1	BSD %	RPD	Limits Rec/RPD	

CAS No.	Compound	ug/l	ug/I	%	ug/l	%	RPD	Rec/RPD
71-43-2	Benzene	25	23.7	95 ·	27.5	110	15	41-145/30
100-41-4	Ethylbenzene	25	20.1	80	24.7	99	21	49-135/30
108-88-3	Toluene	25	20.7	83	24.8	99	18	66-128/30
1330-20-7	Xylene (total)	75	60.9	81	74.8	100	20	67-122/30
CAS No.	Surrogate Recoveries	BSP	BS	D	Limits			
1868-53-7	Dibromofluoromethane	99%	99	%	73-126	%		
17060-07-0	1,2-Dichloroethane-D4	93%	- 88	%	61-136	%		
2037-26-5	Toluene-D8	94%	939	%	80-125	%		
460-00-4	4-Bromofluorobenzene	99%	97	%	65-147	'%		

(a) No MS/MSD data available due to autosampler failure.



Page 1 of 1

Blank Spike Summary

Job Number:	121483
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

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The QC reported here applies to the following samples:

4-Bromofluorobenzene

Method: SW846 8260B

T21483-5

460-00-4

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CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	28.6	114	41-145
100-41-4	Ethylbenzene	25	24.9	100	49-135
108-88-3	Toluene	25	25.7	103	66-128
1330-20-7	Xylene (total)	75	76.5	102	67-122
CAS No.	Surrogate Recoveries	BSP	Li	mits	
1868-53-7	Dibromofluoromethane	100%	73	-126%	
17060-07-0	1,2-Dichloroethane-D4	93 %	61	-136%	
2037-26-5	Toluene-D8	95%	80	-125%	

99%

65-147%

25 of 27 ACCUTEST. T21483 Laboratories



Matrix Spike/Matrix Spike Duplicate Summary Job Number: T21483

JOD NUMBEL.	121403
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

SampleFile IDT21482-4MSB01328T21482-4MSDB01328T21482-4B01328	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
	16.D 1	03/27/08	NAZ	n/a	n/a	VB1658
	17.D 1	03/27/08	NAZ	n/a	n/a	VB1658
	15.D 1	03/27/08	NAZ	n/a	n/a	VB1658

The QC reported here applies to the following samples:

Method: SW846 8260B

T21483-1, T21483-2, T21483-3

CAS No.	Compound	T21482-4 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4	Benzene Ethylbenzene	ND ND	25 25	28.2 24.9	113 100	28.7 25.7	115 103	2 3	60-131/12 58-127/13
108-88-3 1330-20-7	Toluene Xylene (total)	ND ND	25 75	26.5 77.1	106 103	27.1 79.5	108 106	2 3	67-123/11 62-125/14
CAS No.	Surrogate Recoveries	MS	MSD	T21	482-4	Limits			
1868-53-7	Dibromofluoromethane	94%	94% [~]	92%)	73-126%	ó		
17060-07-0 2037-26-5	1,2-Dichloroethane-D4 Toluene-D8	87% 98%	87% 96%	95% 95%) ,)	61-136% 80-125%	ó		
460-00-4	4-Bromofluorobenzene	99%	100%	95%	,) 	65-147%	6		



Page 1 of 1

Matrix Spike/Matrix Spike Duplicate Summary Job Number: T21483

JOD Number:	121403	
Account:	DUKE DCP Midstream, LLC	
Project:	DEFS J-4-2	

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T21483-5MS	B0132842.D	1	03/28/08	NAZ	n/a	n/a	VB1660
T21483-5MSD	B0132846.D	1	03/28/08	NAZ	n/a	n/a	VB1660
T21483-5	B0132844.D	1	03/28/08	NAZ	n/a	n/a	VB1660

The QC reported here applies to the following samples:

Method: SW846 8260B

T21483-5

CAS No.	Compound	T21483-5 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	28.0	112	29.4	118	5	60-131/12
100-41-4	Ethylbenzene	ND	25	23.5	94	24.8	99	5	58-127/13
108-88-3	Toluene	ND	25	23.7	95	25.8	103	. 8	67-123/11
1330-20-7	Xylene (total)	ND	75	71.4	95	74.6	99	, 4	62-125/14
CAS No.	Surrogate Recoveries	MS	MSD	T21	483-5	Limits	•		
1868-53-7	Dibromofluoromethane	101%	98 %	95%	,- , 5	73-1269	%		
17060-07-0	1,2-Dichloroethane-D4	91%	90%	91%	, o,	61-1369	6		
2037-26-5	Toluene-D8	91%	96%	95%	ó	80-1259	6		
460-00-4	4-Bromofluorobenzene	99%	99%	96%	5	65-1479	6		



Page 1 of 1



DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605-2226 *FAX*

February 29, 2008

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

RE: 4th Quarter 2007 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Price:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 4th Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East). At this time, no RP number has been assigned to this remediation project.

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me <u>swweathers@dcpmidstream.com</u>.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Sr. Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office (Copy on CD) Environmental Files

www.dcpmidstream.com

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

February 26, 2008

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Summary of the Fourth Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the fourth quarter 2007 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP. The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed because of drilling refusal.

GROUNDWATER SAMPLING

Groundwater sampling was completed on November 30, 2007. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2.

The approximate water-table elevation for any well containing free phase hydrocarbons (FPH) was estimated 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 FPH density (assumed at 0.73).

The historic FPH thickness values are summarized in Table 3. No FPH was measured in any well during this sampling event for the first time. The FPH thickness has been less than 0.1 foot (1.2 inches) since December 2006.

Mr. Stephen Weathers February 26, 2008 Page 2

All of the wells were purged and sampled using the standard protocols for this site. Purging was completed using dedicated bailers until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity stabilized. The well purging forms are attached. The affected purge water was disposed at the DCP Linam Ranch facility.

Unfiltered samples were collected upon stabilization using the dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to ACCUTEST Laboratories using standard chain-of-custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX).

The laboratory analyses for the sampling episode are summarized in Table 4. The laboratory report is attached. Table 5 provides the quality assurance/quality control (QA/QC) information. The QA/QC evaluation includes:

- The sample container temperature was 4.8 degrees centigrade when received at the lab.
- All of the individual surrogate spikes were within their control limits.
- The relative percentage difference (RPD) values for the MW-2 duplicates were less than 10 percent.
- The matrix spike and matrix spike duplicate results from MW-8 were within the control limits for all four constituents.

The above data indicate that the data is suitable as monitoring data.

RESULTS AND INTERPRETATIONS

The results and interpretations presented below are based upon all of the data collected to date. Groundwater flow is discussed first. Evaluation of the organic data follows.

Groundwater Flow

Figure 3 includes hydrographs for the corrected water-table elevations for all site wells. The water table increased by approximately 0.5 feet in all wells.

The resulting December 2007 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table elevation measured in MW-2 remains anomalously high. The December 2007 water table exhibits the historic southeast gradient.

Mr. Stephen Weathers February 26, 2008 Page 3

Groundwater Chemistry

The December 2007 data is summarized in Table 4. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of the table. Any constituents that exceeds these standards are bolded. Examination of Table 4 shows that benzene in MW-1 was the only constituent exceeding the standards. The benzene concentration of 0.0011 mg/l measured in MW-3 indicates the constituent was measured below the method reporting limit but above the method detection limit.

The data for all of the organic constituents are summarized in Table 6. Examination of Table 6 indicates the following:

- The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards.
- The benzene concentration in MW-1 increased between the third and fourth quarter 2007 sampling events.
- The benzene concentration in MW-2 remained unchanged between the third and fourth quarter 2007 sampling events.
- The BTEX concentrations in MW-3 have remained below the method reporting limits with the exception of one the two June 2007 samples.
- The benzene concentration in MW-4 remained below the method reporting limit for the third consecutive quarter.
- None of the BTEX constituents have ever been detected in down-gradient wells MW-6, MW-7 and MW-8.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that:

- 1. The disappearance of the thin layer of mobile FPH probably resulted from the rise of the water table. The FPH may or may not reappear given its nominal (<0.1 foot) thickness.
- 2. Groundwater flow is constant toward the southeast with the exception of an small area surrounding MW-2. Any migration deflection resulting from this anomaly should be minimal.
- 3. The presence of dissolved phase BTEX constituents is limited to the original release area as defined by MW-1 and MW-2.
- 4. The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is either stable or contracting;

AEC recommends continued quarterly groundwater monitoring to verify continuance of the trends discussed above. The next groundwater-monitoring event is scheduled for the first quarter of 2008.

Mr. Stephen Weathers February 26, 2008 Page 4

Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC Muchael 11. Stewart

Michael H. Stewart, P.E., C.P.G. Principal Engineer

MHS/tbm attachments TABLES

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Name	Date	Stickup	Casing	Total	Screen	Sand			
	Installed	_	Diameter	Depth	Interval	Interval			
			(inches)	(btoc)	(ground)				
MW-1	2/06	3.17	2	43.05	19-39	17-39			
MW-2	2/06	3.08	4	43.30	19-39	17-39			
MW-3	2/06	3.21	2	43.00	19-39	17-39			
MW-4	9/06	3.12	2	38.12	20-35	18-35			
MW-5	Not installed because of drilling refusal								
MW-6	9/06	3.32	2	38.32	20-35	18-35			
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5			
MW-8	9/06	3.32	2	38.32	20-35	18-35			

Table 1 – Summary of Monitoring Well Completions at the J-4-2 Site

All units are feet except as noted btoc: Below top of casing

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	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07	9/25/07	11/30/07
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86	3712.42
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34	3712.91
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50	3712.09
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98	3713.48
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56	3711.92
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87	3710.33
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06	3708.33
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Table 2 - Summary of Water Table Elevations for the J-4-2 Site

Units are feet

Blank cells: wells not installed

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Date	MW-1	MW-2
02/15/06	0.00	0.57
09/25/06	0.00	0.15
12/21/06	0.09	0.13
03/14/07	0.07	0.10
06/26/07	0.09	0.00
9/25/07	0.09	0.03
11/30/07	0.00	0.00
Units are fee	ht.	

Table 3 - Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

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Well	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62
MW-1	0.107	0.0243	0.0401	0.39
MW-2	0.006	0.0033	0.0025	0.0613
MW-2 Dup	0.0062	0.003	0.0023	0.0577
MW-3	0.0011J	< 0.002	< 0.002	<0.006
MW-4	< 0.002	< 0.002	< 0.002	< 0.006
MW-6	< 0.002	< 0.002	< 0.002	< 0.006
MW-7	< 0.002	< 0.002	< 0.002	< 0.006
MW-8	< 0.002	< 0.002	< 0.002	< 0.006
Trip	<0.002	< 0.002	< 0.002	< 0.006

Table 4 - Summary of November 30, 2007 Groundwater Sampling Results

Notes: Units are mg/l,

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MW-5 was not installed because of drilling refusal

A J modifier indicates the constituent was measured below the method reporting limit but above the method detection limit.

Table 5 - Quality Assurance Evaluation for the December 2007 Data

MW-2 Duplicate Samples

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	Benzene	Toluene	Ethylbenzene	Total Xylenes
RPD (%)	3.3%	9.5%	8.3%	6.1%

MW-8 Matrix Spike and Matrix Spike Duplicate Results

	Benzene	Toluene	Ethylbenzene	Total Xylenes	
MS	112	108	106	106	
MSD	105	106	101	104	

Units are percent recovery

MS: matrix spike

MSD: matrix spike duplicate

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1	2/06	0.139	0.326	0.34	0.31
	9/06	0.0418	0.0048	0.0247	0.0605
Dup	9/06	0.0555	0.0068	0.032	0.0782
	12/06	FPH	FPH	FPH	FPH
	3/07	FPH	FPH	FPH	FPH
	6/07	FPH	FPH	FPH	FPH
	9/07	0.0114	0.0029	0.0035	0.0978
	11/07	0.107	0.0243	0.0401	0.39
MW-2	6/07	0.0262	0.0382	0.0404	0.335
	9/07	0.0045	< 0.001	0.0027	0.0471
	11/07	0.006	0.0033	0.0025	0.0613
Dup	11/07	0.0062	0.003	0.0023	0.0577
MW-3	2/06	< 0.001	< 0.001	<0.001	< 0.002
	9/06	< 0.002	< 0.002	< 0.002	<0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
Dup	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	0.0029	0.0053	0.0015	0.0097
Dup	6/07	< 0.001	<0.001	<0.001	<0.001
	9/07	< 0.001	< 0.001	<0.001	<0.001
	9/07	<0.001	< 0.001	<0.001	<0.001
	11/07	0.0011J	< 0.002	< 0.002	< 0.006
MW-4	9/06	0.0086	0.00093J	0.0092	0.0061
	12/06	0.0295	0.0058	< 0.002	0.0075
Dup	12/06	0.0207	0.004	<0.002	0.0054
	3/07	0.0044	0.0006	< 0.002	0.0032
	6/07	< 0.001	< 0.001	< 0.001	0.0025
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006

Table 6 – Summary of Organic Groundwater Data

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Units are mg/l, FPH: No sample because FPH is present: MW-5 was never installed Notes:

J modifiers are not included in this table

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-6	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	<0.006
	6/07	< 0.001	<0.001	< 0.001	<0.001
	9/07	< 0.001	< 0.001	<0.001	<0.001
	11/07	< 0.002	< 0.002	< 0.002	<0.006
MW-7	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	<0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	0.0027
	9/07	< 0.001	< 0.001	< 0.001	<0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006
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MW-8	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	<0.006
	3/07	< 0.002	< 0.002	< 0.002	<0.006
	6/07	< 0.001	< 0.001	< 0.001	<0.001
	9/07	< 0.001	< 0.001	< 0.001	<0.001
	11/07	< 0.002	< 0.002	< 0.002	< 0.006

Table 6 – Summary of Organic Groundwater Data (continued)

Notes:

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Units are mg/l, FPH: MW-5 was never installed

J modifiers are not included in this table

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GROUNDWATER SAMPLING NOTES AND LABORATORY ANALYTICAL REPORT

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	CLIENT:	DC	P Midstre	am		WELL ID:	MW-1		
SI	TE NAME:	J42	(Pipeline Leak)			DATE:	11/30/2007		
PRC	JECT NO.		F-119		. 5	SAMPLER:	J. Fergerson		
PURGING METHOD:									
SAMPLING METHOD: 🖸 Disposable Bailer 🗆 Direct from Discharge Hose 🗆 Other:									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:									
Glove	☑ Gloves □ Alconox □ Distilled Water Rinse □ Other:								
DISPOSA		OF PURG	E WATER:	Surface	Discharg	ge 🗆 Drui	ms 🗵 Disposal Facility		
TOTAL D	EPTH OF V	VELL:	43.05	Feet					
DEPTH T	O WATER:		28.03	Feet Feet		29.4	Minimum Gallons to		
WELL DIA	AMETER:	4.0	Inch				purge 3 well volumes		
·		TEMP.	COND.				(Water Column Height x 1.96) PHYSICAL APPEARANCE AND		
	PURGED	°C	<i>m</i> S/cm	рН	mg\L	Turb	REMARKS		
15:07	0.0	-	-	-	-	-	Begin Hand Bailing		
15:26	20.0	-	-	_	-	-	FPH Accumulating Inside &		
							Outside of Bailer!		
			-						
	-								
0:19	:Total Time	e (hr:min)	20	:Total Vol ((gal)	1.05	:Flow Rate (gal/min)		
SAMP	LE NO.:	Collected S	ample No.:	071130	1530				
ANAL	YSES:	BTEX (826	0)		-				
COM	MENTS:								

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	CLIENT:	DC	P Midstre	am		WELL ID:	MW-2		
SI	TE NAME:	J42 (Pipeline Leak)				DATE:	11/30/2007		
PRC	JECT NO.		F-119 S				J. Fergerson		
PURGING METHOD: 🛛 Hand Bailed 🗆 Pump If Pump, Type:									
SAMPLIN	G METHO	D :	☑ Disposab	le Bailer	Direct f	rom Disch	arge Hose 🛛 Other:		
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:									
Glove	☑ Gloves □ Alconox □ Distilled Water Rinse □ Other:								
DISPOSA	L METHOD	OF PURG	E WATER:	Surface	e Discharg	je 🗆 Dru	ms 🗵 Disposal Facility		
Total di Depth T Height (Well dia	EPTH OF V O WATER: DF WATER METER:	VELL: COLUMN: 2.0	43.30 27.71 15.59 Inch	Feet Feet Feet		7.6	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME PURGED	TEMP. ° C	COND. mS/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
14:36	0.0	-	-	-	-	-	Begin Hand Bailing		
14:41	2.7	19.7	>4.00	6.91	-	-			
14:47	5.4	19.7	>4.00	6.92	-	-			
14:53	8.1	19.7	>4.00	6.93	-	-			
	•								
0:17	:Total Time	e (hr:min)	8.1	:Total Vol	(gal)	0.47	:Flow Rate (gal/min)		
SAMP	LE NO.:	Collected S	ample No.:	071130	1455				
ANAL	YSES:	BTEX (826	0)						
COM	IENTS:	Collected D	uplicate "A"	Sample No	o.: 07113	01600			
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	CLIENT:	DC	P Midstre	am		WELL ID:	NW-3		
SI	TE NAME:	J42	J42 (Pipeline Leak)			DATE:	11/30/2007		
PRC	JECT NO.		F-119			SAMPLER:	J. Fergerson		
PURGING METHOD: I Hand Bailed I Pump If Pump, Type:									
SAMPLING METHOD: Disposable Bailer Direct from Discharge Hose Differ:									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:									
⊡ Glove:	s 🗆 Alcono	ox ⊔ Distill	ed Water Ri	nse ⊔ C	other:				
DISPOSA	DISPOSAL METHOD OF PURGE WATER: 🛛 Surface Discharge 🛛 Drums 🗹 Disposal Facility								
TOTAL DI	EPTH OF V	VELL:	43.00	Feet					
HEIGHT (D WATER: DF WATER	COLUMN:	27.30	Feet Feet		7.7	Minimum Gallons to		
WELL DIA	METER:	2.0	Inch				purge 3 well volumes		
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
14:07	0.0	-	-	-	-	-	Begin Hand Bailing		
14:12	2.7	19.8	3.86	7.08	-	-			
14:17	5.4	19.8	3.80	7.02	-	-			
14:22	8.1	19.7	3.83	7.02	_	-			
						<u>.</u>			
0:15	:Total Time	e (hr:min)	8.1	:Total Vol	(gal)	0.54	:Flow Rate (gal/min)		
SAMP	LE NO.:	Collected S	ample No.:	071130	1425				
ANAL	YSES:	BTEX (826	0)						
COMMENTS:									

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	CLIENT:	DC	P Midstrea	am		WELL ID:	MW-4			
SI	TE NAME:	J42	J42 (Pipeline Leak)			DATE:	11/30/2007			
PRC	JECT NO.		F-119		. 8	SAMPLER:	J. Fergerson			
PURGING METHOD: If Pump If Pump, Type:										
SAMPLIN	SAMPLING METHOD: Disposable Bailer Direct from Discharge Hose Other: 									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Glove:	s 🗹 Alcono	x 🗹 Distill	ed Water Ri	nse 🗆 C	Other:	=				
DISPOSA	L METHOD	OF PURG	E WATER:	🗆 Surface	e Discharg	je 🗆 Dru	ms 🗹 Disposal Facility			
TOTAL DI DEPTH T HEIGHT (WELL DIA	EPTH OF W O WATER: DF WATER METER:	VELL: COLUMN: 2.0	38.12 26.76 11.36 Inch	Feet Feet Feet		5.6	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)			
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
13:43	0.0	-	-	-	-	-	Begin Hand Bailing			
13:46	2.0	19.9	3.06	7.07	-	-				
13:49	4.0	19.8	>4.00	6.84	-	-				
13:54	6.0	19.7	>4.00	6.88	-	-				
				· · · · · · · · · · · · · · · · · · ·						
.										
0:11	:Total Time	e (hr:min)	6	: fotal Vol	(gal)	0.54	:Flow Rate (gal/min)			
SAMP		Collected S	ample No.:	0/1130	1355					
ANAL	YSES:	BTEX (826	ט)			···				
COM	INTS:	COMMENTS:								

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		DCI	P Midstre	am		WELL ID:	MW-6			
SITE		J42 (42 (Pipeline Leak)			DATE:	11/30/2007			
PROJE	ECT NO.	0.2	F-119			SAMPLER:	J. Fergerson			
PURGING METHOD: 🛛 Hand Bailed 🗆 Pump If Pump, Type:										
SAMPLING METHOD: 🛛 Disposable Bailer 🗆 Direct from Discharge Hose 🗆 Other:										
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Gloves 🛛		x 🗆 Distill	ed Water Ri	nse 🗆 C	Other:					
DISPOSAL	METHOD		E WATER:	Surface	e Dischar	ge 🗆 Dru	ms 🛯 Disposal Facility			
TOTAL DEPTH OF WELL: 38.32 Feet DEPTH TO WATER: 28.04 Feet HEIGHT OF WATER COLUMN: 10.28 Feet WELL DIAMETER: 2.0 Inch										
	/OLUME PURGED	TEMP. °C	COND. mS/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
14:16	0.0	-	-	-	_	-	Begin Hand Bailing			
14 :19	2.0	18.2	2.21	7.67	-	-				
14:23	4.0	17.9	1.98	7.70	-	-	· · · · · · · · · · · · · · · · · · ·			
14:27	6.0	17.9	1.90	7.73	-	-				
				· · · · · · · · · · · · · · · · · · ·						
		(brimin)	6	·Total Val	(aci)	0.54	·Flow Pote (col/min)			
		Collected S	ample No :	071130	(yai) 1/20	0.54				
	SES	BTFX (826)	0)	0/1100	1720					
COMME	ENTS:		-/							

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	CLIENT:	DC	P Midstre	am		WELL ID:	NW-7		
SI	TE NAME:	J42	J42 (Pipeline Leak)			DATE:	11/30/2007		
PRC	JECT NO.		F-119				J. Fergerson		
PURGING METHOD: Image: Hand Bailed Pump If Pump, Type:									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:									
☑ Gloves ☐ Alconox ☐ Distilled Water Rinse									
DISPOSA			E WATER:	Surface	Discharg	je 🗆 Dru	ıms 🗆 Disposal Facility		
TOTAL DEPTH OF WELL:39.45 FeetDEPTH TO WATER:30.40 FeetHEIGHT OF WATER COLUMN:9.05 FeetWELL DIAMETER:2.0 InchUter Column Height >							_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
13:52	0.0	-	-	-	-	-	Begin Hand Bailing		
13:56	2.0	18.3	3.68	7.49	-	-			
14:00	4.0	18.2	3.68	7.49	-	-			
14:04	6.0	18.1	3.68	7.49	-	-			
0:12	:Total Time	e (hr:min)	6	:Total Vol ((gal)	0.50	:Flow Rate (gal/min)		
SAMP	LE NO.:	Collected S	ample No.:	071130	1406				
ANAL	YSES:	BTEX (826	0)						
COMMENTS:									

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	CLIENT: DCP Midstream				WELL ID:	MW-8	
SITE NAME:			J42 (Pipeline Leak)			DATE:	11/30/2007
PROJECT NO.		F-119				SAMPLER:	J. Fergerson
PURGING	METHOD	: 🖸 Hand Bailed 🛛 Pump If Pump, Type: _					
SAMPLING METHOD: 🖸 Disposable Bailer 🗆 Direct from Discharge Hose 🗆 Other:							
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:							
☑ Gloves □ Alconox □ Distilled Water Rinse □ Other:							
DISPOSAL METHOD OF PURGE WATER: 🗹 Surface Discharge 🛛 Drums 🗆 Disposal Facility							
TOTAL DEPTH OF WELL: 38.32 Feet							
DEPTH TO HEIGHT (o water: DF water	28.99 Feet COLUMN: 9.33 Feet				4.6	Minimum Gallons to
WELL DIA	METER:	2.0 Inch					purge 3 well volumes
TIME	VOLUME	TEMP. °C	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
13:23	0.0	-	-	-	_	-	Began Hand Bailing
13:26	2.0	19.6	2.47	7.53	-	-	
13:29	4.0	18.8	2.44	7.49	-	-	
13:33	6.0	18.6	2.53	7.50	-	-	
0:10 :Total Tim		e (hr:min) 6 :Total Vol (gal) 0.60 :Flow Rate (gal/min)					
SAMPLE NO.:		Collected Sample No.: 071130 1334					
ANALYSES:		BTEX (8260)					
COMMENTS:		Collected MS/MSD Samples					



02/21/08

Technical Report for

DCP Midstream, LLC

DEFS J-4-2

Accutest Job Number: T19959

Sampling Date: 11/30/07

Report to:

American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 26





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.

Ron Martino Laboratory Manager

Client Service contact: Agnes Vicknair 713-271-4700

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.



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Gulf Coast • 10165 Harwin Drive • Suite 150 • Houston, TX 77036 • tel: 713-271-4700 • fax: 713-271-4770 • http://www.accutest.com


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Sample Summary

DCP Midstream, LLC

DEFS J-4-2

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Job No: T19959

Sample Number	Collected Date	Time By	Received	Matr Code	ix Type	Client Sample ID
T19959-1	11/30/07	15:30 DL	12/04/07	AQ	Ground Water	MW-1 (0711301530)
T19959-2	11/30/07	14:55 DL	12/04/07	AQ	Ground Water	MW-2 (0711301455)
T19959-3	11/30/07	14:25 DL	12/04/07	AQ	Ground Water	MW-3 (0711301425)
T19959-4	11/30/07	13:55 DL	12/04/07	AQ	Ground Water	MW-4 (0711301355)
T19959-5	11/30/07	14:29 DL	12/04/07	AQ	Ground Water	MW-6 (0711301429)
T19959-6	11/30/07	14:06 DL	12/04/07	AQ	Ground Water	MW-7 (0711301604)
T19959-7	11/30/07	13:34 DL	12/04/07	AQ	Ground Water	MW-8 (0711301334)
T19959-7D	11/30/07	13:34 DL	12/04/07	AQ	Water Dup/MSD	MW-8 (0711301334) MSD
T19959-7S	11/30/07	13:34 DL	12/04/07	ÂQ	Water Matrix Spike	MW-8 (0711301334) MS
T19959-8	11/30/07	16:00 DL	12/04/07	AQ	Ground Water	DUPLICATE "A" (0711301600)
T19959-9	11/30/07	00:00 DL	12/04/07	AQ	Trip Blank Water	TRIP BLANK





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Sample Results

Report of Analysis



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1330-20-7

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Method:		W-1 (0711301 9959-1 Q - Ground Wa V846 8260B	530) ater		Date Sar Date Rec Percent	npled: ceived: Solids:	11/30/07 12/04/07 n/a	
Project:	DI	EFS J-4-2						
Run #1 Run #2	File ID B0130908.	DF D 1	Analyzed 12/07/07	By ZLH	Prep Date n/a	e	Prep Batch n/a	Analytical Batch VB1553
Run #1 Run #2	Purge Vol 5.0 ml	ume						
Purgeable	Aromatics							
CAS No.	Compour	ıd	Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylbenz	ene	0.107 0.0243 0.0401	0.0020 0.0020 0.0020	0.00046 0.00048 0.00045	mg/l mg/l mg/l		

0.0060

Run# 2

.

mg/l

Limits

76-125% 69-128%

80-121% 69-142%

0.390

Run#1

107%

115%

98%

94%

ND = Not detected	MDL - Method Detection Limit
RL = Reporting Limit	
T T 10 / 1	1 111 /1

E = Indicates value exceeds calibration range

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- 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

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108-88-3

100-41-4

1330-20-7

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Toluene

Ethylbenzene

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1.2-Dichloroethane-D4

4-Bromofluorobenzene

Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: le ID:	MW-2 T1995 AQ - 0 SW846 DEFS	(07113014 9-2 Ground Wa 5 8260B J-4-2	155) ter		Date Samp Date Recei Percent So	led: 11/30/07 ved: 12/04/07 lids: n/a	
Run #1 Run #2	File ID B01308	61.D	DF 1	Analyzed 12/06/07	By ZLH	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1551
Run #1 Run #2	Purge 5.0 ml	Volume	1					
Purgeable	Aromati	cs						
CAS No.	Comp	ound		Result	RL	MDL Un	its Q	
71-43-2	Benzei	ne		0.0060	0.0020	0.00046 mg	y/l	

0.0020

0.0020

0.0060

Run#2

0.00048 mg/l

0.00045 mg/l

Limits

76-125%

69-128%

80-121%

69-142%

mg/l

0.0033

0.0025

0.0613

Run#1

104%

122%

100%

97%

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

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Report of Analysis

Client Sam Lab Samp Matrix: Method: Project:	aple ID: MW-3 le ID: T19959 AQ - G SW846 DEFS	(07113014)-3 Ground Wa 5 8260B J-4-2	l25) ter		Date Sa Date Re Percent	mpled: eceived: Solids:	11/30/07 : 12/04/07 : n/a	
Run #1 Run #2	File ID F0088581.D	DF 1	Analyzed 12/06/07	By ZLH	Prep Da t n/a	te	Prep Batch n/a	Analytical Batch VF2793
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)		0.0011 ND ND ND	0.0020 0.0020 0.0020 0.0060	0.00046 0.00048 0.00045	mg/l mg/l mg/l mg/l	J	
CAS No.	Surrogate Rea	coveries	Run# 1	Run# 2	Limit	S		

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

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

1868-53-7

17060-07-0

2037-26-5

460-00-4

J = Indicates an estimated value

76-125%

69-128%

80-121%

69-142%

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



2.3

Page 1 of 1

R

98%

101%

102%

104%

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Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: MV ble ID: T1 AQ SW DE	V-4 (0711301 9959-4 9 - Ground Wa 846 8260B FS J-4-2	355) ater	npled: æived: Solids:	11/30/07 12/04/07 n/a			
	File ID	DF	Analyzed	By	Prep Date)	Prep Batch	Analytical Batch
Run #1 Run #2	F0088580.I) 1	12/06/07	ZLH	n/a		n/a	VF2793
	Purge Volu	me						
Run #1 Run #2	5.0 ml							
Purgeable	Aromatics				•			
CAS No.	Compoun	d	Result	RL	MDL U	U nits	Q	
71-43-2	Benzene		ND	0.0020	0.00046 r	ng/l		
108-88-3	Toluene		ND	0.0020	0.00048 r	ng/l		
100-41-4	Ethylbenze	ene	ND	0.0020	0.00045 r	ng/l		

0.0060

Run#2

mg/l

Limits

76-125%

69-128%

80-121%

69-142%

ND

Run#1

98%

100%

101%

105%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

1330-20-7

CAS No.

1868-53-7

460-00-4

17060-07-0 2037-26-5 Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

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

Report of Analysis

Client San Lab Samp Matrix: Method: Project:	nple ID: MW-6 ole ID: T1995 AQ - (SW840 DEFS	(0711301) 9-5 Ground Wa 5 8260B J-4-2	429) Iter		Date Sample Date Receive Percent Solid	d: 11/30/07 d: 12/04/07 ls: n/a	
Run #1 Run #2	File ID F0088579.D	DF 1	Analyzed 12/06/07	By ZLH	Prep Date n/a	Prep Batch n/a	Analytical Batch VF2793
Run #1 Run #2	Purge Volume 5.0 ml	1					
Purgeable	Aromatics						
CAS No.	Compound		Result	RI.	MDL Units	5 0	

I I I I I			
Benzene	ND	0.0020	0.00023 mg/l
Toluene	ND	0.0020	0.00054 mg/l
Ethylbenzene	ND	0.0020	0.00048 mg/l
Xylene (total)	ND	0.0060	0.0011 mg/l
Surrogate Recoveries	Run# 1	Run# 2	Limits
Dibromofluoromethane	99 %		76-125%
Dibromofluoromethane 1,2-Dichloroethane-D4	99% 99%		76-125% 69-128%
Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8	99% 99% 101%		76-125% 69-128% 80-121%
	Benzene Toluene Ethylbenzene Xylene (total) Surrogate Recoveries	BenzeneNDTolueneNDEthylbenzeneNDXylene (total)NDSurrogate RecoveriesRun# 1	BenzeneND0.0020TolueneND0.0020EthylbenzeneND0.0020Xylene (total)ND0.0060Surrogate RecoveriesRun# 1Run# 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





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Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Method: Project:		AW-7 (19959- AQ - Gr W846 DEFS J-	0711301604 6 ound Water 8260B 4-2)		Date Sa Date Ro Percent	mpled: eceived: Solids:	11/30/07 12/04/07 n/a	
Run #1 Run #2	File ID F0088578	3.D	DF 1	Analyzed 12/06/07	By ZLH	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VF2793
Run #1 Run #2	Purge Vo 5.0 ml	olume							
Purgeable	Aromatics								
CAS No.	Compou	ınd		Result	RL	MDL	Units	Q	
71-43-2 108-88-3 100-41-4	Benzene Toluene Ethylber	izene		ND ND ND	0.0020 0.0020 0.0020	0.00023 0.00054 0.00048	mg/l mg/l mg/ł		

0.0060

Run#2

0.0011 mg/l

Limits

76-125%

69-128%

80-121%

69-142%

ND

Run#1

99%

99%

103%

101%

ND =	Not	detec	ted	MDL - Method Detection	Limit
	_				

RL = Reporting Limit

1330-20-7

CAS No.

1868-53-7

17060-07-0

2037-26-5

460-00-4

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

- **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

Surrogate Recoveries

Dibromofluoromethane

1.2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

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CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Report of Analysis

Client Sam Lab Sampl Matrix: Method: Project:	aple ID: MW-8 le ID: T1995 AQ - C SW846 DEFS	(07113013 9-7 Ground Wa 5 8260B J-4-2	334) tter		Date Sampled Date Received Percent Solid	l: 11/30/07 l: 12/04/07 s: n/a	
Run #1 Run #2	File ID B0130907.D	DF 1	Analyzed 12/07/07	By ZLH	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1553
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	0.00046 mg/l 0.00048 mg/l 0.00045 mg/l mg/l		

Run# 2

Limits

76-125%

69-128%

80-121%

69-142%

Run#1

110%

124%

100%

101%

ND = Not detected	MDL - Method Detection Limit
RL = Reporting Limit	
E = Indicates value exce	eeds 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

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1330-20-7

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Xylene (total)

Toluene-D8

Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

			Repo	rt of An	alysis			Page 1 of 1
Client San Lab Samp Matrix: Method: Project:	nple ID: DUPL le ID: T1995 AQ - 0 SW84 DEFS	ICATE "A 9-8 Ground Wa 6 8260B J-4-2	\" (0711301600) ater		Date Sa Date Ro Percent	ampled: eceived t Solids	11/30/07 : 12/04/07 : n/a	
Run #1 Run #2	File ID B0130862.D	DF 1	Analyzed 12/06/07	By ZLH	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VB1551
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	Benzene Toluene Ethylbenzene		0.0062 0.0030 0.0023	0.0020 0.0020 0.0020	0.00046 0.00048 0.00045	mg/l mg/l mg/l		

0.0060

Run# 2

mg/l

Limits

76-125%

69-128%

80-121%

69-142%

0.0577

Run#1

102%

115%

97%

99%

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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Surrogate Recoveries

Dibromofluoromethane

1.2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

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CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Report of Analysis

Client Sam Lab Sampl Matrix: Method: Project:	ple ID: e ID:	TRIP BI T19959- AQ - Tr SW846 4 DEFS J-	ANK 9 ip Blank W 8260B 4-2	ater		Date Sampled: 11/30/07 Date Received: 12/04/07 Percent Solids: n/a						
Run #1 Run #2	File ID F00885	72.D	DF 1	Analyzed 12/06/07	By ZLH	Prep Da n/a	te	Prep Batch n/a	Analytical Batch VF2793			
Run #1 Run #2	Purge V 5.0 ml	/olume										
Purgeable	Aromati	cs										
CAS No.	Comp	ound		Result	RL	MDL	Units	Q				
71-43-2 108-88-3 100-41-4 1330-20-7	Benzer Toluer Ethylb Xylene	ne le enzene e (total)		ND ND ND ND	0.0020 0.0020 0.0020 0.0060	0.00023 0.00054 0.00048 0.0011	mg/l mg/l mg/l mg/l					

Run#2

Limits

76-125%

69-128%

80-121%

69-142%

Run#1

98%

98%

101%

107%

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



Section 3

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Misc. Forms

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Custody Documents and Other Forms

Includes the following where applicable:

• Chain of Custody



accutest.				1016	5 Harv TEL. 1	vin Dri 113-27	ive, S 1-470	te. 15 0 FA	0, Hou X: 71	ston, 3-271-	FX 77 4770	036 F	ED-EX	1730king	395	317	1	Bottle C	irder Cont	rol#		
Laboratories						w	ww.a	ccutes	it.com			^	ocutest	Quote #				Accutes	l Job #	TIC	195	9
Client / Reporting Information					P	oject Infr	ormatic	n		- 10-2						3	Requ	ested Ana	ilysis			Matrix Codes
pany Name	Carell	Projec	Name	11			10	12	P	1.							Γ					DW - Drinking Water
Merkan Environmental	Consult	JSIM	-r / 11/	<u>as (</u>	car	<u>y</u>	77	2	rφ	<μ	nc					1						GW - Ground Water
885 S. Marshall, Sui	tc3	- 0588																				VWV - Water
III - 10 State COLO	Zip	City				State		м	,								[517 - 50-1808 Materi
teleton CU 80/28	5		<u>a co</u>	UAT	¥-	NC	W	_//	CX.	00			0									Si Sludar
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T19959: Chain of Custody Page 1 of 2



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T19959: Chain of Custody Page 2 of 2



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Section 4

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries



Method Blank Summary

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460-00-4

Job Number:	T19959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2793-MB	F0088566.D	1	12/06/07	ZLH	n/a	n/a	VF2793
		•					

The QC reported here applies to the following samples:

Method: SW846 8260B

T19959-3, T19959-4, T19959-5, T19959-6, T19959-9

4-Bromofluorobenzene

CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.23	ug/l
100-41-4	Ethylbenzene	ND	2.0	0.48	ug/l
108-88-3	Toluene	ND	2.0	0.54	ug/l
1330-20-7	Xylene (total)	ND	6.0	1.1	ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
1868-53-7	Dibromofluoromethane	99%	76-12	25%	
17060-07-0	1,2-Dichloroethane-D4	100%	69-12	28%	
2037-26-5	Toluene-D8	100%	80-12	21%	

104%

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69-142%



Page 1 of 1

4.1

Method Blank Summary

Job Number:	T19959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

VB1551-MB	B0130845.D	Dr 1	Analyzed 12/06/07	ву ZLH	n/a	n/a	VB1551
The QC report	ted here appli	es to the	e following sam	ples:		Method: SW	/846 8260B

9959-2, T19959-8

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CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.46	ug/l
100-41-4	Ethylbenzene	ND	2.0	0.45	ug/l
108-88-3	Toluene	ND	2.0	0.48	ug/l
1330-20-7	Xylene (total)	ND	6.0		ug/l
CAS No.	Surrogate Recoveries		Limi	ts	
1868-53-7	Dibromofluoromethane	103%	76-12	25%	
17060-07-0	1,2-Dichloroethane-D4	118%	69-12	28%	
2037-26-5	Toluene-D8	99%	80-12	21%	
460-00-4	4-Bromofluorobenzene	98 %	69-14	2%	



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Page 1 of 1

Method Blank Summary

Job Number:	T19959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB1553-MB	B0130894.D	1	12/07/07	ZLH	n/a	n/a	VB1553
The OC repo	rted here appli	es to the	following sam	nles:		Method: SW	

T19959-1, T19959-7

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CAS No.	Compound	Result	RL	MDL	Units Q
71-43-2	Benzene	ND	2.0	0.46	ug/l
100-41-4	Ethylbenzene	ND	2.0	0.45	ug/l
108-88-3	Toluene	ND	2.0	0.48	ug/l
1330-20-7	Xylene (total)	ND	6.0		ug/l

CAS No.	Surrogate Recoveries		Limits	
1868-53-7	Dibromofluoromethane	101%	76-125%	
17060-07-0	1,2-Dichloroethane-D4	115%	69-128%	
2037-26-5	Toluene-D8	99 %	80-121%	
460-00-4	4-Bromofluorobenzene	99 %	69-142%	



Page 1 of 1



Blank Spike Summary

Job Number:	T19959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VF2793-BS	F0088564.D	1	12/06/07	ZLH	n/a	n/a	VF2793

The QC reported here applies to the following samples:

Method: SW846 8260B

T19959-3, T19959-4, T19959-5, T19959-6, T19959-9

4-Bromofluorobenzene

CAS No.	Compound	Spike ug/l	BSP ug/1	BSP %	Limits
71-43-2	Benzene	25	27.0	108	73-121
100-41-4	Ethylbenzene	25	27.2	109	75-117
108-88-3	Toluene	25	27.6	110	75-119
1330-20-7	Xylene (total)	75	83.3	111	75-118
CAS No.	Surrogate Recoveries	BSP	Li	mits	
1868-53-7	Dibromofluoromethane	99 %	76	-125%	
17060-07-0	1,2-Dichloroethane-D4	104%	69	- 128 %	
2037-26-5	Toluene-D8	102%	80	-121%	

100%

69-142%



Page 1 of 1

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Blank Spike Summary

Job Number:	T19959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VB1551-BS	B0130843.D	1	12/06/07	ZLH	n/a	n/a	VB1551

The QC reported here applies to the following samples:

Method: SW846 8260B

T19959-2, T19959-8

Compound	Spike ug/l	BSP ug/l	BSP %	Limits
Benzene	25	27.7	111	73-121
Ethylbenzene	25	28.4	114	75-117
Toluene	25	27.3	109	75-119
Xylene (total)	75	83.3	111	75-118
	Compound Benzene Ethylbenzene Toluene Xylene (total)	Spike ug/lBenzene25Ethylbenzene25Toluene25Xylene (total)75	Spike ug/lBSP ug/lBenzene2527.7Ethylbenzene2528.4Toluene2527.3Xylene (total)7583.3	Spike ug/lBSP ug/lBSP ug/lBSP %Benzene2527.7111Ethylbenzene2528.4114Toluene2527.3109Xylene (total)7583.3111

CAS No.	Surrogate Recoveries	BSP	Limits	
1868-53-7	Dibromofluoromethane	100%	76-125%	
17060-07-0	1,2-Dichloroethane-D4	107%	69-128%	
2037-26-5	Toluene-D8	95%	80-12 1%	
460-00-4	4-Bromofluorobenzene	100%	69-142%	

 Image: Construction
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 T19959
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Blank Spike Summary

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Job Number:	T19959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch	
VB1553-BS	B0130892.D	1	12/07/07	ZLH	n/a	n/a	VB1553	

The QC reported here applies to the following samples:

4-Bromofluorobenzene

Method: SW846 8260B

T19959-1, T19959-7

460-00-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	25.9	104	73-121
100-41-4	Ethylbenzene	25	25.8	103	75-117
108-88-3	Toluene	25	25.1	100	75-119
1330-20-7	Xylene (total)	75	76.6	102	75-118
CAS No.	Surrogate Recoveries	BSP	Li	mits	
1868-53-7	Dibromofluoromethane	100%	76	-125%	
17060-07-0	1,2-Dichloroethane-D4	106%	69	-128%	
2037-26-5	Toluene-D8	97%	80	-121%	

99%

69-142%



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Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	T19959	
Account:	DUKE DCP Midstream, LLC	С
Project:	DEFS J-4-2	

								_
Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch	
T19953-3MS	F0088574.D	10	12/06/07	ZLH	n/a	n/a	VF2793	
T19953-3MSD	F0088575.D	10	12/06/07	ZLH	n/a	n/a	VF2793	
T19953-3	F0088573.D	10	12/06/07	ZLH	n/a	n/a	VF2793	

The QC reported here applies to the following samples:

Method: SW846 8260B

T19959-3, T19959-4, T19959-5, T19959-6, T19959-9

CAS No.	Compound	T19953-3 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4	Benzene Ethylbenzene	266 1630	250 250	518 1780	101 60* ^a	495 1700	92 28* ^a	5 5	74-125/18 77-119/20
108-88-3 1330-20-7	Toluene Xylene (total)	86.3 1180	250 750	342 1870	102 92	328 1790	97 81	4 4	79-119/21 78-119/20
CAS No.	Surrogate Recoveries	MS	MSD	T19	953-3	Limits			
1868-53-7 17060-07-0	Dibromofluoromethane	101% 107%	102% 107%	97%	6 6	76-1259 69-1289	6		
2037-26-5 460-00-4	Toluene-D8 4-Bromofluorobenzene	99% 95%	97% 93%	101 100	, % %	80-1219 69-1429	6		

(a) Outside control limits due to high level in sample relative to spike amount.



Page 1 of 1

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Job Number: Account: Project:	T19959 DUKE DCP Midstrea DEFS J-4-2	am, LLC	e Summ	iar y				r	age 1 of 1
Sample	File ID DF	Analyzed	Ву	Prep D	Date	Prep Bate	h Ar	alytical	Batch
T19933-8MS	B0130857.D 25	12/06/07	ZLH	n/a		n/a	VI	31551	
T19933-8MSI	D B0130858.D 25	12/06/07	ZLH	n/a		n/a	VI	31551	
T19933-8	B0130853.D 25	12/06/07	ZLH	n/a		n/a	VI	31551	
The QC repo T19959-2, T1	rted here applies to the 9959-8	following sam	ples:			Method:	SW846	8260B	
CAS No. C	Compound	T19933-8 ug/l	S Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPI
71-43-2 E	Benzene	2090	625	2560	75	2490	64* a	3	74-125/1
100-41-4 E	Ethylbenzene	1540	625	2170	101	2080	86	4	77-119/2
108-88-3 Т	oluene	1810	625	2350	86	2290	77* a	3	79-119/2
1330-20-7 🗴	(ylene (total)	3030	1880	4980	104	4790	94	4	78-119/2
CAS No. S	urrogate Recoveries	MS	MSD	T1	.9933-8	Limits			
1868-53-7 I	Dibromofluoromethane	99 %	99 %	10	5%	76-1259	%		
17060-07-0 1	,2-Dichloroethane-D4	101%	100%	11	8%	69-1289	%		
2037-26-5 Т	`oluene-D8	98%	97%	98	%	80-1219	6		

100%

97%

69-142%

(a) Outside control limits due to high level in sample relative to spike amount.

99%

4-Bromofluorobenzene



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T19959-2,	T19959-8
CAS No.	Compound

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number:	119959
Account:	DUKE DCP Midstream, LLC
Project:	DEFS J-4-2

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T19959-7MS T19959-7MSD	B0130909.D B0130910.D	1	12/07/07	ZLH ZLH	n/a n/a	n/a n/a	VB1553 VB1553
T19959-7	B0130907.D	1	12/07/07	ZLH	n/a	n/a	VB1553

The QC reported here applies to the following samples:

Method: SW846 8260B

T19959-1, T19959-7

CAS No.	Compound	T19959-7 ug/l	v Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		25	27.9	112	26.2	105	6	74-125/18
100-41-4	Ethylbenzene	ND		25	26.9	108	26.5	106	1	77-119/20
108-88-3	Toluene	ND		25	26.5	106	25.2	101	5	79-119/21
1330-20-7	Xylene (total)	ND		75	79.8	106	77.9	104	2	78-119/20
CAS No.	Surrogate Recoveries	MS		MSD	T 1	9959-7	Limits			
1868-53-7	Dibromofluoromethane	105%		101%	110	0%	76-1259	%		
17060-07-0	1,2-Dichloroethane-D4	107%		106%	124	4%	69-128	%		
2037-26-5	Toluene-D8	97%		95%	10)%	80-1219	%		
460-00-4	4-Bromofluorobenzene	98%		101%	10	1%	69-1429	%		

Page 1 of 1

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 Image: Section 26 of 26

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DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605-2226 FAX

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October 29, 2007

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

RE: 3rd Quarter 2007 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Price:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 3rd Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East). At this time, no RP number has been assigned to this remediation project.

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me <u>swweathers@dcpmidstream.com</u>.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Sr. Environmental Specialist

cc: Carl Chavez, OCD Santa Fe Office Larry Johnson, OCD Hobbs District Office (Copy on CD) Lynn Ward, DCP Midland Office Environmental Files October 17, 2007

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Summary of the Third Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the third quarter 2007 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP. The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed because of drilling refusal.

GROUNDWATER SAMPLING

Trident Environmental collected groundwater samples on September 25, 2007. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2.

The approximate water-table elevation for MW-1 was estimated 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 FPH density (assumed at 0.73).

The historic FPH thickness values are summarized in Table 3. Well MW-1 did not contain FPH during the February 2006 and the September 2006 sampling events. The

6885 South Marshall St., Suite 3, Littleton, CO 80128 phone 303-948-7733 fax 303-948-7739

Mr. Stephen Weathers October 17, 2007 Page 2

FPH thickness has remained between 0.07 feet and 0.09 feet since then. The FPH thickness in MW-2 declined from 0.57 feet in February 2006 to no FPH present in June 2007 back to 0.03 feet in September 2007.

All of the wells were purged and sampled using the standard protocols for this site. MW-1 and MW-2 were both sampled because the thickness of FPH was low. Purging was completed using dedicated bailers until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity stabilized. The well purging forms are attached. The affected purge water was disposed at the DCP Linam Ranch facility.

Unfiltered samples were collected using the 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 protocol. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX).

The laboratory analyses for the sampling episode are summarized in Table 4. The laboratory report is attached. Table 5 provides the quality assurance/quality control (QA/QC) information. The QA/QC evaluation includes:

- The sample container temperature was 2.5° centigrade when the lab received it.
- All but on one of the individual surrogate spikes were within their control limits.
- The relative percentage difference (RPD) values could not be calculated because the constituents for the duplicate were below the method reporting limits.
- The matrix spike and matrix spike duplicate results from the MW-6 sample were all within the control limits for all four constituents.

The above data indicate that the data is suitable as monitoring data.

Mr. Stephen Weathers October 17, 2007 Page 3

RESULTS AND INTERPRETATIONS

The results and interpretations presented below are based upon all of the data collected to date. Groundwater flow is discussed first. Evaluation of the organic data follows.

Groundwater Flow

Figure 3 includes hydrographs for the corrected water-table elevations for all site wells. The water table declined in all wells. The decline was uniform in all wells excepting MW-3. The decline in MW-3 was steeper.

The resulting September 2007 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table that was measured in September 2007 exhibits the same approximate 0.009 feet/foot gradient toward the southeast that was measured in the past. The water table elevation measured in MW-2 is anomalously high relative to its position between MW-3, MW-4 and MW-2.

Groundwater Chemistry

The September 2007 data is summarized in Table 4. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of the table. The constituents that exceeded these standards are highlighted by bolding. Examination of Table 4 shows that benzene in MW-1 was the only constituent that exceeded the NMWQCC groundwater standards. None of the other constituents exceeded these standards in MW-2 or any of the remaining wells.

The data for all of the organic constituents are summarized in Table 6. Examination of Table 6 indicates the following:

- The toluene, ethylbenzene and total xylenes concentrations have never exceeded the NMWQCC standards.
- The benzene concentration in MW-1 appears to be declining even though FPH has been present at thicknesses less than 0.1 feet.
- The benzene concentration in MW-2 declined from 0.0262 mg/l to 0.0045 mg/l between June 2007 and September 2007.
- The BTEX concentrations in MW-3 have remained below the method reporting limits with the exception of the primary June 2007 sample. The concentrations in the primary June 2007 sample were near the MRL while the concentrations in its duplicate are all below the MRL. Based upon the above information, the potential for cross-gradient constituent migration appears to be limited at best.
- The benzene concentrations in MW-4 declined to below the MRL in both the June 2007 and September 2007 sampling episodes.

Mr. Stephen Weathers October 17, 2007 Page 4

 None of the BTEX constituents have been detected in down-gradient wells MW-6, MW-7 and MW-8;

CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that:

- Groundwater flow is constant toward the southeast with the exception of an anomalous area associated with MW-2;
- The BTEX constituents were only detected in the wells MW-1 and MW-2 that were originally installed in the release area.
- The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is not expanding and, in fact, it may be contracting;
- The FPH in MW-1 and MW-2 is less than 0.1' thick, and it may be dissipating;

Passive FPH collection bailers were installed in wells MW-1 and MW-2. These bailers have been checked and emptied as necessary on a regular basis.

AEC recommends continued quarterly groundwater monitoring to verify continuance of the trends discussed above. The next groundwater-monitoring event is scheduled for the fourth quarter of 2007. Do not hesitate to contact me if you have any questions or comments on this letter.

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Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Mechael H. Stewart

Michael H. Stewart, P.E., C.P.G. Principal Engineer MHS/tbm TABLES

Name	Date	Stickup	Casing	Total	Screen	Sand
	Installed		Diameter	Depth	Interval	Interval
			(inches)	(btoc)	(ground)	· · · ·
MW-1	2/06	3.17	2	43.05	19-39	17-39
MW-2	2/06	3.08	4	43.30	19-39	17-39
MW-3	2/06	3.21	2	43.00	19-39	17-39
MW-4	9/06	3.12	2	38.12	20-35	18-35
MW-5		Not in	stalled beca	use of dril	ling refusal	
MW-6	9/06	3.32	2	38.32	20-35	18-35
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	2	38.32	20-35	18-35

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Table 1 – Summary of Monitoring Well Completions at the J-4-2 Site

All units are feet except as noted btoc: Below top of casing

	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07	9/25/07
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15	3711.86
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63	3712.34
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79	3711.50
MW-4		3712.80	3712.82	3712.78	3713.25	3712.98
MW-6		3711.76	3712.00	3711.96	3711.87	3711.56
MW-7		3711.03	3710.80	3710.73	3710.50	3709.87
MW-8		3709.22	3708.95	3708.79	3708.54	3708.06

Table 2 - Summary of Water Table Elevations for the J-4-2 Site

Units are feet

Blank cells: wells not installed

Date	MW-1	MW-2
02/15/06	0.00	0.57
09/25/06	0.00	0.15
12/21/06	0.09	0.13
03/14/07	0.07	0.10
06/26/07	0.09	0.00
9/25/07	0.09	0.03

Table 3 - Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

Units are feet

Well	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62
MW-1	0.0114	0.0029	0.0035	0.0978
MW-2	0.0045	< 0.00100	0.0027	0.0471
MW-3	< 0.00100	< 0.00100	< 0.00100	< 0.00100
MW-3 Dup	< 0.00100	< 0.00100	< 0.00100	< 0.00100
MW-4	< 0.00100	< 0.00100	< 0.00100	< 0.00100
MW-6	< 0.00100	< 0.00100	< 0.00100	< 0.00100
MW-7	< 0.00100	< 0.00100	< 0.00100	< 0.00100
MW-8	< 0.00100	< 0.00100	< 0.00100	< 0.00100
Trip	< 0.00100	< 0.00100	< 0.00100	< 0.00100

 Table 4 - Summary of September 25, 2007 Organic Groundwater Sampling Results

Notes: Units are mg/l,

MW-5 was not installed because of drilling refusal

Table 5 - Quality Assurance Evaluation for the September 2007 Data

MW-3 Duplicate Samples

	Benzene	Toluene	Ethylbenzene	Total Xylenes
<u>RPD (%)</u>	NA	NA	NA	NA

NA: Not analyzed because one or both of the constituents are below their method reporting limit(s).

MW-6 MS/MSD (percent recovery)

	Benzene	Toluene	Ethylbenzene	Total Xylenes
MS	89	89	90	91
MSD	92	93	94	94

MS: matrix spike

MSD: matrix spike duplicate
Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWOCC				220071001000	<u> </u>
Groundwater		0.01	0.75	0.75	0.62
Standard					
MW-1	2/06	0.139	0.326	0.34	0.31
	9/06	0.0418	0.0048	0.0247	0.0605
Dup	9/06	0.0555	0.0068	0.032	0.0782
	12/06	FPH	FPH	FPH	FPH
	3/07	FPH	FPH	FPH	FPH
	6/07	FPH	FPH	FPH	FPH
	9/07	0.0114	0.0029	0.0035	0.0978
MW-2	6/07	0.0262	0.0382	0.0404	0.335
	9/07	0.0045	< 0.001	0.0027	0.0471
MW-3	2/06	< 0.001	< 0.001	< 0.001	< 0.002
	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
Dup	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	0.0029	0.0053	0.0015	0.0097
Dup	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
MW-4	9/06	0.0086	0.00093J	0.0092	0.0061
	12/06	0.0295	0.0058	< 0.002	0.0075
Dup	12/06	0.0207	0.004	< 0.002	0.0054
	3/07	0.0044	0.0006	< 0.002	0.0032
	6/07	< 0.001	< 0.001	< 0.001	0.0025
	9/07	< 0.001	< 0.001	< 0.001	< 0.001

Table 6 - Summary of Organic Groundwater Data

Notes: Units are mg/l, FPH: No sample because FPH is present: Blank cell: no sample collected, MW-5 was never installed

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC	,	· · · · · ·			1
Groundwater		0.01	0.75	0.75	0.62
Standard					
MW-6	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
MW-7	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	0.0027
	9/07	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
	6/07	< 0.001	< 0.001	< 0.001	< 0.001
	9/07	< 0.001	< 0.001	< 0.001	< 0.001

Table 6 – Summary of Organic Groundwater Data (continued)

Notes: Units are mg/l, FPH: No sample because FPH is present:

FIGURES











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GROUNDWATER SAMPLING NOTES AND LABORATORY ANALYTICAL REPORT

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-1
S	TE NAME:	J42	(Pipeline Le	eak)		DATE:	9/25/2007
PRC	JECT NO.		F-119		-	SAMPLER:	J. Fergerson
PURGINO	G METHOD:	:	🗸 Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:	
SAMPLIN	G METHO	D:	🗹 Disposab	le Bailer [Direct	from Discha	arge Hose 🗌 Other:
DESCRIE	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMP	LING THE WELL:
Glove	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗌 🤇	Other:		
DISPOSA		OF PURG	E WATER:	Surface	e Dischar	ge 🗌 Dru	ms 🗹 Disposal Facility
TOTAL D	EPTH OF V	VELL:	43.05	Feet			
DEPTH T	O WATER:	COLUMNI	28.66	Feet		20.2	Minimum College to
WELL DI	METER:	4.0	Inch	reel		20.2	purge 3 well volumes
		TEMP	COND				(Water Column Height x 1.96)
TIME	PURGED	°C	<i>m</i> S/cm	pН	mg\L	Turb	REMARKS
13:00	0.0	-	-	-	-	-	Begin Hand Bailing
13:30	30.0	-	-		-	-	
		_					
0:30	:Total Time	e (hr:min)	30	:Total Vol	(gal)	1.00	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070926	1330		
ANAL	YSES:	BTEX (802	1-B)				
COM	MENTS:						

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-2
SI	ITE NAME:	J42	(Pipeline Le	eak)	-	DATE:	9/25/2007
PRC	DJECT NO.		F-119		_ :	SAMPLER:	J. Fergerson
PURGING SAMPLIN DESCRIB I Glove	G METHOD: IG METHOE BE EQUIPM s 🗌 Alcono	D: ENT DECO x □ Distill	☑ Hand Bai ☑ Disposab NTAMINATI ed Water Ri	led	Imp If Pui Direct ⁻ OD BEFC Other:	mp, Type: from Disch DRE SAMP	arge Hose
DISPOSA TOTAL DI DEPTH T HEIGHT (WELL DIA	L METHOD EPTH OF W O WATER: OF WATER AMETER:	OF PURG VELL: COLUMN: 2.0	E WATER: 43.30 28.30 15.00 Inch	Surface Feet Feet Feet	e Dischar	ge 🗌 Dru 7.3	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	PURGED	° C	COND. mS/cm	pН	mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
12:28	0.0	-	-	-	-	-	Begin Hand Bailing
12:47	8.1		-	-	-	-	
0:19	:Total Time	e (hr:min)	8.1	:Total Vol	(gal)	0.42	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070926	1250		
ANAL COMM	LYSES: MENTS:	BTEX (802	1-B)				

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	CLIENT:	DC	P Midstre	am	-	WELL ID:	MW-3
SI	ITE NAME:	J42	(Pipeline L	eak)	_	DATE:	9/25/2007
PRC	DJECT NO.		F-119			SAMPLER:	J. Fergerson
PURGING	G METHOD:	:	✓ Hand Bai	led 🗌 Pu	imp If Pui	mp, Type:	
SAMPLIN	G METHOD	D:	✓ Disposab	le Bailer [Direct 1	from Discha	arge Hose DOther:
DESCRIB	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPI	LING THE WELL:
Glove	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗌 (Other:		
DISPOSA		OF PURG	E WATER:	Surface	e Discharç	ge 🗌 Dru	ms 🗹 Disposal Facility
TOTAL D	EPTH OF W	VELL:	43.00	Feet			
DEPTH T	O WATER:	COLUMN	27.89	Feet		74	Minimum Callona ta
WELL DIA	AMETER:	2.0	Inch	reel		7.4	purge 3 well volumes
		TEMP					(Water Column Height x 0.49)
TIME	PURGED	°C	m S/cm	pН	mg\L	Turb	REMARKS
18:31	0.0	-	-	-	_	-	Begin Hand Bailing
18:36	2.7	19.7	>4.00	6.96	-	<u> </u>	
18:40	5.4	19.7	>4.00	7.00	-	-	
18:45	8.1	19.7	3.94	7.02	-	-	
						· · · · · ·	
				<u></u>			
							· · · · · · · · · · · · · · · · · · ·
0:14	:Total Time	e (hr:min)	8.1	:Total Vol	(qal)	0.58	Elow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070925	1850		
ANAL	YSES:	BTEX (802	1-B)				
COM	MENTS:	Collected D	uplicate Sa	mple No.:	07092519	00 for BTE	X (8021-B)

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-4
SI		J42	(Pipeline Le	eak)	-	DATE	9/25/2007
PRC	JECT NO.		F-119	analasia distante da Aug	-	SAMPLER	J. Fergerson
PURGING SAMPLIN DESCRIB		:): ENT DECO	☑ Hand Bai ☑ Disposab NTAMINATI	led Du le Bailer [ON METH	mp If Pu Direct	mp, Type: from Disch DRE SAMP	arge Hose
DISPOSA TOTAL DI DEPTH T HEIGHT (WELL DIA	S I Alcond L METHOE EPTH OF W O WATER: OF WATER: AMETER:	OF PURG	ed Water Ri E WATER: <u>38.12</u> 27.26 10.86 Inch	nse 🗌 🤇 Surface Feet Feet Feet	Other:	ge Dru 5.3	ms
TIME	VOLUME PURGED	°C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
18:06	0.0	-	-	-	-	-	Begin Hand Bailing
18:09	2.0	19.7	3.38	7.00	-	-	
18:13	4.0	19.7	>4.00	6.89	-	-	
18:17	6.0	19.7	>4.00	6.86	-	-	
							· · · · · · · · · · · · · · · · · · ·
			<u>.</u>				
0:11	:Total Time	e (hr:min)	6	:Total Vol	(gal)	0.54	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070925	1820		
ANAL	YSES:	BTEX (802	1-B)				· · · · · · · · · · · · · · · · · · ·
COMN	MENTS:						

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	CLIENT:	DC	P Midstre	am		WELL ID:	MW-6
S	TE NAME:	J42	(Pipeline Le	eak)		DATE	9/25/2007
PRC	JECT NO.		F-119			SAMPLER	J. Fergerson
PURGING	G METHOD	:	✓ Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:	
SAMPLIN	G METHO	D:	🗹 Disposab	le Bailer [Direct f	rom Disch	arge Hose 🗌 Other:
DESCRIE	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
Glove	s 🗌 Alconc	ox 🗌 Distill	ed Water Ri	nse 🗌 C	Other:		
DISPOSA		OF PURG	E WATER:	Surface	e Discharg	je 🗌 Dru	ms 🗌 Disposal Facility
total d	FPTH OF V	VELL:	38.32	Feet			
DEPTH T	O WATER:	0011001	28.40	Feet		4.0	
WELL DI	OF WATER	2.0	9.92 Inch	Feet		4.9	_Minimum Gallons to purge 3 well volumes
							(Water Column Height x 0.49)
TIME	PURGED	° C	m S/cm	pН	mg\L	Turb	REMARKS
17:33	0.0	-	_	-	-		Begin Hand Bailing
17:36	1.7	19.6	1.91	7.14	-		
17:39	3.4	19.5	1.75	7.13	-		·····
17:42	5.1	19.4	1.71	7.13	-	-	
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							· · · · · · · · · · · · · · · · · · ·
·····							
ļ							·
0:09	:Total Time	ə (hr:min)	5.1	:Total Vol	(gal)	0.56	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070925	1750		·····
ANAL	YSES:	BTEX (802	1-B)		·	<u></u>	
COM	MENTS:	Collected N	IS/MSD San	nples!			

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CLIEN	CLIENT: DCP Midstream			_	WELL ID:	MW- 7
SITE NAM	E: J42	(Pipeline Le	eak)	-	DATE:	9/25/2007
PROJECT N	D	F-119		_ :	SAMPLER:	J. Fergerson
PURGING METHO	D:	⊡ Hand Bai	led 🗌 Pu	ımp If Pu	mp, Type:	
SAMPLING METH	OD:	🗹 Disposab	le Bailer	Direct	from Discha	arge Hose DOther:
DESCRIBE EQUIF	MENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPI	LING THE WELL:
Gloves Alco	nox 🗌 Distil	led Water Ri	nse 🗌 (Other:		
DISPOSAL METH	DD OF PURG	E WATER:	Surface	e Dischar	ge 🗌 Dru	ms 🗌 Disposal Facility
TOTAL DEPTH OF DEPTH TO WATE HEIGHT OF WATE WELL DIAMETER	WELL: R: R COLUMN: 2.0	39.45 30.86 8.59 Inch	Feet Feet Feet		4.2	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME VOLUN PURGE	E TEMP. D ° C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
17:08 0.0		-	-	-	-	Begin Hand Bailing
17:11 1.7	19.9	3.11	7.07	-	-	
17:15 3.4	19.8	3.26	7.07	-	-	
17:18 5.1	19.7	3.30	7.07	-	-	
0.10 ·Total Ti	me (hr:min)	51	·Total Vol	(gal)	0.51	·Elow Rate (cal/min)
SAMPLE NO	Collected S	Sample No :	070925	1720	<u> </u>	
ANAI YSES	BTEX (802	(1-B)	0.0020			· · · · · · · · · · · · · · · · · · ·
COMMENTS:		/				

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-8
SI	TE NAME:	J42	(Pipeline Le	eak)	-	DATE:	9/25/2007
PRC	JECT NO.		F-119		-	SAMPLER:	J. Fergerson
PURGING	G METHOD:):	☑ Hand Bai ☑ Disposab	led Pu le Bailer	mp If Pui	mp, Type: from Discha	arge Hose 🔲 Other:
			NTAMINATI		OD BEFC	RE SAMPI	LING THE WELL:
Glove: DISPOSA TOTAL DI DEPTH TI HEIGHT (WELL DIA	S Alcono L METHOD EPTH OF W O WATER: DF WATER METER:	OF PURG	ed Water Ri E WATER: <u>38.32</u> 29.26 9.06 Inch	nse 🗌 C V Surface Feet Feet Feet	Other:	ge Drui 4.4	ms Disposal Facility Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME PURGED	темр. ° с	COND. mS/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
16:42	0.0	-	-	-	-	-	Began Hand Bailing
16:44	1.7	20.4	2.46	7.03	-		
16:48	<u>3</u> .4	20.0	2.45	7.03	-	-	
16:52	5.1	19.8	2.44	7.04	-	-	
0:10	:Total Time	e (hr:min)	5.1	:Total Vol	(gal)	0.51	E Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070925	1655		
ANAL	YSES:	BTEX (802	1-B)		_ <u></u>		
COMN	MENTS:						



E-Mail: lab@traceanalvsis.com

Midland, Texas 79703

Analytical and Quality Control Report

432•689•6301

817 • 201 • 5260

FAX 432 • 689 • 6313

Mike Stewart American Environmental Consulting 6885 South Marshall Street Suite 3 Littleton, CO, 80128

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Project Location:Lea County, NMProject Name:DCP Midstream-J42 PipelineProject Number:DCP Midstream-J42 Pipeline

5002 Basin Street, Suite A1

6015 Harris Parkway, Suite 110 - 5t. Worth, Texas 76132

Report Date: October 4, 2007

Work	Order:	7092739

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
137659	MW-1 (0709261330)	water	2007-09-26	13:30	2007-09-27
137660	MW-2 (0709261250)	water	2007-09-26	12:50	2007-09-27
137661	MW-3 (0709251850)	water	2007-09-25	18:50	2007-09-27
137662	MW-4 (0709251820)	water	2007-09-25	18:20	2007-09-27
137663	MW-6 (0709251750)	water	2007-09-25	17:50	2007-09-27
137664	MW-7 (0709251720)	water	2007-09-25	17:20	2007-09-27
137665	MW-8 (0709251655)	water	2007-09-25	16:55	2007-09-27
137666	Duplicate (0709251900)	water	2007-09-25	19:00	2007-09-27
137667	Trip Blank	water	2007-09-25	00:00	2007-09-27

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Alm

Dr. Blair Leftwich, Director

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 ${\bf B}$ - The sample contains less than ten times the concentration found in the method blank.

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Analytical Report

Sample: 137659 - MW-1 (0709261330)

Analysis:BTEQC Batch:4166Prep Batch:3599	EX 60 94	A E S	analytical Me Date Analyze ample Prepa	ethod: ed: aration:	S 8021B 2007-10-02 2007-10-02		Prep Method: Analyzed By: Prepared By:	: S 5030B MT MT
			RL	1				
Parameter	Flag		Result	;	Units	Dil	lution	RL
Benzene	0		0.0114		mg/L		1	0.00100
Toluene			0.00350)	mg/L		1	0.00100
Ethylbenzene			0.00290	1	mg/L		1	0.00100
Xylene			0.0978	;	mg/L	<u>-</u> <u></u>	1	0.00100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (7	(FT)	~	0.0778	mg/L	, <u>1</u>	0.100	78	71.7 - 119
4-Bromofluorobenz	zene (4-BFB)		0.0865	mg/L	. 1	0.100	86	43.8 - 126
Sample:137660Analysis:BTHQC Batch:4160Prep Batch:3599	- MW-2 (070 § EX 50 94	9 26125 0) A I S	nalytical M Date Analyze ample Prepa	ethod: ed: aration:	S 8021B 2007-10-02 2007-10-02		Prep Method Analyzed By: Prepared By:	: S 5030B MT MT
			RI					
Parameter	Flag		Result	t	Units	Di	lution	RL
Benzene			0.00450)	mg/L		1	0.00100
Toluene			0.00270)	$\mathrm{mg/L}$		1	0.00100
Ethylbenzene			< 0.00100	C	$\mathrm{mg/L}$		1	0.00100
Xylene			0.047	l	mg/L		1	0.00100
C		T-1	DU	тт •/		Spike	Percent	Recovery
Surrogate		Flag	Result	Units	5 Dilution	Amount	Recoverv	Limits

Sample: 137661 - MW-3 (0709251850)

Trifluorotoluene (TFT)

4-Bromofluorobenzene (4-BFB)

Analysis:	BTEX		Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	41610		Date Analyzed:	2007 - 10 - 01	Analyzed By:	KB
Prep Batch:	35953		Sample Preparation:	2007 - 10 - 01	Prepared By:	KB
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Benzene			< 0.00100	mg/L	1	0.00100
Toluene			< 0.00100	$\mathrm{mg/L}$	1	0.00100
Ethylbenzen	e		< 0.00100	mg/L	1	0.00100
Xylene			< 0.00100	mg/L	1	0.00100

mg/L

mg/L

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71.7 - 119

43.8 - 126

0.0645

0.0856

¹Surrogate out due to peak interference.

Report Date: October 4, 2007 DCP Midstream-J42 Pipeline

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Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0951	mg/L	1	0.100	95	78.1 - 112
4-Bromofluorobenzene (4-BFB)		0.0759	$\mathrm{mg/L}$	1	0.100	76	63.1 - 120

Sample: 137662 - MW-4 (0709251820)

Analysis:BTEXQC Batch:41610Prep Batch:35953		A I S	Analytical Me Date Analyzed Sample Prepa	ethod: d: ration:	S 8021B 2007-10-01 2007-10-01		Prep Method Analyzed By Prepared By:	: S 5030B : KB KB
			RL					
Parameter	Flag		Result		Units		Dilution	RL
Benzene			< 0.00100		mg/L		1	0.00100
Toluene			< 0.00100	I	mg/L		1	0.00100
Ethylbenzene			< 0.00100	I	mg/L		1	0.00100
Xylene			< 0.00100	l 	mg/L		1	0.00100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilutio	n Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.0942	mg/L	1	0.100	94	78.1 - 112
4-Bromofluorobenzene (4-	-BFB)		0.0758	mg/L	. 1	0.100	76	63.1 - 120

Sample: 137663 - MW-6 (0709251750)

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	41613	Date Analyzed:	2007-10-01	Analyzed By:	KB
Prep Batch:	35956	Sample Preparation:	2007-10-01	Prepared By:	KB
Commente II	as as MC/MCD				

Comment: Use as MS/MSD

		F	₹L				
Parameter F	lag	Resu	ılt	Units	Di	lution	RL
Benzene		< 0.00100		mg/L	1		0.00100
Toluene		< 0.00100		$\mathrm{mg/L}$	1		0.00100
Ethylbenzene		< 0.00100		mg/L	1		0.00100
Xylene		< 0.00100		mg/L		1	0.00100
Surrogate	Fla	g Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0785	mg/L	1	0.100	78	71.7 - 119
4-Bromofluorobenzene (4-BF)	B)	0.0667	$\mathrm{mg/L}$	1	0.100	67	43.8 - 126

Sample: 137664 - MW-7 (0709251720)

Analysis:	BTEX	Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	41613	Date Analyzed:	2007-10-01	Analyzed By:	KB
Prep Batch:	35956	Sample Preparation:	2007-10-01	Prepared By:	KB

Report 1	Date:	Octobe	r 4,	2007
DCP M	idstrea	am-J42	Pip	eline

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Parameter	Flag	Result	t	Units	Di	lution	RL
Benzene		< 0.00100)	mg/L		1	0.00100
Toluene		< 0.00100)	mg/L		1	0.00100
Ethylbenzene		< 0.00100)	mg/L		1	0.00100
Xylene		< 0.00100)	$\mathrm{mg/L}$		1	0.00100
					Spike	Percent	Recovery
Surrogate	Fla	g Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0825	mg/L	1	0.100	82	71.7 - 119
4-Bromofluorobenzene (4-BF	̈́Β)	0.0680	$\mathrm{mg/L}$	1	0.100	68	43.8 - 126

Sample: 137665 - MW-8 (0709251655)

Analysis:BTEXQC Batch:41613Prep Batch:35956		A I S	Analytical Me Date Analyzec Sample Prepar	thod: l: ration:	S 8021B 2007-10-01 2007-10-01		Prep Method Analyzed By: Prepared By:	: S 5030B KB KB
			RL					
Parameter	Flag		Result		Units	D	ilution	RL
Benzene			< 0.00100		mg/L		1	0.00100
Toluene			< 0.00100		mg/L		1	0.00100
Ethylbenzene			< 0.00100		$\mathrm{mg/L}$		1	0.00100
Xylene			< 0.00100		mg/L		1	0.00100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)			0.0814	mg/L	1	0.100	81	71.7 - 119
4-Bromofluorobenzene (4-	-BFB)		0.0679	mg/L	1	0.100	68	43.8 - 126

Sample: 137666 - Duplicate (0709251900)

Analysis: BTEX		Analytical Me	ethod:	S 8021B		Prep Method:	S 5030B
QC Batch: 41613		Date Analyze	d:	2007-10-01		Analyzed By:	
Prep Batch: 35956		Sample Prepa	ration:	2007-10-01		Prepared By:	\mathbf{KB}
		BI					
Parameter Flag		Result		Units]	Dilution	RL
Benzene		< 0.00100)	$\mathrm{mg/L}$		1	0.00100
Toluene		< 0.00100)	$\mathrm{mg/L}$		1	0.00100
${f E}{thylbenzene}$		< 0.00100)	$\mathrm{mg/L}$		1	0.00100
\mathbf{X} ylene		< 0.00100)	mg/L		1	0.00100
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilutior	n Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0890	mg/L	, 1	0.100	89	71.7 - 119
4-Bromofluorobenzene (4-BFB)		0.0742	mg/L	, 1	0.100	74	43.8 - 126

Report Date: Octobe DCP Midstream-J42	er 4, 2007 Pipeline	DCP	Work Orde Midstrea	er: 7092739 m-J42 Pipeline	Page Number: 6 of 12 Lea County, NM		
Sample: 137667 - 7	Trip Blank						
Analysis: BTEX		Analytical M	ethod:	S 8021B		Prep Method:	S 5030I
QC Batch: 41613		Date Analyze	ed:	2007-10-01		Analyzed By:	\mathbf{KB}
Prep Batch: 35956		Sample Prep	aration:	2007-10-01		Prepared By:	KB
		R	L				
Parameter	Flag	Resul	t	Units	Dil	RI	
Benzene		<0.00100 mg/L 1		1	0.0010		
Toluene		<0.00100 mg/L			1	0.0010	
Ethylbenzene		< 0.0010	0	mg/L		1	0.0010
Xylene		< 0.0010	0	mg/L		1	0.0010
					Spike	Percent	Recovery
Surrogate	Fla	ag Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TF	Г)	0.0812	mg/L	1	0.100	81	71.7 - 11
4-Bromofluorobenzen	e (4-BFB)	0.0658	$\mathrm{mg/L}$	1	0.100	66	43.8 - 12
Method Blank (1)	QC Batch: 41	1610					
QC Batch: 41610		Date Ana	alyzed:	2007-10-01		Analyzed	By: KB
Prep Batch: 35953		QC Prep	aration:	2007-10-01		Prepared	By: KB
			Ν	MDL			
Parameter	Flag		Re	esult	Unit	s	RL

Method Blank (1) QC Batch: 41613

Flag

Result

0.0987

0.0813

Benzene Toluene

Xylene

Surrogate

Trifluorotoluene (TFT)

4-Bromofluorobenzene (4-BFB)

Ethylbenzene

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QC Batch: 41613		Date Ana	lyzed: 20	07-10-01		Analyz	ed By: KB
Prep Batch: 35956		QC Prepa	ration: 20		Prepar		
			MI	DL			
Parameter	\mathbf{Flag}		Res	ult	Uni	ts	RL
Benzene			< 0.0002	299	mg/	'L	0.001
Toluene		< 0.000332			mg/	'L	0.001
Ethylbenzene	Ethylbenzene		< 0.000644			'L	0.001
Xylene			< 0.0004	56	mg/	′L	0.001
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0888	mg/L	1	0.100	89	64.9 - 111
4-Bromofluorobenzene (4-BFB)		0.0730	$\mathrm{mg/L}$	1	0.100	73	35.3 - 121

< 0.000247

< 0.000257

< 0.000336

< 0.000218

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Units

mg/L

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mg/L

mg/L

Percent

Recovery

99

81

Spike

Amount

0.100

0.100

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0.001

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Recovery

Limits

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Method Blank (1) QC Batch: 41660

QC Batch: 41660 Prep Batch: 35994		Date Anal QC Prepa	yzed: 20 ration: 20	07-10-02 07-10-02		Analyze Prepare	ed By: MT ed By: MT
			M	DL			
Parameter	Flag		Res	ult	Uni	ts	RL
Benzene			< 0.0002	299	mg/	'L	0.001
Toluene			< 0.0003	32	mg/	'L	0.001
Ethylbenzene			< 0.0006	644	mg/	'L	0.001
Xylene			< 0.0004	56	mg/	'L	0.001
					Spike	Percent	Recovery
Surrogate	Flag	Result	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0876	mg/L	1	0.100	88	64.9 - 111
4-Bromofluorobenzene (4-BFB)		0.0716	$\mathrm{mg/L}$	1	0.100	72	35.3 - 121

Laboratory Control Spike (LCS-1)

QC Batch:	41610	Date Analyzed:	2007-10-01	Analyzed By:	\mathbf{KB}
Prep Batch:	35953	QC Preparation:	2007-10-01	Prepared By:	KB

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.101	mg/L	1	0.100	< 0.000247	101	82 - 118
Toluene	0.0998	$\mathrm{mg/L}$	1	0.100	< 0.000257	100	81.4 - 118
Ethylbenzene	0.0984	$\mathrm{mg/L}$	1	0.100	< 0.000336	98	81.5 - 120
Xylene	0.288	$\mathrm{mg/L}$	1	0.300	< 0.000218	96	82.2 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.100	mg/L	1	0.100	< 0.000247	100	82 - 118	1	20
Toluene	0.0991	$\mathrm{mg/L}$	1	0.100	< 0.000257	99	81.4 - 118	1	20
Ethylbenzene	0.0993	$\mathrm{mg/L}$	1	0.100	< 0.000336	99	81.5 - 120	1	20
Xylene	0.289	$\mathrm{mg/L}$	1	0.300	< 0.000218	96	82.2 - 121	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0958	0.0943	$\mathrm{mg/L}$	1	0.100	96	94	75.7 - 113
4-Bromofluorobenzene (4-BFB)	0.0935	0.0918	m mg/L	1	0.100	94	92	75.8 - 110

Laboratory Control Spike (LCS-1)

QC Batch:	41613	Date Analyzed:	2007-10-01	Analyzed By:	\mathbf{KB}
Prep Batch:	35956	QC Preparation:	2007-10-01	Prepared By:	KB

continued ...

Repo	rt Date:	Octobe	er 4,	2007
DCP	Midstre	am-J42	Pip	eline

control spikes continued

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0921	mg/L	1	0.100	< 0.000299	92	70 - 130
Toluene	0.0937	mg/L	1	0.100	< 0.000332	94	70 - 130
Ethylbenzene	0.0951	mg/L	1	0.100	< 0.000644	95	70 - 130
Xylene	0.289	$\mathrm{mg/L}$	1	0.300	< 0.000456	96	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0923	mg/L	1	0.100	< 0.000299	92	70 - 130	0	20
Toluene	0.0931	mg/L	1	0.100	< 0.000332	93	70 - 130	1	20
Ethylbenzene	0.0949	mg/L	1	0.100	< 0.000644	95	70 - 130	0	20
Xylene	0.288	$\mathrm{mg/L}$	1	0.300	< 0.000456	96	70 - 130	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0947	0.104	mg/L	1	0.100	95	104	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0999	0.108	mg/L	1	0.100	100	108	70 - 130

Laboratory Control Spike (LCS-1)

QC Batch:	41660	Date Analyzed:	2007-10-02	Analyzed By:	\mathbf{MT}
Prep Batch:	35994	QC Preparation:	2007-10-02	Prepared By:	MT

	LCS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0891	mg/L	1	0.100	< 0.000299	89	70 - 130
Toluene	0.0904	$\mathrm{mg/L}$	1	0.100	< 0.000332	90	70 - 130
Ethylbenzene	0.0908	mg/L	1	0.100	< 0.000644	91	70 - 130
Xylene	0.276	mg/L	1	0.300	< 0.000456	92	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0900	mg/L	1	0.100	< 0.000299	90	70 - 130	1	20
Toluene	0.0914	mg/L	1	0.100	< 0.000332	91	70 - 130	1	20
Ethylbenzene	0.0914	mg/L	1	0.100	< 0.000644	91	70 - 130	1	20
Xylene	0.278	$\mathrm{mg/L}$	1	0.300	< 0.000456	93	70 - 130	1	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCS	LCSD			Spike	LCS	LCSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0998	0.0954	mg/L	1	0.100	100	95	70 - 130
4-Bromofluorobenzene (4-BFB)	0.105	0.0994	$\mathrm{mg/L}$	1	0.100	105	99	70 - 130

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Matrix Spike (MS-1) Spiked Sample: 137515

QC Batch:	41610	Date Analyzed:	2007-10-01	Analyzed By:	KB
Prep Batch:	35953	QC Preparation:	2007-10-01	Prepared By:	KB

	MS			\mathbf{Spike}	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.103	mg/L	1	0.100	< 0.000247	103	78.2 - 121
Toluene	0.101	$\mathrm{mg/L}$	1	0.100	< 0.000257	101	73.7 - 122
Ethylbenzene	0.100	$\mathrm{mg/L}$	1	0.100	< 0.000336	100	72.6 - 123
Xylene	0.292	m mg/L	1	0.300	< 0.000218	97	76.4 - 121

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	2	0.0828	mg/L	1	0.100	< 0.000247	83	78.2 - 121	22	20
Toluene	3	0.0814	$\mathrm{mg/L}$	1	0.100	< 0.000257	81	73.7 - 122	22	20
Ethylbenzene	4	0.0804	$\mathrm{mg/L}$	1	0.100	< 0.000336	80	72.6 - 123	22	20
Xylene	5	0.236	$\mathrm{mg/L}$	1	0.300	< 0.000218	79	76.4 - 121	21	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0948	0.0936	mg/L	1	0.1	95	94	78.9 - 116
4-Bromofluorobenzene (4-BFB)	0.0918	0.0907	$\mathrm{mg/L}$	1	0.1	92	91	67.9 - 122

Matrix Spike (MS-1) Spiked Sample: 137663

QC Batch:	41613	Date Analyzed:	2007-10-01	Analyzed By:	KB
Prep Batch:	35956	QC Preparation:	2007-10-01	Prepared By:	KB

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0886	mg/L	1	0.100	< 0.000299	89	70 - 130
Toluene	0.0894	mg/L	1	0.100	< 0.000332	89	70 - 130
Ethylbenzene	0.0904	mg/L	1	0.100	< 0.000644	90	70 - 130
Xylene	0.273	$\mathrm{mg/L}$	1	0.300	< 0.000456	91	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0924	mg/L	1	0.100	< 0.000299	92	70 - 130	4	20
Toluene	0.0928	$\mathrm{mg/L}$	1	0.100	< 0.000332	93	70 - 130	4	20
Ethylbenzene	0.0935	$\mathrm{mg/L}$	1	0.100	< 0.000644	94	70 - 130	3	20
Xylene	0.282	$\rm mg/L$	1	0.300	< 0.000456	94	70 - 130	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

²Matrix spike RPD out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

³Matrix spike RPD out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

⁴Matrix spike RPD out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

⁵Matrix spike RPD out of control limits. Use LCS/LCSD to demonstrate analysis is under control.

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Work Order: 7092739 DCP Midstream-J42 Pipeline

Surrogate	${ m MS} { m Result}$	MSD Result	Units	Dil.	${ m Spike} \ { m Amount}$	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0939	0.0956	mg/L	1	0.1	94	96	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0994	0.101	$\mathrm{mg/L}$	1	0.1	99	101	70 - 130

Matrix Spike (MS-1) Spiked Sample: 138092

QC Batch:	41660	Date Analyzed:	2007-10-02	Analyzed By:	\mathbf{MT}
Prep Batch:	35994	QC Preparation:	2007-10-02	Prepared By:	MT

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit
Benzene	0.0893	mg/L	1	0.100	< 0.000299	89	70 - 130
Toluene	0.0898	$\mathrm{mg/L}$	1	0.100	< 0.000332	90	70 - 130
Ethylbenzene	0.0891	$\mathrm{mg/L}$	1	0.100	< 0.000644	89	70 - 130
Xylene	0.270	$\mathrm{mg/L}$	1	0.300	< 0.000456	90	70 - 130

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0911	mg/L	1	0.100	< 0.000299	91	70 - 130	2	20
Toluene	0.0920	$\mathrm{mg/L}$	1	0.100	< 0.000332	92	70 - 130	2	20
Ethylbenzene	0.0906	$\mathrm{mg/L}$	1	0.100	< 0.000644	91	70 - 130	2	20
Xylene	0.276	$\mathrm{mg/L}$	1	0.300	< 0.000456	92	70 - 130	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	Result	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Trifluorotoluene (TFT)	0.0907	0.100	mg/L	1	0.1	91	100	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0951	0.105	$\mathrm{mg/L}$	1	0.1	95	105	70 - 130

Standard (ICV-1)

QC Batch: 41610			Date Analy	Analyzed By: KB			
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.103	103	85 - 115	2007-10-01
Toluene		$\mathrm{mg/L}$	0.100	0.100	100	85 - 115	2007 - 10 - 01
Ethylbenzene		mg/L	0.100	0.0991	99	85 - 115	2007 - 10 - 01
Xylene		mg/L	0.300	0.290	97	85 - 115	2007-10-01

Standard (CCV-1)

QC Batch: 41610			Date Analyz	zed: 2007-10-	Analyzed By: KB		
			CCVs True	CCVs Found	$\begin{array}{c} \mathrm{CCVs} \\ \mathrm{Percent} \end{array}$	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		$\mathrm{mg/L}$	0.100	0.102	102	85 - 115	2007-10-01

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			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Toluene		mg/L	0.100	0.100	100	85 - 115	2007-10-01
Ethylbenzene		$\mathrm{mg/L}$	0.100	0.0987	99	85 - 115	2007 - 10 - 01
Xylene		mg/L	0.300	0.288	96	85 - 115	2007 - 10 - 01

Standard (ICV-1)

QC Batch: 41613	3		Date Analy	Analyzed By: KB			
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0920	92	85 - 115	2007-10-01
Toluene		m mg/L	0.100	0.0943	94	85 - 115	2007 - 10 - 01
Ethylbenzene		m mg/L	0.100	0.0966	97	85 - 115	2007 - 10 - 01
Xylene		$\mathrm{mg/L}$	0.300	0.293	98	85 - 115	2007 - 10 - 01

Standard (CCV-1)

QC Batch: 416	13		Date Analyz	Analyzed By: KB			
			CCVs	CCVs	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0936	94	85 - 115	2007-10-01
Toluene		$\mathrm{mg/L}$	0.100	0.0947	95	85 - 115	2007 - 10 - 01
Ethylbenzene		$\mathrm{mg/L}$	0.100	0.0953	95	85 - 115	2007 - 10 - 01
Xylene		$\mathrm{mg/L}$	0.300	0.290	97	85 - 115	2007 - 10 - 01

Standard (ICV-1)

QC Batch: 41		Date Analy	zed: 2007-10-0	Analyzed By: MT			
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0909	91	85 - 115	2007-10-02
Toluene		$\mathrm{mg/L}$	0.100	0.0921	92	85 - 115	2007 - 10 - 02
Ethylbenzene		$\mathrm{mg/L}$	0.100	0.0929	93	85 - 115	2007 - 10 - 02
Xylene		$\mathrm{mg/L}$	0.300	0.283	94	85 - 115	2007 - 10 - 02

Standard (CCV-1)

QC Batch: 41660

Date Analyzed: 2007-10-02

Analyzed By: MT

Report Date:	October 4, 2007
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Work Order: 7092739 DCP Midstream-J42 Pipeline Page Number: 12 of 12 Lea County, NM

			CCVs True	CCVs Found	CCVs Percent	$\operatorname{Percent}$ Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene	<u> </u>	mg/L	0.100	0.0893	89	85 - 115	2007-10-02
Toluene		mg/L	0.100	0.0903	90	85 - 115	2007-10-02
Ethylbenzene		mg/L	0.100	0.0913	91	85 - 115	2007-10-02
Xylene		mg/L	0.300	0.281	94	85 - 115	2007-10-02

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DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605-2226 *FAX*

August 29, 2007

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

RE: 2nd Quarter 2007 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

Dear Mr. Price:

DCP Midstream, LP (DCP) is pleased to submit for your review, a copy of the 2nd Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East). At this time, no RP number has been assigned to this remediation project.

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me swweathers@dcpmidstream.com.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Sr. Environmental Specialist

cc: Carl Chavez, OCD Santa Fe Office
 Larry Johnson, OCD Hobbs District Office (Copy on CD)
 Lynn Ward, DCP Midland Office
 Environmental Files

August 27, 2007

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Summary of the Second Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the second quarter 2007 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP (DCP, formerly Duke Energy Field Services, LP). The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed because of drilling refusal.

GROUNDWATER SAMPLING

Trident Environmental collected groundwater samples on June 26, 2007. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2.

The approximate water-table elevation for MW-1 was estimated 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 FPH density (assumed at 0.73).

6885 South Marshall St., Suite 3, Littleton, CO 80128 phone 303-948-7733 fax 303-948-7739

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The historic FPH thickness values are summarized in Table 3. Well MW-1 did not contain FPH during the February 2006 and the September 2006 sampling events. The FPH was measured at 0.09 feet in both March 2007 and June 2007. The FPH thickness in MW-2 declined from 0.57 feet in February 2006 to no FPH present in June 2007.

Five of the six wells that did not contain FPH were purged and sampled using the standard protocols for this site. Purging was completed using dedicated bailers until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity stabilized. The well purging forms are attached. The affected purge water was disposed at the DCP Linam Ranch facility. Unfiltered samples were collected using the 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 protocol.

Well MW-2 was not purged because of equipment constraints. Instead, a sample was collected from the well with no purging. Well MW-2 will be purged and sampled using standard protocols in subsequent monitoring events provided that no FPH is present.

Well MW-1 was purged and sampled for principal ions (calcium, magnesium, sodium, potassium, alkalinity, chlorides sulfates, nitrates) and total dissolved solids (TDS) even though it contained FPH. No sample was collected for benzene, toluene, ethylbenzene and total xylenes (BTEX) analyses because the FPH in the well could enter the bailer and bias the results. The remaining samples were analyzed for BTEX, principal ions, and TDS.

The laboratory analyses for the sampling episode are summarized in Table 4 for the organic constituents and Table 5 for the inorganic constituents. The laboratory report is attached.

Table 6 provides the quality assurance/quality control (QA/QC) information. The QA/QC evaluation includes:

- The sample container temperature was 1.3° centigrade when the lab received it.
- All of the individual surrogate spikes were within their control limits.
- The relative percentage difference (RPD) values could not be calculated because the constituents for the duplicate were below the method reporting limits.
- The matrix spike and matrix spike duplicate results from the MW-6 sample were all within the control limits for all four constituents.

The above data indicate that the data is suitable as monitoring data.

RESULTS AND INTERPRETATIONS

The results and interpretations presented below are based upon all of the data collected to date. Groundwater flow is discussed first. Evaluation of the organic and inorganic data follows.

Groundwater Flow

Figure 3 includes hydrographs for the corrected water-table elevations for all site wells. The water table rose in wells MW-3 and MW-4, located in the northwestern part of the study area, while declining in the remaining wells. The water table declined in MW-2 to below that measured in MW-3 and MW-4; however, it remained above the value MW-1.

The resulting June 2007 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table that was measured in June 2007 exhibits a consistent 0.009 feet/foot gradient toward the southeast. The water table elevation measured in MW-1 remains anomalously low relative to its position between MW-3, MW-4 and MW-2 (see hydrographs in Figure 3).

Groundwater Chemistry

Both organic and inorganic data were collected during the June 2007 sampling event. The organic data was collected to identify any expansion or contraction of the dissolve-phase hydrocarbon plume related to the DCP Midstream pipeline release. The inorganic data was collected to evaluate the potential for other sources since salts are typically not associated with mid-stream-industry type releases.

The June 2007 organic (hydrocarbon) data is summarized in Table 4. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are reproduced at the top of the table. The constituents that exceeded these standards are highlighted by bolding. Examination of Table 4 shows that benzene in MW-2 was the only constituent that exceeded the NMWQCC groundwater standards. None of the other constituents exceeded these standards in MW-2 or any of the remaining wells.

The benzene concentrations are plotted on Figure 5. Spatially, the organic constituents attenuate to below the method reporting limit prior to reaching MW-7.

The data for all of the organic constituents are summarized in Table 7. Examination of Table 7 indicates the following:

• The concentrations in MW-1 cannot be evaluated. FPH has been present in MW-1 during the last three sampling events.

- FPH has only been absent in MW-2 during the most recent episode so only one data set is available;
- None of the BTEX constituents have been detected in down-gradient wells MW-6, MW-7 and MW-8;
- The BTEX concentrations in MW-3 have remained below the method reporting limits with the exception of the primary June 2007 sample. The concentrations in the primary June 2007 sample were near the MRL while the concentrations in its duplicate are all below the MRL. Based upon the above information, the potential for cross-gradient constituent migration appears to be limited at best.

The benzene data in mg/l for MW-4 is summarized below:

<u>Date</u>	Concentration
9/06	0.0086
12/06	0.0295
12/06 (dup)	0.0207
3/07	0.0044
6/07	< 0.001

The results appear to demonstrate that the benzene concentration have declined in MW-4 over time. Additional sampling will be necessary to verify this trend.

The June 2007 inorganic data is summarized in Table 5. The NMWQCC groundwater standards, where present, are reproduced at the top of the table. The value for nitrates is a primary (health-based) drinking water standard. The standards for the remaining constituents are all secondary (aesthetics).

Examination of Table 5 shows that the NMWQCC groundwater standards for chlorides and TDS were exceeded in all seven of the wells. The inorganic results indicate that the water is unusable for domestic purposes and its use may be restricted for irrigation and stock watering.

The chloride and TDS data were contoured using the Surfer program with the kriging option. The resulting isopleth maps are shown in Figures 6 and 7 respectively. Both of these maps demonstrate the same trend of the highest concentration at the northern upgradient border in MW-4, a location that is upgradient of the DCP J-4-2 pipeline leak. The concentrations attenuate to the south. This distribution is different than the benzene distribution shown in Figure 5 where benzene was not detected in MW-4. These two facts indicate that the source for the salts is upgradient and not associated with this release.

CONCLUSIONS AND RECOMMENDATIONS

Based upon the data collected to date, AEC concludes that;

- Groundwater flow is constant toward the southeast with the exception of an anomalous area associated with MW-1;
- The dissolved-phase hydrocarbon plume associated with the DCP J-4-2 pipeline release is not expanding;
- The FPH in MW-1 and MW-2 is declining, and it may already be absent in MW-2;
- The benzene concentration in cross-gradient well MW-4 may be declining; and
- The source for the chlorides measured at the site may be from an up-gradient (north to northwest) source.

Passive FPH collection bailers were installed in wells MW-1 and MW-2. These bailers have been checked and emptied as necessary on a regular basis.

The next groundwater-monitoring event is scheduled for the third quarter of 2007. Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Muchael H. Stewart Michael H. Stewart, P.E., C.P.G. Principal Engineer MHS/tbm

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	Installed		Diameter	Depth	Interval	Interval
			(inches)	(btoc)	(ground)	
MW-1	2/06	3.17	2	43.05	19-39	17-39
MW-2	2/06	3.08	4	43.30	19-39	17-39
MW-3	2/06	3.21	2	43.00	19-39	17-39
MW-4	9/06	3.12	2	38.12	20-35	18-35
MW-5		Not in	stalled beca	use of dril	ling refusal	
MW-6	9/06	3.32	2	38.32	20-35	18-35
MW-7	9/06	2.95	2	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	2	38.32	20-35	18-35

Table 1 – Summary of Monitoring Well Completions at the J-4-2 Site

All units are feet except as noted

btoc: Below top of casing

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	2/15/06	9/25/06	12/21/06	3/14/07	6/26/07
MW-1	3713.61	3712.60	3712.63	3712.29	3712.15
MW-2	3713.93	3713.48	3712.49	3712.75	3712.63
MW-3	3713.36	3712.57	3712.57	3712.55	3712.79
MW-4		3712.80	3712.82	3712.78	3713.25
MW-6		3711.76	3712.00	3711.96	3711.87
MW-7		3711.03	3710.80	3710.73	3710.50
MW-8		3709.22	3708.95	3708.79	3708.54

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Table 2 - Summary of Water Table Elevations for the J-4-2 Site

Units are feet

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Blank cells: wells not installed

Date	MW-1	MW-2
02/15/06	0.00	0.57
09/25/06	0.00	0.15
12/21/06	0.09	0.13
03/14/07	0.09	0.00

Table 3 - Summary of Free Phase Hydrocarbon Thickness Values for MW-1 and MW-2

Units are feet

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Well	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Groundwater Standard	0.01	0.75	0.75	0.62
MW-2*	0.0262	0.0382	0.0404	0.335
MW-3	0.0029	0.0053	0.0015	0.0097
MW-3 Dup	< 0.001	< 0.001	< 0.001	< 0.001
MW-4	< 0.001	< 0.001	< 0.001	0.0025
MW-6	< 0.001	< 0.001	< 0.001	< 0.001
MW-7	< 0.001	< 0.001	< 0.001	0.0027
MW-8	< 0.001	< 0.001	< 0.001	< 0.001

Table 4 - Summary of June 26, 2007 Organic Groundwater Sampling Results

Notes: Units are mg/l,

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* MW-2 not purged prior to sampling

W-1 contained free phase hydrocarbon so it was not sampled.

MW-5 was not installed because of drilling refusal

The duplicate sample was not analyzed for chlorides and total dissolved solids

Well	Calcium	Magnesium	Sodium	Potassium
NMWQCC	NA	NA	NA	NA
Groundwater				
Standard				
MW-1	572	130	923	13
MW-2	406	103	1,180	34
MW-3	377	80	454	7.0
MW-4	1,220	446	5,330	63
MW-6	150	34	215	4.0
MW-7	296	70	391	6.0
MW-8	206	48	227	4.0

Table 5 - Summary of June 26, 2007 Inorganic Groundwater Sampling Results

Well	Bicarbonate Alkalinity	Chloride	Sulfate	Nitrate*	Total Solids
NMWQCC					
Groundwater					
Standard	NA	250	600	10	1,000
MW-1	212	2,760	155	- 3	5,900
MW-2	222	2,640	249	4	6,005
MW-3	230	1,380	97	4	4,065
MW-4	226	10,800	685	5	19,900
MW-6	264	544	63	3	1,334
MW-7	252	1,150	87	4	3,035
MW-8	216	617	68	3	1,996

Notes: Units are mg/l

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NA no established groundwater standard

MW-5 was never installed

The duplicate sample was not analyzed for the inorganic constituents

* nitrate is a primary (health-based) drinking water standard. The remaining standards are all non-health based (asthetics)

Table 6 - Quality Assurance Evaluation for the March 2007 Data

MW-3 Duplicate Samples

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	Benzene	Toluene	Ethylbenzene	Total Xylenes	
RPD (%)	NA	NA	NA	NA	

NA: Not analyzed because one or both of the constituents are below their method reporting limit(s).

MW-6 MS/MSD (percent recovery)

	Benzene	Toluene	Ethylbenzene	Total Xylenes
MS	98	98	94	94
MSD	99	102	98	98

MS: matrix spike

MSD: matrix spike duplicate

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
NMWQCC Groundwater Standard		0.01	0.75	0.75	0.62
Ground water Standard					
	2/06	0.139	0.326	0.34	0.31
	9/06	0.0418	0.0048	0.0247	0.0605
Dup	9/06	0.0555	0.0068	0.032	0.0782
	12/06	FPH	FPH	FPH	FPH
	3/07	FPH	FPH	FPH	FPH
	6/07	FPH	FPH	FPH	FPH
MW-2	6/07	0.0262	0.0382	0.0404	0.335
MW-3	2/06	< 0.001	< 0.001	< 0.001	< 0.002
	9/06	< 0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	< 0.002	< 0.006
	3/07	< 0.002	< 0.002	< 0.002	< 0.006
Dup	3/07	< 0.002	< 0.002	< 0.002	<0.006
	6/07	0.0029	0.0053	0.0015	0.0097
Dup	6/07	< 0.001	< 0.001	< 0.001	<0.001
MW-4	9/06	0.0086	0.00093J	0.0092	0.0061
	12/06	0.0295	0.0058	< 0.002	0.0075
Dup	12/06	0.0207	0.004	< 0.002	0.0054
	3/07	0.0044	0.0006	<0.002	0.0032
	6/07	< 0.001	< 0.001	<0.001	0.0025
MW-6	9/06	<0.002	< 0.002	< 0.002	< 0.006
	12/06	< 0.002	< 0.002	<0.002	<0.006
	3/07	< 0.002	< 0.002	<0.002	<0.006
	6/07	< 0.001	< 0.001	< 0.001	<0.001
MW-7	9/06	< 0.002	<0.002	<0.002	<0.006
	12/06	< 0.002	< 0.002	<0.002	<0.006
	3/07	<0.002	< 0.002	<0.002	<0.006
	6/07	<0.001	<0.001	<0.001	0.0027
MW-8	9/06	< 0.002	<0.002	<0.002	<0.006
	12/06	<0.002	<0.002	<0.002	< 0.006
	3/07	<0.002	<0.002	<0.002	<0.006
	6/07	<0.001	<0.001	<u><</u> 0.001	<0.001

Table 7 – Summary of Organic Groundwater Data

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Notes: Units are mg/l, FPH: No sample because FPH is present: Blank cell: no sample collected,

MW-2 has contained FPH since it was installed MW-5 was never installed

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GROUNDWATER SAMPLING NOTES AND LABORATORY ANALYTICAL REPORT

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	CLIENT:	DC	P Midstre	am		WELL ID:	MW-1				
SI	TE NAME:	J42	(Pipeline Le	Pipeline Leak)			6/26/2007				
PRC	JECT NO.		F-119		. 8	SAMPLER:	J. Fergerson/M. Stewart				
PURGING METHOD: If Hand Bailed I Pump If Pump, Type:											
SAMPLING METHOD: 🛛 Disposable Bailer 🗋 Direct from Discharge Hose 🔲 Other:											
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:											
☑ Gloves □ Alconox □ Distilled Water Rinse □ Other:											
DISPOSA	DISPOSAL METHOD OF PURGE WATER: 🗹 Surface Discharge 🔲 Drums 🔲 Disposal Facility										
TOTAL DEPTH OF WELL:43.05 FeetDEPTH TO WATER:28.37 FeetHEIGHT OF WATER COLUMN:14.68 FeetWELL DIAMETER:4.0 InchDEPTH TO WATER COLUMN:14.68 Feet											
TIME	VOLUME PURGED	TEMP. ° <u>C</u>	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS				
15:40						-	Begin Hand Bailing				
15:45											
•											
					l						
0:05	:Total Time	e (hr:min)	0	:Total Vol	(gal)	0.00	:Flow Rate (gal/min)				
SAMP	LE NO.:	Collected S	ample No.:	070626	1545	·	·····				
ANAL	YSES:	BTEX (826	0), Major lor	ns, TDS							
COMMENTS: Collected Major Ions/TDS Sample Only!											

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	CLIENT:	DC	P Midstream			WELL ID:	MW-2			
SI	TE NAME:	J42	(Pipeline Le	eak)		DATE:	6/26/2007			
PRC	JECT NO.		F-119			SAMPLER:	J. Fergerson/M. Stewart			
PURGING METHOD: Image: Ima										
DISPOSAL METHOD OF PORGE WATER: Surface Discharge Drums Disposal Facility TOTAL DEPTH OF WELL: 43.30 Feet DEPTH TO WATER: 27.99 Feet HEIGHT OF WATER COLUMN: 15.31 Feet 7.5 Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)										
TIME	VOLUME PURGED	1EMP. ℃	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
15:18	0.0	-	-	-	-	-	Begin Hand Bailing			
15:21	2.7	-	-	-	-	-	No Parameter Reading			
15:24	5.4	-	-	-	-		Collected Due to Possible			
15:27	8.1	-	-		-	-	Damage to Probe!			
0:09	:Total Time	ə (hr:min)	8.1	:Total Vol	(gal)	0.90	:Flow Rate (gal/min)			
SAMP	LE NO.:	Collected S	ample No.:	070626	1530		·			
ANAL	YSES:	BTEX (826	0), <mark>Major</mark> Ior	ns, TDS			1994			
COM	MENTS:									

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	CLIENT:	DCI	P Midstrea	am		WELL ID:	MW-3			
SI	TE NAME:	J42	(Pipeline Le	Pipeline Leak)			6/26/2007			
PRO	JECT NO.		F-119			SAMPLER:	J. Fergerson/M. Stewart			
	·									
PURGING METHOD: 🛛 Hand Bailed 🗌 Pump If Pump, Type:										
SAMPLING METHOD: I Disposable Bailer Direct from Discharge Hose Other:										
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Gloves 🗆 Alconox 🗋 Distilled Water Rinse 📋 Other:										
DISPOSA) of Purgi	E WATER:	Surface	e Dischar	ge 🗌 Dru	ms 🖸 Disposal Facility			
TOTAL DEPTH OF WELL:43.00 FeetDEPTH TO WATER:26.6 FeetHEIGHT OF WATER COLUMN:16.40 FeetWELL DIAMETER:2.0 InchB.0Minimum Gallons toDurge 3 well volumes							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			
14:56	0.0	-	-	_	-	-	Begin Hand Bailing			
14:59	2.7	21.2	>4.00	7.06	-	_				
15:01	5.4	20.9	>4.00	7.05	-	_				
15:04	8.1	20.8	>4.00	7.02	-	-				
							·			
·	<u> </u>									
0:08	:Total Time	e (hr:min)	8.1	:Total Vol	(gal)	1.01	:Flow Rate (gal/min)			
SAMP	LE NO.:	Collected S	ample No.:	070626	1505					
ANAL	YSES:	BTEX (826	0), Major lor	ns, TDS						
COMMENTS: Collected Duplicate Sample No.: 0706261700 for BTEX (8260)						EX (8260)				

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	CLIENT:	DC	P Midstre	am	_	WELL ID:	MW-4
SI	TE NAME:	J42	(Pipeline Le	eak)	_	DATE:	6/26/2007
PRO	JECT NO.		F-119			SAMPLER:	J. Fergerson/M. Stewart
					-		
PURGING		I	Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:	
SAMPLIN	G METHOD	D:	☑ Disposab	le Bailer	Direct 1	from Disch	arge Hose 🛛 Other:
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METHO	OD BEFO	RE SAMPI	LING THE WELL:
Gloves	s 🗹 Alcono	x 🗹 Distill	ed Water Ri	nse 🗆 C	Other:	. = <u></u>	
DISPOSA	L METHOD	OF PURG	E WATER:	🗵 Surface	e Discharg	ge 🗌 Dru	ms 🛛 Disposal Facility
TOTAL DE	EPTH OF W	VELL:	38.12	Feet			
DEPTH TO	O WATER:	COLLIMN	26.99	Feet Feet		54	Minimum Gallons to
WELL DIA	METER:	2.0	Inch	1 001			purge 3 well volumes
 _		TEMP	COND	<u></u>			(Water Column Height x 0.49)
TIME	PURGED	°C	<i>m</i> S/cm	pН	mg\L	Turb	REMARKS
14:43	0.0	-	-	-	-		Begin Hand Bailing
14:45	2.0	21.8	3.78	6.98	_		
14:46	4.0	21.1	>4.00	6.80	-		
14:47	6.0	20.9	>4.00	6.77	-		
							· · ·
0:04	:Total Time	e (hr:min)	6	:Total Vol	(gal)	1.49	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070626	1450		
ANAL	YSES:	BTEX (826	0), Major lor	ns, TDS			· · · · · · · · · · · · · · · · · · ·
COMN	MENTS:						· · · · · · · · · · · · · · · · · · ·

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	CLIENT:	DC	P Midstre	am		WELL ID:	MW-6
SI	TE NAME:	J42	(Pipeline Le	eak)		DATE:	6/26/2007
PRC	JECT NO.		F-119		. 8	SAMPLER	J. Fergerson/M. Stewart
PURGING	METHOD	: 1	Hand Bai	iled 🗆 Pu	mp If Pu	mp, Type:	
SAMPLIN	g metho	D:	☑ Disposab	le Bailer	Direct 1	rom Disch	arge Hose 🛛 Other:
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METHO	DD BEFO	RE SAMP	LING THE WELL:
Glove:	s 🗆 Alcond	x 🗆 Distill	ed Water Ri	nse 🖸 C	Other:		
DISPOSA) of Purgi	E WATER:	Surface	Discharg	je 🗆 Dru	ms 🛛 Disposal Facility
TOTAL DI	EPTH OF V	VELL:	38.32	Feet			
DEPTH TO	O WATER:	COLLIMAN	28.09	Feet		50	Minimum Collons to
WELL DIA	METER:	2.0	Inch	reel		5.0	purge 3 well volumes
			00115		<u> </u>		(Water Column Height x 0.49)
TIME	PURGED	°C	COND. <i>m</i> S/cm	рН	mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
14:27	0.0	-	-	-	-	-	Begin Hand Bailing
14:29	1.7	21.7	2.54	7.18	-	-	
14:30	3.4	20.6	2.21	7.22			
14:31	5.1	20.4	2.06	7.24	-	-	
14:34	6.8	20.3	1.99	7.22	_	-	
	: 						
0:07	:Total Time	e (hr:min)	6.8	:Total Vol	(gal)	0.97	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070626	1435		
ANAL	YSES:	BTEX (826	0), Major lor	ns, TDS			
COM	MENTS:	Collected M	IS/MSD Sar	nples!			

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		DC	P Midstre	am		WELL ID:	MW-7
SI	TE NAME:	J42	(Pipeline Le	eak)		DATE:	6/26/2007
PRC	JECT NO.		F-119			SAMPLER:	J. Fergerson/M. Stewart
PURGING	METHOD:		☑ Hand Bai	led 🗆 Pu	mp If Pui	mp, Type:	
SAMPLIN	G METHOD	D:	⊡ Disposab	le Bailer	Direct f	rom Disch	arge Hose 🛛 Other:
DESCRIB	E EQUIPMI	ENT DECO	NTAMINATI	ON METHO	DD BEFO	RE SAMP	LING THE WELL:
Glove:	s 🗆 Alcono	x 🛛 Distill	ed Water Ri	nse 🗆 C	Other:		
DISPOSA	L METHOD		E WATER:	⊡ Surface	Discharg	je 🗆 Dru	ms 🛛 Disposal Facility
TOTAL DI	EPTH OF W	VELL:	39.45	Feet			
DEPTH T		COLUMN	30.23	Feet Feet		45	Minimum Gallons to
WELL DIA	METER:	2.0	Inch	reel		4.5	purge 3 well volumes
r			COND				(Water Column Height x 0.49)
TIME	PURGED	°C	m S/cm	pН	mg\L	Turb	REMARKS
14:13	0.0	_	-	-	-	-	Begin Hand Bailing
14:15	1.7	21.7	3.99	7.03	-	-	
14:17	3.4	20.9	>4.00	7.06	-	-	
<u>14:19</u>	5.1	20.6	>4.00	7.07	-	-	
							·
0:06	:Total Time	e (hr:min)	5.1	:Total Vol	(gal)	0.85	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070626	1420		
ANAL	YSES:	BTEX (826	0), Major Ior	is, TDS			
COM	MENTS:						· · · · · · · · · · · · · · · · · · ·

С		DCI	<u>Midstrea</u>	am		WELL ID:	MW-8
SITE	NAME:	J42 (Pipeline Le	eak)		DATE:	6/26/2007
PROJEC	CT NO.		<u>F-119</u>		S	AMPLER:	J. Fergerson/M. Stewart
PURGING ME SAMPLING M	ethod: Iethod	(): [☑ Hand Bai ☑ Disposab	led 🔲 Pu le Bailer 🗆	mp If Pur	np, Type: rom Disch	arge Hose 🔲 Other:
DESCRIBE E	QUIPME	ENT DECON		ON METHO	DD BEFO	RE SAMP	LING THE WELL:
☑ Gloves □	Alcono	x 🛛 Distille	ed Water Ri	nse 🗆 C)ther:		
DISPOSAL M	ETHOD	of Purge	E WATER:	Surface	Discharg	e 🗆 Dru	ms 🛯 Disposal Facility
TOTAL DEPT DEPTH TO W HEIGHT OF V WELL DIAME	H OF W IATER: WATER TER:	ELL: COLUMN: 2.0	38.32 28.78 9.54 Inch	Feet Feet Feet		4.7	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
	IRGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
13:57	0.0	-	-		_	-	Began Hand Bailing
13:59	1.7	22.9	2.53	6.90	-		
14:02	3.4	21.7	2.43	7.02	-	-	
14:04	5.1	21.1	2.45	7.04	-		
						···	
				<u></u>			
├							
0:07 ·To	l	(hr:min)	5.1	:Total Vol		0.73	·Flow Rate (gal/min)
SAMPLE N	NO.:	Collected S	ample No.:	070626	1405		
ANALYSI	- ES:	BTEX (826)), Maior Ior	is, TDS			
COMMEN	ITS:		<u></u>				

6701 Aberdeen Avenue, Suite 9 200 East Sunset Road, Suite E 5002 Basin Street, Suite A1 6015 Harris Parkway, Suite 110

Lubbock, Texas 79424 El Paso, Texas 79922 Midland, Texas 79703 Ft. Worth, Texas 76132 E-Mail: lab@traceanalysis.com

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Analytical and Quality Control Report

Mike Stewart American Environmental Consulting 6885 South Marshall Street Suite 3 Littleton, CO, 80128

Suma.

Project Location: Lea County, NM DCP Midstream-J42 Pipeline **Project Name:** Project Number: DCP Midstream-J42 Pipeline Report Date: July 10, 2007

Work Order: 7062821

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

			Date	Time	Date
Sample	Description	Matrix	Taken	Taken	Received
128756	MW-1 (0706261545)	water	2007-06-26	15:45	2007-06-28
128757	MW-2 (0706261530)	water	2007-06-26	15:30	2007-06-28
128758	MW-3 (0706261505)	water	2007-06-26	15:05	2007-06-28
128759	MW-4 (0706261450)	water	2007-06-26	14:50	2007-06-28
128760	MW-6 (0706261435)	water	2007-06-26	14:35	2007-06-28
128761	MW-7 (0706261420)	water	2007-06-26	14:20	2007-06-28
128762	MW-8 (0706261405)	water	2007-06-26	14:05	2007-06-28
128763	Duplicate (0706261700)	water	2007-06-26	17:00	2007-06-28

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 25 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Michael Alm

Dr. Blair Leftwich, Director

Standard Flags

 ${\bf B}$ - The sample contains less than ten times the concentration found in the method blank.

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Page 2 of 25

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Analytical Report

Sample: 128756 - MW-1 (0706261545)

Analysis:	Alkalinity		Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	38716		Date Analyzed:	2007-07-02	Analyzed By:	JS
Prep Batch:	33511	Sample Preparation: 2007-07-02 Prep		Prepared By:	JS	
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Hydroxide Al	kalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Al	lkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate A	Alkalinity		212	mg/L as CaCo3	1	4.00
Total Alkalin	ity		212	mg/L as CaCo3	1	4.00

Sample: 128756 - MW-1 (0706261545)

Analysis:	Cations		Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	38754		Date Analyzed:	2007-07-02	Analyzed By:	TP
Prep Batch:	33486		Sample Preparation:	2007-07-02	Prepared By:	KV
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	RL
Dissolved Ca	lcium		572	mg/L	10	0.500
Dissolved Pot	tassium		12.5	mg/L	1	0.500
Dissolved Ma	gnesium		130	mg/L	10	0.500
Dissolved Soc	lium		923	mg/L	10	0.500

Sample: 128756 - MW-1 (0706261545)

Analysis:	Ion Chromatography	Analytical	Method:	E 300.0		Prep Method:	N/A
QC Batch:	38817	Date Anal	yzed:	2007-07-05		Analyzed By:	\mathbf{ER}
Prep Batch:	33596	Sample Pr	eparation:	2007-07-05		Prepared By:	\mathbf{ER}
		RL					
Parameter	Flag	Result	Ur	iits	Dilution		\mathbf{RL}
Chloride		2760	mg	;/L	100		0.500
Fluoride		<1.00	mg	ς/L	5		0.200
Sulfate		155	mg	;/L	5		0.500

Sample: 128756 - MW-1 (0706261545)

Analysis:	NO3 (IC)	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38817	Date Analyzed:	2007-07-05	Analyzed By:	\mathbf{ER}
Prep Batch:	33596	Sample Preparation:	2007-07-05	Prepared By:	\mathbf{ER}

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sample 128756 continued ...

		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
		RL			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Nitrate-N	1	2.73	mg/L	5	0.200

Sample: 128756 - MW-1 (0706261545)

Analysis:	TDS		Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	38844		Date Analyzed:	2007-07-06	Analyzed By:	AR
Prep Batch:	33618		Sample Preparation:		Prepared By:	\mathbf{AR}
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Total Dissolv	red Solids		5900	mg/L	5	10.00

Sample: 128757 - MW-2 (0706261530)

Analysis:	Alkalinity		Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	38716		Date Analyzed:	2007-07-02	Analyzed By:	JS
Prep Batch:	33511		Sample Preparation:	2007-07-02	Prepared By:	JS
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Hydroxide Al	kalinity	·	<1.00	mg/L as CaCo3	1	1.00
Carbonate Al	lkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate A	Alkalinity		222	mg/L as CaCo3	1	4.00
Total Alkalin	ity		222	mg/L as CaCo3	1	4.00

Sample: 128757 - MW-2 (0706261530)

Analysis: BTEX		A	Analytical M	ethod:	S 8021B		Prep Met	thod:	5 5030B
QC Batch: 38675		I	Date Analyze	ed:	2007-06-29		Analyzed	By: J	AG
Prep Batch: 33475		5	ample Prep	aration:	2007-06-29		Prepared	By:	AG
			\mathbf{RL}						
Parameter	Flag		Result		Units	D	ilution		\mathbf{RL}
Benzene			0.0262		mg/L		1		0.00100
Toluene			0.0404		mg/L		1		0.00100
Ethylbenzene			0.0382		mg/L		1		0.00100
Xylene			0.335		mg/L		1		0.00100
						Spike	Percent	Re	covery
Surrogate		Flag	Result	Units	Dilution	Amount	Recovery	L	imits
Trifluorotoluene (TFT)			0.0529	mg/L	1	0.100	53	23.9	- 107.4
·								contin	ued

¹Test for NO3 run out of hold time for sample 128756.

sample continued ...

					Spike	Percent	Recovery
Surrogate	Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
4-Bromofluorobenzene (4-BFB)		0.0855	mg/L	1	0.100	86	22.2 - 104.5

Sample: 128757 - MW-2 (0706261530)

Analysis: QC Batch: Prep Batch:	Cations 38754 33486		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B 2007-07-02 2007-07-02	6010BPrep Method:007-07-02Analyzed By:007-07-02Prepared By:	
			\mathbf{RL}			
Parameter		\mathbf{Flag}	\mathbf{Result}	Units	Dilution	RL
Dissolved Ca	lcium		406	mg/L	10	0.500
Dissolved Pot	tassium		34.4	mg/L	1	0.500
Dissolved Ma	gnesium		103	$\mathrm{mg/L}$	10	0.500
Dissolved Soc	dium		1180	$\mathrm{mg/L}$	20	0.500

Sample: 128757 - MW-2 (0706261530)

Analysis:	Ion Chromatography	Analytical	Method:	E 300.0		Prep Method:	N/A
QC Batch:	38817	Date Anal	yzed:	2007-07-05		Analyzed By:	\mathbf{ER}
Prep Batch:	33596	Sample Pr	eparation:	2007-07-05		Prepared By:	\mathbf{ER}
		\mathbf{RL}					
Parameter	Flag	\mathbf{Result}	Un	its	Dilution		RL
Chloride		2640	mg	:/L	100		0.500
Fluoride		<1.00	mg	:/L	5		0.200
Sulfate		249	mg	:/L	5		0.500

Sample: 128757 - MW-2 (0706261530)

Analysis:	NO3 (IC)	Analytical Meth	od: E 300.0	Prep Meth	od: N/A
QC Batch:	38817	Date Analyzed:	2007-07-05	Analyzed 1	By: ER
Prep Batch:	33596	Sample Preparat	ion: 2007-07-05	Prepared I	By: ER
		\mathbf{RL}			
Parameter	Fla	ag Result	Units	Dilution	\mathbf{RL}
Nitrate-N	2	4.17	mg/L	5	0.200

Sample: 128757 - MW-2 (0706261530)

Analysis:	TDS	Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	38844	Date Analyzed:	2007-07-06	Analyzed By:	AR
Prep Batch:	33618	Sample Preparation:		Prepared By:	AR

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²Test for NO3 run out of hold time for sample 128757. \bullet

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sample 128757 continued

		RL			
Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Total Dissolved Solids		6005	mg/L	5	10.00

Sample: 128758 - MW-3 (0706261505)

Analysis: QC Batch:	Alkalinity 38716		Analytical Method: Date Analyzed:	SM 2320B 2007-07-02	Prep Method: Analyzed By:	N/A JS
Prep Batch:	33511	Sample Preparation: 2007-07-02		2007-07-02	Prepared By:	JS
			\mathbf{RL}			
Parameter		Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Parameter Hydroxide Alk	kalinity	Flag	Result	Units mg/L as CaCo3	Dilution1	$\frac{\text{RL}}{1.00}$
Parameter Hydroxide Alk Carbonate Alk	kalinity kalinity	Flag	Result <1.00 <1.00	Units mg/L as CaCo3 mg/L as CaCo3	Dilution 1 1	$\frac{\text{RL}}{1.00}$ 1.00
Parameter Hydroxide Alk Carbonate Alk Bicarbonate A	kalinity kalinity Alkalinity	Flag	Result <1.00 <1.00 230	Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3	Dilution 1 1 1	RL 1.00 1.00 4.00

Sample: 128758 - MW-3 (0706261505)

Analysis: QC Batch: Prep Batch:	BTEX 38675 33475]	Analytical M Date Analyze Sample Prepa	ethod: ed: aration:	S 8021B 2007-06-29 2007-06-29		Prep Meth Analyzed I Prepared I	od: S 5030B By: AG By: AG
				RI	J				
Parameter		Flag		Result	t	Units		Dilution	\mathbf{RL}
Benzene				0.00290)	mg/L		1	0.00100
Toluene				0.0015()	mg/L		1	0.00100
Ethylbenzene	e			0.0053()	mg/L		1	0.00100
Xylene				0.0097()	mg/L		1	0.00100
							Spike	Percent	Recovery
Surrogate			Flag	\mathbf{Result}	Units	Dilution	n Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			0.0735	mg/L	1	0.100	74	23.9 - 107.4
4-Bromofluor	obenzene (4-	BFB)		0.0773	mg/L	1	0.100	77	22.2 - 104.5

Sample: 128758 - MW-3 (0706261505)

Analysis: QC Batch: Prep Batch:	Cations 38754 33486		Analytical Method: Date Analyzed: Sample Preparation:	S 6010B Prep Method 2007-07-02 Analyzed By 2007-07-02 Prepared By		S 3005A TP KV
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Ca	lcium		377	mg/L	10	0.500

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sample 128758 continued ...

		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Potassium		7.01	mg/L	1	0.500
Dissolved Magnesium		79.8	mg/L	1	0.500
Dissolved Sodium		454	mg/L	10	0.500

Sample: 128758 - MW-3 (0706261505)

Analysis:	Ion Chromatography	Analytical	l Method:	E 300.0		Prep Method:	N/A
QC Batch:	38817	Date Anal	lyzed:	2007-07-05		Analyzed By:	ER.
Prep Batch:	33596	Sample P	reparation:	2007-07-05		Prepared By:	\mathbf{ER}
		\mathbf{RL}					
Parameter	Flag	Result	Un	its	Dilution		\mathbf{RL}
Chloride		1380	mg	/L	100		0.500
Fluoride		<1.00	mg	/L	5		0.200
Sulfate		97.1	\mathbf{mg}	/L	5		0.500

Sample: 128758 - MW-3 (0706261505)

Analysis:	NO3 (IC)		Analytical Method:	E 300.0		Prep Method:	N/A
QC Batch:	38817		Date Analyzed:	2007-07-05		Analyzed By:	\mathbf{ER}
Prep Batch:	33596		Sample Preparation:	2007-07-05		Prepared By:	\mathbf{ER}
			\mathbf{RL}				
Parameter	F	lag	Result	Units	Dilution		\mathbf{RL}
Nitrate-N		3	3.52	mg/L	5		0.200

Sample: 128758 - MW-3 (0706261505)

Analysis:	TDS		Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	38844		Date Analyzed:	2007-07-06	Analyzed By:	AR
Prep Batch:	33618		Sample Preparation:		Prepared By:	\mathbf{AR}
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Total Dissolv	ed Solids		4065	mg/L	5	10.00

Sample: 128759 - MW-4 (0706261450)

Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	38716	Date Analyzed:	2007-07-02	Analyzed By:	JŚ
Prep Batch:	33511	Sample Preparation:	2007-07-02	Prepared By:	\mathbf{JS}

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³Test for NO3 run out of hold time for sample 128758. •

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sample 128759 continued ...

		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		< 1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		226	mg/L as CaCo3	1	4.00
Total Alkalinity		226	mg/L as CaCo3	1	4.00

Sample: 128759 - MW-4 (0706261450)

Analysis: QC Batch: Prep Batch:	BTEX 38675 33475		Analytical M Date Analyz Sample Prep	lethod: ed: paration:	S 8021B 2007-06-29 2007-06-29		Prep Meth Analyzed I Prepared I	od: S 5030B By: AG By: AG
			R	L				
Parameter	Flag		Resu	lt	Units		Dilution	\mathbf{RL}
Benzene			< 0.0010)0	mg/L		1	0.00100
Toluene			< 0.0010)0	mg/L		1	0.00100
Ethylbenzene	e		< 0.0010)()	mg/L		1	0.00100
Xylene			0.0025	0	mg/L		1	0.00100
						Spike	Percent	Recovery
Surrogate		Flag	Result	Units	Dilution	n Amount	Recovery	Limits
Trifluorotolu	ene (TFT)	-	0.0739	mg/L	1	0.100	74	23.9 - 107.4
4-Bromofluor	obenzene (4-BFB)		0.0754	mg/L	1	0.100	75	22.2 - 104.5

Sample: 128759 - MW-4 (0706261450)

Analysis:	Cations		Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	38754		Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{TP}
Prep Batch:	33486		Sample Preparation:	2007-07-02	Prepared By:	KV
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Cal	lcium		1220	mg/L	100	0.500
Dissolved Pot	assium		63.0	mg/L	1	0.500
Dissolved Ma	gnesium		446	mg/L	10	0.500
Dissolved Soc	lium		5330	mg/L	100	0.500

Sample: 128759 - MW-4 (0706261450)

Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38871	Date Analyzed:	2007-07-06	Analyzed By:	\mathbf{ER}
Prep Batch:	33644	Sample Preparation:	2007-07-06	Prepared By:	\mathbf{ER}

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		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Chloride		10800	mg/L	1000	0.500
Fluoride		<1.00	mg/L	5	0.200
Sulfate		685	mg/L	100	0.500

Sample: 128759 - MW-4 (0706261450)

Analysis: QC Batch: Prep Batch:	NO3 (IC) 38871 33644		Analytical Method: Date Analyzed: Sample Preparation:	E 300.0 2007-07-06 2007-07-06	Prep Method: Analyzed By: Prepared By:	N/A ER ER
Parameter	F	`lag	$f RL \ Result$	Units	Dilution	RL
Nitrate-N		4	4.90	mg/L	5	0.200

Sample: 128759 - MW-4 (0706261450)

Analysis: OC Batch:	TDS 38844		Analytical Method: Date Analyzed:	SM 2540C 2007-07-06	Prep Metho Analyzed B	d: N/A v: AR
Prep Batch:	33618		Sample Preparation:		Prepared By	y: AR
			RL			
Parameter		Flag	Result	Units	Dilution	RL
Total Dissolv	ed Solids		19900	mg/L	100	10.00

Sample: 128760 - MW-6 (0706261435)

Analysis:	Alkalinity		Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	38716		Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{JS}
Prep Batch:	33511		Sample Preparation:	2007-07-02	Prepared By:	$_{\rm JS}$
			RL			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Hydroxide Al	kalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Al	lkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate A	Alkalinity		264	mg/L as CaCo3	1	4.00
Total Alkalin	ity		264	mg/L as CaCo3	1	4.00

Sample: 128760 - MW-6 (0706261435)

Analysis:	BTEX		Analytical Method:	S 8021B	Prep Method:	S 5030B
QC Batch:	38675		Date Analyzed:	2007-06-29	Analyzed By:	AG
Prep Batch:	33475		Sample Preparation:	2007-06-29	Prepared By:	AG
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	$\cdot \mathbf{RL}$
Benzene			< 0.00100	mg/L	1	0.00100
					continued	

⁴Test for NO3 run out of hold time for sample 128759.

sample 128760 continued ...

	\mathbf{R}	L				
	\mathbf{Resu}	lt	Units	Γ	Dilution	\mathbf{RL}
	< 0.0010	0	mg/L		1	0.00100
	< 0.0010	0	mg/L		1	0.00100
	< 0.0010	0	mg/L	·····	1	0.00100
				Spike	Percent	Recovery
Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
	0.0731	mg/L	1	0.100	73	23.9 - 107.4
	0.0755	mg/L	1	0.100	76	22.2 - 104.5
	Flag	$\begin{tabular}{c} & & & R \\ & & & Result \\ & & <0.0010 \\ & & <0.0010 \\ \hline & & & <0.0010 \\ \hline & & & \\ \hline & & & & \\ \hline & & & & \\ \hline & & & &$	$\begin{tabular}{c} RL \\ \hline Result \\ <0.00100 \\ <0.00100 \\ <0.00100 \\ \hline \end{tabular} $	RL Units Result Units <0.00100	RL Units E Result Units E <0.00100	$\begin{array}{c c c c c c c c c c c c c c c c c c c $

Sample: 128760 - MW-6 (0706261435)

Analysis:	Cations		Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	38754		Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{TP}
Prep Batch:	33486		Sample Preparation:	2007-07-02	Prepared By:	KV
			RL			
Parameter		Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Dissolved Cal	lcium		150	mg/L	10	0.500
Dissolved Pot	tassium		4.40	$\mathrm{mg/L}$	1	0.500
Dissolved Ma	gnesium		33.9	mg/L	1	0.500
Dissolved Soc	lium		215	mg/L	10	0.500

Sample: 128760 - MW-6 (0706261435)

Analysis:	Ion Chromatography	Analytica	al Method:	E 300.0		Prep Method:	N/A
QC Batch:	38871	Date Ana	alyzed:	2007-07-06		Analyzed By:	\mathbf{ER}
Prep Batch:	33644	Sample F	reparation:	2007-07-06		Prepared By:	\mathbf{ER}
		\mathbf{RL}					
Parameter	Flag	Result	Ur	nits	Dilution	4	\mathbf{RL}
Chloride		544	mg	ς/L	50		0.500
Fluoride		<1.00	mg	g/L	5		0.200
Sulfate		62.7	mg	g/L	5		0.500

Sample: 128760 - MW-6 (0706261435)

Analysis: QC Batch: Prep Batch:	NO3 (IC) 38871 33644		Analytical Method: Date Analyzed: Sample Preparation	E 300.0 2007-07-06 2007-07-06		Prep Method: Analyzed By: Prepared By:	N/A ER ER
Parameter		Flag	RL Result	Units	Dilution	L	\mathbf{RL}
Nitrate-N		5	3.15	mg/L	5	· · · · · · · · · · · · · · · · · · ·	0.200

⁵Test for NO3 run out of hold time for sample 128760. \bullet

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Work Order: 7062821 DCP Midstream-J42 Pipeline

Sample: 128760 - MW-6 (0706261435)

Analysis: QC Batch: Prep Batch:	TDS Anal 38844 Date h: 33618 Samp		Analytical Method: Date Analyzed: Sample Preparation:	SM 2540C 2007-07-06	Prep Method: Analyzed By: Prepared By:	N/A AR AR
			\mathbf{RL}			
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Total Dissolv	red Solids		1334	mg/L	2	10.00

Sample: 128761 - MW-7 (0706261420)

Analysis:	Alkalinity		Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	38716		Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{JS}
Prep Batch:	33511		Sample Preparation:	2007-07-02	Prepared By:	JS
			RL			
D (TT T .	T211	DI
Parameter		Flag	Result	Units	Dilution	\mathbf{RL}
Hydroxide Al	kalinity	Flag	Result <1.00	Units mg/L as CaCo3	Dilution 1	1.00
ParameterHydroxide AlCarbonate Al	lkalinity Ikalinity	Flag	<pre> Result <1.00 <1.00</pre>	mg/L as CaCo3 mg/L as CaCo3	Dilution 1 1	RL 1.00 1.00
Hydroxide Al Carbonate Al Bicarbonate	lkalinity lkalinity Alkalinity	Flag	Result <1.00	Units mg/L as CaCo3 mg/L as CaCo3 mg/L as CaCo3	Dilution 1 1 1	RL 1.00 1.00 4.00

Sample: 128761 - MW-7 (0706261420)

Analysis: QC Batch: Prep Batch:	BTEX 38675 33475		Analytical M Date Analyz Sample Prep	fethod: ed: paration:	S 8021B 2007-06-29 2007-06-29		Prep Meth Analyzed Prepared 1	od: S 5030B By: AG By: AG
*			 р	т				·
Parameter	Flag		Resu	ılt	Units		Dilution	RL
Benzene			< 0.0010	00	mg/L		1	0.00100
Toluene			< 0.0010	00	mg/L		1	0.00100
Ethylbenzene	;		< 0.0010	00	mg/L		1	0.00100
Xylene			0.0027	70	mg/L		1	0.00100
						Spike	Percent	Recovery
Surrogate		Flag	\mathbf{Result}	$\mathbf{U}\mathbf{n}\mathbf{i}\mathbf{t}\mathbf{s}$	Dilution	Amount	Recovery	Limits
Trifluorotolue	ene (TFT)		0.0725	mg/L	1	0.100	72	23.9 - 107.4
4-Bromofluor	obenzene (4-BFB)		0.0741	$\mathrm{mg/L}$	1	0.100	74	22.2 - 104.5

Sample: 128761 - MW-7 (0706261420)

Analysis:	Cations		Analytical Method:	S 6010B	Prep Method:	S 3005A
QC Batch:	38754		Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{TP}
Prep Batch:	33486		Sample Preparation:	2007-07-02	Prepared By:	KV
			\mathbf{RL}			
Parameter		\mathbf{Flag}	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Dissolved Cal	lcium		296	mg/L	10	0.500

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sample 128761 continued ...

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Parameter	Flag	Result	Units	Dilution	\mathbf{RL}
Dissolved Potassium		5.89	mg/L	1	0.500
Dissolved Magnesium		69.8	mg/L	1	0.500
Dissolved Sodium		391	mg/L	10	0.500

Sample: 128761 - MW-7 (0706261420)

Analysis:	Ion Chromatography	Analytical	Method:	E 300.0		Prep Method:	N/A
QC Batch:	38871	Date Anal	yzed:	2007-07-06		Analyzed By:	\mathbf{ER}
Prep Batch:	33644	Sample Pr	reparation:	2007-07-06		Prepared By:	\mathbf{ER}
		\mathbf{RL}					
Parameter	\mathbf{Flag}	Result	Un	its	Dilution		\mathbf{RL}
Chloride		1150	mg	/L	100		0.500
Fluoride		<1.00	\mathbf{mg}	/L	5		0.200
Sulfate		87.0	mg	/L	5		0.500

Sample: 128761 - MW-7 (0706261420)

Analysis:	NO3 (IC)		Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38871		Date Analyzed:	2007-07-06	Analyzed By:	\mathbf{ER}
Prep Batch:	33644		Sample Preparation:	2007-07-06	Prepared By:	\mathbf{ER}
			RL			
Parameter	Fl	ag	Result	Units	Dilution	\mathbf{RL}
Nitrate-N	e	3	4.08	mg/L	5	0.200

Sample: 128761 - MW-7 (0706261420)

Analysis:	TDS		Analytical Method:	SM 2540C	Prep Method	: N/A
QC Batch:	38844		Date Analyzed:	2007-07-06	Analyzed By:	AR
Prep Batch:	33618		Sample Preparation:		Prepared By:	\mathbf{AR}
			\mathbf{RL}			
Parameter		Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Total Dissolv	ed Solids		3035	mg/L	5	10.00

Sample: 128762 - MW-8 (0706261405)

Analysis:	Alkalinity	Analytical Method:	SM 2320B	Prep Method:	N/A
QC Batch:	38716	Date Analyzed:	2007-07-02	Analyzed By:	JŚ
Prep Batch:	33511	Sample Preparation:	2007-07-02	Prepared By:	JS

continued ...

⁶Test for NO3 run out of hold time for sample 128761. •

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sample 128762 continued ...

		\mathbf{RL}			
Parameter	Flag	Result	Units	Dilution	RL
		\mathbf{RL}			
Parameter	Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as $CaCo3$	1	1.00
Bicarbonate Alkalinity		216	mg/L as CaCo3	1	4.00
Total Alkalinity		216	mg/L as CaCo3	1	4.00

Sample: 128762 - MW-8 (0706261405)

Analysis: QC Batch: Prep Batch:	BTEX 38675 33475]	Analytical M Date Analyz Sample Prep	lethod: ed: aration:	S 8021B 2007-06-29 2007-06-29		Prep Meth Analyzed Prepared I	nod: S 5030B By: AG By: AG
				R	L				
Parameter		Flag		\mathbf{Resu}	lt	Units		Dilution	\mathbf{RL}
Benzene				< 0.0010	0	mg/L		1	0.00100
Toluene				< 0.0010	0	mg/L		1	0.00100
Ethylbenzene	e			< 0.0010	0	mg/L		1	0.00100
Xylene				< 0.0010	0	mg/L		1	0.00100
							Spike	Percent	Recovery
Surrogate			Flag	\mathbf{Result}	Units	Dilution	. Amount	Recovery	Limits
Trifluorotolu	ene (TFT)			0.0727	mg/L	1	0.100	73	23.9 - 107.4
4-Bromofluor	obenzene (4-B	FB)		0.0746	mg/L	1	0.100	75	22.2 - 104.5

Sample: 128762 - MW-8 (0706261405)

Analysis: Cations		Analytical Method:	S 6010B	Prep Method:	S 3005A	
QC Batch:	38754	I	Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{TP}
Prep Batch:	33486	S	ample Preparation:	2007-07-02	Prepared By:	KV
			\mathbf{RL}			
Parameter		Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Dissolved Cal	lcium		206	mg/L	10	0.500
Dissolved Pot	tassium		4.11	mg/L	1	0.500
Dissolved Ma	gnesium		48.3	mg/L	1	0.500
Dissolved Soc	lium		227	mg/L	10	0.500

Sample: 128762 - MW-8 (0706261405)

Analysis:	Ion Chromatography	Analytical Method:	E 300.0	Prep Method:	N/A
QC Batch:	38871	Date Analyzed:	2007-07-06	Analyzed By:	\mathbf{ER}
Prep Batch:	33644	Sample Preparation:	2007-07-06	Prepared By:	\mathbf{ER}
		\mathbf{RL}			
-----------	------	---------------	------------------	----------	---------------
Parameter	Flag	Result	\mathbf{Units}	Dilution	\mathbf{RL}
Chloride		617	mg/L	50	0.500
Fluoride		<1.00	mg/L	5	0.200
Sulfate		67.5	mg/L	5	0.500

Sample: 128762 - MW-8 (0706261405)

Analysis: OC Batch:	NO3 (IC) 38871		Analytical Method:	E 300.0 2007 07 06	Prep Method:	N/A FD
QC Datch.	99644		Sample Dependencion.	2007-07-00	Dren and Dry	ED
Prep Batch:	33044		Sample Preparation:	2007-07-00	Prepared By:	ER
			RL			
Parameter]	Flag	Result	Units	Dilution	\mathbf{RL}
Nitrate-N		7	3.44	mg/L	5	0.200

Sample: 128762 - MW-8 (0706261405)

Analysis:	TDS		Analytical Method:	SM 2540C	Prep Method:	N/A
QC Batch:	38844		Date Analyzed:	2007-07-06	Analyzed By:	\mathbf{AR}
Prep Batch:	33618		Sample Preparation:		Prepared By:	\mathbf{AR}
			\mathbf{RL}			
Parameter		Flag	\mathbf{Result}	Units	Dilution	\mathbf{RL}
Total Dissolv	red Solids		1996	mg/L	2	10.00

Sample: 128763 - Duplicate (0706261700)

Analysis: QC Batch:	BTEX 38675		Analytical M Date Analyz	lethod: ed:	S 8021B 2007-06-29		Prep Met Analyzed	hod: S 5030B By: AG
Prep Batch:	33475		Sample Preparation: 2007-06-29 Prepared		By: AG			
			R	L				
Parameter	Flag		\mathbf{Resu}	lt	Units		Dilution	\mathbf{RL}
Benzene		•	< 0.0010	0	mg/L		1	0.00100
Toluene			< 0.0010	0	mg/L		1	0.00100
Ethylbenzene			< 0.0010	0	mg/L		1	0.00100
Xylene			< 0.0010	0	mg/L		1	0.00100
						Spike	Percent	Recovery
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotolue	me (TFT)		0.0685	mg/L	1	0.100	68	23.9 - 107.4
4-Bromofluor	obenzene (4-BFB)		0.0740	mg/L	1	0.100	74	22.2 - 104.5

⁷Test for NO3 run out of hold time for sample 128762.

Report Date: July 10, 2007 DCP Midstream-J42 Pipeline

Method Blank (1) QC Batch: 38675

QC Batch: Prep Batch:	38675 33475		Date Anal QC Prepa	lyzed: 2 ration: 2	2007-06-29 2007-06-29		A F	Analyzed By: Prepared By:	AG AG
				Ν	4DL				
Parameter		Flag		Re	esult	Un	its		\mathbf{RL}
Benzene				< 0.000	0200	mg	;/L		0.001
Toluene				< 0.000	0200	mg	j/L		0.001
Ethylbenzene	<u>)</u>			< 0.000	0200	mg	;/L		0.001
Xylene				< 0.000	0300	ing	$_{\rm J}/{ m L}$	<u> </u>	0.001
Surrogate		Flag	\mathbf{Result}	Units	Dilution	Spike Amount	Percen Recove	nt Reco ry Lin	overy nits

Surrogate	Flag	\mathbf{Result}	Units	Dilution	Amount	Recovery	Limits
Trifluorotoluene (TFT)		0.0764	mg/L	1	0.100	76	60.1 - 116.8
4-Bromofluorobenzene (4-BFB)	•	0.0747	mg/L	1	0.100	75	54.4 - 112.5

Method Blank (1) QC Batch: 38716

QC Batch: 38716 Prep Batch: 33511	I. C	Date Analyzed: C Preparation:	2007-07-02 2007-07-02		Analyzed By: Prepared By:	JS IS
Thep Batton. 00011	4	e rioparation.	2001 01 02		r repared by.	0.5
		Ν	IDL			
Parameter	Flag	\mathbf{Re}	sult	Units		\mathbf{RL}
Hydroxide Alkalinity	·····	<	1.00	mg/L as CaCo3		1
Carbonate Alkalinity		<	1.00	mg/L as CaCo3		1
Bicarbonate Alkalinity		<-	4.00	mg/L as CaCo3		4
Total Alkalinity		<	4.00	mg/L as CaCo3		4

Method Blank (1) QC Batch: 38754

QC Batch: Prep Batch:	38754 33486	Date Analyzed: QC Preparation:	2007-07-02 2007-07-02		Analyzed By: Prepared By:	TP KV
	,		MDI		1 0	
_			MDL			
Parameter		Flag	\mathbf{Result}	Units		\mathbf{RL}
Dissolved Cal	cium	· · · · · · · · · · · · · · · · ·	< 0.0290	mg/L		0.5
Dissolved Pot	assium		1.10	mg/L		0.5
Dissolved Mag	gnesium		< 0.0740	mg/L		0.5
Dissolved Sod	ium		< 0.529	mg/L		0.5

Method Blank (1) QC Batch: 38817

QC Batch: Prep Batch:	38817 33596		Date Analyzed: QC Preparation:	2007-07-05 2007-07-05		Analyzed By: Prepared By:	ER ER
			Ν	ADL			
Parameter		Flag	Re	esult	Units		\mathbf{RL}
Nitrate-N			<0.0	0240	mg/L		0.2

Report Date: July 10, 2007Work Order: 7062821DCP Midstream-J42 PipelineDCP Midstream-J42 Pipeline

Method Blank (1) QC Batch: 38817

QC Batch: Prep Batch:	38817 33596		Date Analyzed: QC Preparation:	2007-07-05 2007-07-05		Analyzed By: Prepared By:	ER ER
			М	IDL			
Parameter		Flag	Re	sult	Units		\mathbf{RL}
Chloride			<0.	.172	mg/L		0.5
Fluoride			<0.	.119	mg/L		0.2
Sulfate			<0.	.777	mg/L		0.5

Method Blank (1) QC Batch: 38844

QC Batch:	38844	Date Analyzed	: 2007-07-06		Analyzed By:	\mathbf{AR}
Prep Batch:	33618	QC Preparatio	n: 2007-07-07		Prepared By:	\mathbf{AR}
			MDL			
Parameter		Flag	Result	Units		\mathbf{RL}
Total Dissolv	ed Solids		<5.000	mg/L		10

Method Blank (1) QC Batch: 38871

QC Batch:	38871		Date Analyzed:	2007-07-06		Analyzed By:	\mathbf{ER}
Prep Batch:	33644		QC Preparation:	2007-07-06		Prepared By:	\mathbf{ER}
			Ν	ADL			
Parameter		Flag	Re	esult	\mathbf{Units}		RL
Nitrate-N			<0.	0240	mg/L		0.2

Method Blank (1) QC Batch: 38871

QC Batch:	38871		Date Analyzed:	2007-07-06		Analyzed By:	\mathbf{ER}
Prep Batch:	33644		QC Preparation:	2007-07-06		Prepared By:	\mathbf{ER}
			Μ	IDL			
Parameter		Flag	Re	sult	Units		\mathbf{RL}
Chloride			<0.	172	mg/L		0.5
Fluoride			<0.	119	mg/L		0.2
Sulfate			<0.	777	mg/L		0.5

Duplicates (1)

QC Batch:	38716	Date Analyzed:	2007-07-02	Analyzed By:	JS
Prep Batch:	33511	QC Preparation:	2007-07-02	Prepared By:	JS

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Report Date: July 10, 2007 DCP Midstream-J42 Pipeline

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	Duplicate		Sample						uupncu	e contin	RPT
Param	Result		Result		Units		E	ilution	R	PD	Limi
	Duplicate		Sample								RPf
Param	Result		Result		Units		Е	ilution	R	PD	Limi
Hydroxide Alkalinity	<1.00		<1.00	mg	/L as Ca	Co3		1		0	20
Carbonate Alkalinity	<1.00		<1.00	mg	/L as Ca	Co3		1		0	20
Bicarbonate Alkalinity	244		264	mg	/L as Ca	Co3		1		8	20
Total Alkalinity	244		264	ing	/L as Ca	Co3		1		8	20
Duplicates (1)											
QC Batch: 38844	Ι	Date A	Analyzed:	2007-	-07-06				Anal	lyzed By	: AR
Prep Batch: 33618	(QC Pr	reparation:	2007-	-07-07				Prep	ared By	: AR
	Duplica	te	Sampl	e							RPI
Param	$_$ Result	;	Result	t	Units		Dilu	tion	RP	D	Limi
Total Dissolved Solids	3860		3990		mg/L		5		3		20
Laboratory Control Spike (Lo QC Batch: 38675 Prep Batch: 33475	 [[Date A QC Pr	Analyzed: reparation:	2007- 2007-	-06-29 -06-29				Anal Prer	yzed By ared By	7: AG 7: AG
Laboratory Control Spike (L QC Batch: 38675 Prep Batch: 33475	СЗ-1) Г (Date A QC Pr	Analyzed: reparation:	2007- 2007-	-06-29 -06-29				Anal Prep	yzed By ared By	r: AG r: AG
Laboratory Control Spike (L QC Batch: 38675 Prep Batch: 33475	LCS	Date A QC Pr	Analyzed: reparation:	2007- 2007-	-06-29 -06-29 Spike		Mat	rix	Anal Prep	yzed By ared By	v: AG v: AG Rec.
Laboratory Control Spike (LO QC Batch: 38675 Prep Batch: 33475 Param	LCS Result	Date A QC Pr	Analyzed: reparation: Units I	2007- 2007- Dil.	-06-29 -06-29 Spike Amoun	t	Mat Res	rix 1lt	Апа Prep Rec.	yzed By ared By	7: AG 7: AG Rec. Jimit
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene	LCS Result 0.0931	Date A QC Pr I	Analyzed: reparation: Units I ng/L	2007- 2007- Dil.	-06-29 -06-29 Spike Amoun 0.100	t	Mat Ress <0.00	rix 11t0200	Апа Prep Rec. 93	yzed By ared By [] [] 76.4	7: AG 7: AG Rec. Jimit - 120.
Laboratory Control Spike (LO QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene	LCS Result 0.0931 0.0927	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L	2007- 2007- Dil. 1	-06-29 -06-29 Spike <u>Amoun</u> 0.100 0.100	t	Mat Rest <0.00 <0.00	rix 1lt 0200 0200	Anal Prep <u>Rec.</u> 93 93	yzed By pared By <u>1</u> 76.4 79.2	7: AG 7: AG Rec. Jimit - 120. - 117.
Laboratory Control Spike (LO QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene	LCS Result 0.0931 0.0927 0.0866	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L ng/L	2007- 2007- Dil. 1 1	-06-29 -06-29 Spike Amoun 0.100 0.100 0.100	t	Mat Ress <0.00 <0.00 <0.00	rix 11t 0200 0200 0200	Anal Prep Rec. 93 93 87	yzed By ared By <u>1</u> 76.4 79.2 78.8	7: AG 2: AG Rec. <u>i</u> mit - 120. - 117. - 117.
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Parcent recovery is based on the second	LCS Result 0.0931 0.0927 0.0866 0.261	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L ng/L ng/L	2007- 2007- Dil. 1 1 1 1 1	-06-29 -06-29 Spike <u>Amoun</u> 0.100 0.100 0.100 0.300	t	Mat Ress <0.00 <0.00 <0.00 <0.00	rix 11t 0200 0200 0200 0300	Ана Ргер <u>Rec.</u> 93 93 87 87	yzed By ared By [76.4 79.2 78.8 80	r: AG : AG Rec. .imit - 120. - 117. - 117. - 120.1
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L ng/L ng/L s based on r	2007- 2007- Dil. 1 1 1 the spit	-06-29 -06-29 Spike <u>Amoun</u> 0.100 0.100 0.300 ke and sp	t jike d	Mat Ress <0.00 <0.00 <0.00 <0.00 uplicat	rix 11t 0200 0200 0200 0300 e result	Anal Prep <u>Rec.</u> 93 93 87 87	yzed By ared By [1] 76.4 79.2 78.8 80	7: AG 7: AG Rec. <i>i</i> mit - 120. - 117. - 117. - 120.1
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result	Date A QC Pr I I I I I I RPD is	Analyzed: reparation: Units I ng/L ng/L ng/L s based on the S	2007- 2007- Dil. 1 1 1 1 the spil Spike	-06-29 -06-29 Spike <u>Amoun</u> 0.100 0.100 0.100 0.300 ke and sp Matr	t pike d ix	Mat Ress <0.00 <0.00 <0.00 <0.00 uplicat	rix 11t 0200 0200 0200 0300 e result	Anal Prep <u>Rec.</u> 93 93 87 87 5. Rec.	yzed By ared By [76.4 79.2 78.8 80	7: AG 2: AG Rec. - imit - 120. - 117. - 117. - 120.1 RPIL Limit
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L ng/L s based on the S Dil. Ar	2007- 2007- Dil. 1 1 1 the spil Spike nount	-06-29 -06-29 Spike Amoun 0.100 0.100 0.100 0.300 ke and sp Matr Resu	t jike d ix ilt	Mat Resi <0.00 <0.00 <0.00 <0.00 uplicat Rec.	rix 11t 0200 0200 0200 0300 e result F L 76 4	Anal Prep <u>Rec.</u> 93 93 87 87 5. Rec. imit - 120 5	yzed By aared By [76.4 79.2 78.8 80 <u>RPD</u>	 AG AG amit 120. 117. 117. 120.1 RPI Limi 20
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L ng/L s based on the S Dil. Ar 1 0 1 0	2007- 2007- Dil. 1 1 1 the spil Spike nount 0.100	-06-29 -06-29 Spike Amoun 0.100 0.100 0.100 0.300 ke and sp Matr Resu <0.000 <0.000	t pike d ix lt 2200	Mat Ress <0.00 <0.00 <0.00 <0.00 uplicat Rec. 93 95	rix 11t 0200 0200 0200 0300 e result F L 76.4 76.4 70.2	Anal Prep <u>Rec.</u> 93 93 87 87 5. Rec. imit - 120.5 - 117.8	yzed By ared By <u>1</u> 76.4 79.2 78.8 80 <u>RPD</u> 0 2	 AG AG amit 120. 117. 117. 120.1 RPI Limi 20 20
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m 0.0893 m	Date A QC Pr	Analyzed: reparation: Units I ng/L ng/L ng/L s based on the S Dil. Ar 1 0 1 0 1 0	2007- 2007- Dil. 1 1 1 1 5 pike nount 0.100 0.100	-06-29 -06-29 Amoun 0.100 0.100 0.100 0.300 ke and sp Matr Resu <0.000 <0.000 <0.000	t vike d ix lt 2200 2200	Mat Ress <0.00 <0.00 <0.00 <0.00 uplicat Rec. 93 95 89	rix 11t 0200 0200 0300 e result F L 76.4 79.2 78.8	Anal Prep 93 93 87 87 5. Rec. imit - 120.5 - 117.8 - 117.9	yzed By ared By I 76.4 79.2 78.8 80 <u>RPD</u> 0 2 3	 r: AG r: AG r: and r: and<
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m 0.0893 m 0.269 m	Date A QC Pr	Analyzed: reparation: Units I mg/L mg/L mg/L s based on the S Dil. Ar 1 0 1 0 1 0 1 0 1 0	2007- 2007- 2007- 1 1 1 1 1 1 1 5 5 5 6 6 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7	-06-29 -06-29 Amoun 0.100 0.100 0.100 0.300 ke and sp Matr Resu <0.000 <0.000 <0.000 <0.000	t sike d ix lt 2200 2200 2200 2300	Mat Ress <0.00 <0.00 <0.00 <0.00 uplicat Rec. 93 95 89 90	rix 11t 0200 0200 0300 e result F L 76.4 79.2 78.8 80 -	Anal Prep <u>Rec.</u> 93 93 87 87	yzed By ared By <u>1</u> 76.4 79.2 78.8 80 <u>RPD</u> 0 2 3 3	 AG AG Rec. imit 120. 117. 117. 120.11 RPE Limi 20 20 20 20 20 20 20 20
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m 0.0893 m 0.269 m	Date A QC Pr I I I I I I I I I I I I I I I I I I I	Analyzed: reparation: Units I ng/L ng/L ng/L s based on the S Dil. Ar 1 0 1 0 1 0 1 0 1 0 5 based on the	2007- 2007- Dil. 1 1 1 the spil spike nount 0.100 0.300 the spil	-06-29 -06-29 Spike Amoum 0.100 0.100 0.100 0.300 ke and sp Matr Resu <0.000 <0.000 <0.000 ke and sp	t iike d iix ilt i2000 i2000 i2000 i3000	Mat Ress <0.00 <0.00 <0.00 <0.00 uplicat Rec. 93 95 89 90 uplicat	rix 11t 0200 0200 0200 0300 e result 76.4 79.2 78.8 80 - e result	Anal Prep 93 93 87 87 5. Rec. imit - 120.5 - 117.8 - 117.9 120.1 5.	yzed By ared By I 76.4 79.2 78.8 80 <u>RPD</u> 0 2 3 3 3	r: AG : AG Rec. .imit - 120. - 117. - 117. - 120.1 RPD Limi 20 20 20 20
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Percent recovery is based on the s State St	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m 0.0893 m 0.269 m spike result. R LCS	Date A QC Pr I I I I I I I I I I I I I I I I I I I	Analyzed: reparation: Units I ng/L ng/L ng/L s based on to S Dil. Ar 1 0 1 0 1 0 1 0 s based on to CSD	2007- 2007- 2007- Dil. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-06-29 -06-29 Spike Amoun 0.100 0.100 0.100 0.300 ke and sp <0.000 <0.000 <0.000 ke and sp	t iike d iix ilt i2000 02000 03000 iike d Spill	Mat Resi <0.00 <0.00 <0.00 uplicat Rec. 93 95 89 90 uplicat at	rix 11t 0200 0200 0200 0300 e result F L 76.4 79.2 78.8 80 - e result LCS	Anal Prep 93 93 87 87 5. Rec. imit - 120.5 - 117.8 - 117.9 120.1 5. LCSD	yzed By ared By [1] 76.4 79.2 78.8 80 <u>RPD</u> 0 2 3 3 3	r: AG : AG Rec. .imit - 120. - 117. - 117. - 120.1 RPI Limi 20 20 20 20 Rec.
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Surrogate Surrogate	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m 0.0893 m 0.269 m spike result. R LCS Result R LCS Result R	Date A QC Pr I I I I I I I I I I I I I I I I I I I	Analyzed: reparation: Units I ng/L ng/L ng/L s based on r S Dil. Ar 1 0 1 0 1 0 1 0 1 0 2 based on r CSD cesult U	2007- 2007- 2007- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-06-29 -06-29 Spike Amoum 0.100 0.100 0.100 0.300 ke and sp <0.000 <0.000 <0.000 <0.000 ke and sp Dil.	t iike d iix iit iit iike d iike d Spiil Amo	$\begin{array}{c} \text{Mat}\\ \text{Ress}\\ <0.00\\ <0.00\\ <0.00\\ \text{uplicat}\\ \end{array}$	rix 11t 0200 0200 0200 0300 e result F L 76.4 79.2 78.8 80 - e result LCS Rec.	Anal Prep 93 93 87 87 5. Rec. imit - 120.5 - 117.8 - 117.9 120.1 5. LCSD Rec.	yzed By ared By I 76.4 79.2 78.8 80 <u>RPD</u> 0 2 3 3 3	r: AG : AG Rec. .imit - 120. - 117. - 117. - 120.1 RPI Limi 20 20 20 Rec. .imit
Laboratory Control Spike (L0 QC Batch: 38675 Prep Batch: 33475 Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Param Benzene Toluene Ethylbenzene Xylene Percent recovery is based on the s Surrogate Trifluorotoluene (TFT)	LCS Result 0.0931 0.0927 0.0866 0.261 spike result. R LCSD Result U 0.0933 m 0.0948 m 0.0893 m 0.269 m spike result. R LCS Result LCS Result R	Date A QC Pr I I I I I I I I I I I I I I I I I I I	Analyzed: reparation: Units I ng/L ng/L ng/L s based on the S Dil. Ar 1 00 1 00 1 00 1 00 1 00 1 00 1 00 1 0	2007- 2007- 2007- Dil. 1 1 1 1 the spit spike nount 0.100 0.300 the spit the spit	-06-29 -06-29 Spike Amoun 0.100 0.100 0.100 0.300 ke and sp Matr Resu <0.000 <0.000 <0.000 <0.000 ke and sp Dil.	t iike d iix ilt i2000 i200 i i200 i i i i	Mat Ress <0.00 <0.00 <0.00 uplicat Rec. 93 95 89 90 uplicat ce unt	rix 11t 0200 0200 0200 0300 e result F L 76.4 79.2 78.8 80 - e result LCS Rec. 68	Anal Prep Rec. 93 93 87 87 5. Rec. imit - 120.5 - 117.8 - 117.9 120.1 5. LCSD Rec. 67	yzed By ared By I 76.4 79.2 78.8 80 <u>RPD</u> 0 2 3 3 3 I I 59.5	r: AG : AG Rec. .imit - 120. - 117. - 117. - 120.1 RPI Limi 20 20 20 20 Rec. .imit - 117.

QC Batch:	38754		Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{TP}
Prep Batch:	33486	1	QC Preparation:	2007-07-02	Prepared By:	KV

	eam-J42 Pipeline		DC	P Midstr	eam-J42 Pi	peline			Lea Cou	nty, NN
		LĊ	S			Spike	Mat	rix		Rec.
Param		Resi	ılt	Units	Dil.	Amount	Res	ult Rec	•	Limit
Dissolved Cal	cium	53.	1	mg/L	1	50.0	< 0.0	290 106	79	0.1 - 121
Dissolved Pot	assium	51.	8	mg/L	1	50.0	<0.	307 104	78	8.8 - 114
Dissolved Mag	gnesium	51.	9	mg/L	1	50.0	< 0.0	740 104	80	0.2 - 120
Dissolved Sod		52.	8	mg/L	1	50.0	<0.	529 106	75	.4 - 123
Percent recov	ery is based on t	the spike result.	RPD is	based on	the spike	and spike du	iplicate	result.		
		LCSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit	RPD	Limi
Dissolved Cal	.cium	50.8	mg/L	1	50.0	< 0.0290	102	79.1 - 121	4	20
Dissolved Pot	assium	50.1	mg/L	1	50.0	$<\!0.307$	100	78.8 - 114	3	20
Dissolved Ma	gnesium	49.5	mg/L	1	50.0	< 0.0740	99	80.2 - 120	5	20
Dissolved Sod	lium	51.3	mg/L	1	50.0	< 0.529	103	79.4 - 123	3	20
Percent recov	ery is based on t	zhe spike result.	RPD is	based or	the spike	and spike dı	ıplicate	result.		
QC Batch: Prep Batch:	38817 33596	(105-1)	Date A QC Pr	Analyzed: eparation	2007-07 : 2007-07	-05 -05		Ana Pre	alyzed B pared B	y: ER y: ER
Param		L(Res	2S ult	Units	Dil.	Spike Amount	Ma Re	atrix esult Re	<u></u>	Rec.
Nitrate-N		2.8		mg/L		2.50	<0	.0240 10)3	90 - 11
Percent recov	ery is based on t	the spike result.	RPD is	based or	ı the spike	and spike di	iplicate	result.		
r creent recov		LCSD			Spike	Matrix		Rec.		RPI
Param		$f LCSD \ Result$	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPI Limi
Param Nitrate-N		LCSD Result 2.58	Units mg/L	Dil.	Spike Amount 2.50	Matrix Result <0.0240	Rec. 103	Rec. Limit 90 - 110	RPD 0	RPI Limi 20
Param Nitrate-N Percent recov Laboratory	ery is based on t Control Spike	LCSD Result 2.58 the spike result. (LCS-1)	Units mg/L RPD is	Dil.	Spike Amount 2.50 In the spike	Matrix Result <0.0240 and spike du	Rec. 103 iplicate	Rec. Limit 90 - 110 result.	RPD 0	RPI Limi 20
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch:	ery is based on t Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1)	Units mg/L RPD is Date A QC Pr	Dil. 1 based or Analyzed: eparation	Spike Amount 2.50 a the spike 2007-07 : 2007-07	Matrix Result <0.0240 and spike du -05 -05	Rec. 103 aplicate	Rec. Limit 90 - 110 result. Ana Pre	RPD 0 alyzed B pared B	RPI Limi 20 y: ER y: ER
Param <u>Nitrate-N</u> Percent recov Laboratory QC Batch: Prep Batch: Param	ery is based on t Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Ros	Units mg/L RPD is Date A QC Pr CS nlt	Dil. 1 based or Analyzed: eparation	Spike Amount 2.50 a the spike 2007-07 : 2007-07	Matrix Result <0.0240 and spike du -05 -05 Spike Amount	Rec. 103 iplicate	Rec. Limit 90 - 110 result. Ana Pre	RPD 0 alyzed B pared B	RPI Limi 20 y: ER y: ER Rec. Limit
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Param Chloride	rery is based on t Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Res	Units mg/L RPD is Date A QC Pr CS ult	Dil. 1 based or Analyzed: eparation Units mg/L	Spike Amount 2.50 a the spike 2007-07 a: 2007-07 Dil.	Matrix Result <0.0240 and spike du -05 -05 Spike Amount 12.5	Rec. 103 iplicate Ma Re	Rec. Limit 90 - 110 result. Ana Pre atrix esult Ra	RPD 0 alyzed B pared B ec.	RPI Limi 20 y: ER y: ER Rec. Limit 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Param Chloride Fluoride	rery is based on t Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Res 11 2.5	Units mg/L RPD is Date A QC Pr CS ult .3 33	Dil. 1 based or Analyzed: eparation Units mg/L mg/L	Spike Amount 2.50 a the spike 2007-07 : 2007-07 Dil. 1	Matrix Result <0.0240 and spike du -05 -05 -05 Spike Amount 12.5 2.50	Rec. 103 uplicate Ma Re <0	Rec. Limit 90 - 110 result. Ana Pre atrix esult Ra 0.172 9 .0119 9	RPD 0 alyzed B pared B ec. 0 3	RPI Limi 20 y: ER y: ER Rec. Limit 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Param Chloride Fluoride Sulfate	rery is based on t Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Res 11 2.3 12	Units mg/L RPD is Date A QC Pr CS ult .3 33 .1	Dil. 1 based or Analyzed: eparation Units mg/L mg/L mg/L	Spike Amount 2.50 1 the spike 2007-07 2007-07 2007-07 Dil. 1 1 1	Matrix Result <0.0240 and spike du -05 -05 -05 Spike Amount 12.5 2.50 12.5	Rec. 103 uplicate Ma Ra <0	Rec. Limit 90 - 110 result. Ana Pre atrix ssult Ra 0.172 9 .0119 9 0.777 9	RPD 0 alyzed B pared B ec. 0 3 7	RPI Limi 20 y: EF y: EF Rec. Limit 90 - 11 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Param Chloride Fluoride Sulfate Percent recov	rery is based on the Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Res 11 2.3 12 the spike result.	Units mg/L RPD is Date A QC Pr CS ult .3 33 .1 RPD is	Dil. 1 based or Analyzed: eparation Units mg/L mg/L mg/L based or	Spike Amount 2.50 a the spike 2007-07 : 2007-07 Dil. 1 1 1 1 1	Matrix Result <0.0240 and spike du -05 -05 -05 Spike Amount 12.5 2.50 12.5 and spike du	Rec. 103 plicate Ma Re <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	Rec. Limit 90 - 110 result. Ana Pre atrix esult Ra 0.172 9 0.0119 9 0.777 9 result.	RPD 0 alyzed B pared B ec. 0 3 7	RPI Limi 20 y: EF y: EF Rec. Limit 90 - 11 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Param Chloride Fluoride Sulfate Percent recov	rery is based on the Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Res 11 2.3 12 the spike result.	Units mg/L RPD is Date A QC Pr CS ult .3 33 .1 RPD is	Dil. 1 based or Analyzed: eparation Units mg/L mg/L based or	Spike Amount 2.50 a the spike 2007-07 : 2007-07 Dil. 1 1 1 1 1 1	Matrix Result <0.0240 and spike du -05 -05 -05 -05 Spike Amount 12.5 2.50 12.5 and spike du	Rec. 103 1plicate Ma Rec <c <c <c 1plicate</c </c </c 	Rec. Limit 90 - 110 result. Ana Pre atrix esult Ra 0.172 9 .0119 9 0.777 9 result.	RPD 0 alyzed B pared B ec. 0 3 7	RPI Limi 20 y: ER y: ER Rec. Limit 90 - 11 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Param Chloride Fluoride Sulfate Percent recov	rery is based on the Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) LC Res 11 2.3 12 the spike result. LCSD Result	Units mg/L RPD is Date A QC Pr CS ult .3 33 .1 RPD is	Dil. 1 based or Analyzed: eparation Units mg/L mg/L based or Dil	Spike Amount 2.50 a the spike 2007-07 : 2007-07 Dil. 1 1 1 1 a the spike Spike	Matrix Result <0.0240 and spike du -05 -05 -05 -05 -05 2.50 12.5 and spike du Matrix	Rec. 103 uplicate Ma Re <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	Rec. Limit 90 - 110 result. Ana Pre atrix esult Ra 0.172 9 .0119 9 0.777 9 result. Rec.	RPD 0 alyzed B pared B ec. 0 3 7	RPI Limi 20 y: ER y: ER Rec. Limit 90 - 11 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Param Chloride Fluoride Sulfate Percent recov Param	rery is based on the Control Spike 38817 33596 rery is based on the	LCSD Result 2.58 the spike result. (LCS-1) LCS-1 11 2.3 12 the spike result. LCSD Result 11 2	Units mg/L RPD is Date A QC Pr CS ult .3 33 .1 RPD is Units	Dil. a based or analyzed: reparation Units mg/L mg/L mg/L based or Dil.	Spike Amount 2.50 a the spike 2007-07 : 2007-07 : 2007-07 Dil. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 5	Matrix Result <0.0240 and spike du -05 -05 -05 -05 Spike Amount 12.5 2.50 12.5 and spike du Matrix Result	Rec. 103 plicate Ma Re <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	Rec. Limit 90 - 110 result. Ana Pre atrix sult Ra 0.172 9 .0119 9 0.777 9 result. Rec. Limit 90 - 110	RPD 0 alyzed B pared B ec. 0 3 7 RPD	RPI Limi 20 y: EF y: EF Rec. Limit 90 - 11 90 - 11 90 - 11 90 - 11
Param Nitrate-N Percent recov Laboratory QC Batch: Prep Batch: Prep Batch: Pluoride Fluoride Sulfate Percent recov Param Chloride Fluoride	rery is based on the Control Spike 38817 33596	LCSD Result 2.58 the spike result. (LCS-1) (LCS-1) LCS Result LCSD Result 11.2 2.32	Units mg/L RPD is Date A QC Pr CS ult .3 33 .1 RPD is Mg/L mg/L	Dil. a based or analyzed: eparation Units mg/L mg/L mg/L mg/L mg/L mg/L 1	Spike Amount 2.50 a the spike 2007-07 : 2007-07 : 2007-07 Dil. 1 1 1 1 a the spike Amount 12.5 2 50	Matrix Result <0.0240 and spike du -05 -05 -05 -05 -05 -05 -05 -05 -05 -05	Rec. 103 plicate Ma Re <0 <0 <0 <0 <0 <0 <0 <0 <0 <0	Rec. Limit 90 - 110 result. Ana Pre atrix esult 0.172 9 0.172 9 0.172 9 0.777 9 result. Rec. Limit 90 - 110 90 - 110	RPD 0 alyzed B pared B ec. 0 3 7 RPD 1 0	RPI Limi 20 y: ER y: ER kec. Limit 90 - 11 90 - 11 90 - 11 90 - 11 90 - 20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

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Laboratory Control Spike (LCS-1)

QC Batch:	38871	Date Analyzed:	2007-07-06	Analyzed By:	\mathbf{ER}
Prep Batch:	33644	QC Preparation:	2007-07-06	Prepared By:	\mathbf{ER}

	LCS			Spike	Matrix		Rec.
Param	\mathbf{Result}	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit
Nitrate-N	2.30	mg/L	1	2.50	< 0.0240	92	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Nitrate-N	2.46	mg/L	1	2.50	< 0.0240	98	90 - 110	7	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1)

QC Batch:	38871	Date Analyzed:	2007-07-06	Analyzed By:	\mathbf{ER}
Prep Batch:	33644	QC Preparation:	2007-07-06	Prepared By:	\mathbf{ER}

Param	f LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	11.6	mg/L	1	12.5	< 0.172	93	90 - 110
Fluoride	2.32	mg/L	1	2.50	< 0.0119	93	90 - 110
Sulfate	11.6	mg/L	1	12.5	< 0.777	93	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	LCSD			Spike	Matrix		Rec.		RPD
Param	Result	\mathbf{Units}	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	11.2	mg/L	1	12.5	< 0.172	90	90 - 110	4	20
Fluoride	2.30	mg/L	1	2.50	< 0.0119	92	90 - 110	1	20
Sulfate	11.8	mg/L	1	12.5	< 0.777	94	90 - 110	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 128760

QC Batch:	38675	Date Analyzed:	2007-06-29	Analyzed By:	AG
Prep Batch:	33475	QC Preparation:	2007-06-29	Prepared By:	AG

MS			Spike	Matrix		Rec.
\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit
0.0976	mg/L	1	0.100	< 0.000200	98	75.9 - 114.2
0.0983	mg/L	1	0.100	< 0.000200	98	78.7 - 111.8
0.0940	mg/L	1	0.100	< 0.000200	94	78.3 - 112.3
0.282	mg/L	1	0.300	< 0.000300	94	79.3 - 114.8
	MS Result 0.0976 0.0983 0.0940 0.282	MS Result Units 0.0976 mg/L 0.0983 mg/L 0.0940 mg/L 0.282 mg/L	MS <u>Result</u> Units Dil. 0.0976 mg/L 1 0.0983 mg/L 1 0.0940 mg/L 1 0.282 mg/L 1	MS Spike Result Units Dil. Amount 0.0976 mg/L 1 0.100 0.0983 mg/L 1 0.100 0.0940 mg/L 1 0.100 0.282 mg/L 1 0.300	MS Spike Matrix Result Units Dil. Amount Result 0.0976 mg/L 1 0.100 <0.000200	MS Spike Matrix Result Units Dil. Amount Result Rec. 0.0976 mg/L 1 0.100 <0.000200

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result. continued ...

Report Date: July 10, 2007 DCP Midstream-J42 Pipeline

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matrix spikes continued

	MSD			Spike	Matrix		Rec.		\mathbf{RPD}
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
	MSD			Spike	Matrix		Rec.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Benzene	0.0994	mg/L	1	0.100	< 0.000200	99	75.9 - 114.2	2	20
Toluene	0.102	mg/L	1	0.100	< 0.000200	102	78.7 - 111.8	4	20
Ethylbenzene	0.0978	mg/L	1	0.100	< 0.000200	98	78.3 - 112.3	4	20
Xylene	0.294	$\mathrm{mg/L}$	1	0.300	< 0.000300	98	79.3 - 114.8	4	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

	MS	MSD			Spike	MS	MSD	Rec.
Surrogate	\mathbf{Result}	Result	Units	Dil.	Amount	Rec.	Rec.	Limit
Triffuorotoluene (TFT)	0.0639	0.0671	mg/L	1	0.1	64	67	43.9 - 121.4
4-Bromofluorobenzene (4-BFB)	0.0772	0.0783	mg/L	1	0.1	77	78	54.2 - 120.1

Matrix Spike (MS-1) Spiked Sample: 128883

QC Batch:	38754	Date Analyzed:	2007-07-02	Analyzed By:	\mathbf{TP}
Prep Batch:	33486	QC Preparation:	2007-07-02	Prepared By:	KV

		MS			Spike	Matrix		Rec.
Param		Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit
Dissolved Calcium		196	mg/L	1	50.0	156	80	69 - 130
Dissolved Potassium		204	mg/L	1	50.0	156	96	76.8 - 117
Dissolved Magnesium		187	mg/L	1	50.0	146	82	77.9 - 122
Dissolved Sodium	8	4680	$\mathrm{mg/L}$	1	50.0	4410	540	84.2 - 120

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

		MSD			Spike	Matrix		Rec.		RPD
Param		Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}	RPD	Limit
Dissolved Calcium		194	mg/L	1	50.0	156	76	69 - 130	1	20
Dissolved Potassium	9	192	mg/L	1	50.0	156	72	76.8 - 117	6	20
Dissolved Magnesium	10	184	mg/L	1.	50.0	146	76	77.9 - 122	2	. 20
Dissolved Sodium	11	4790	mg/L	1	50.0	4410	760	84.2 - 120	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) Spiked Sample: 128758

QC Batch:	38817	Date Analyzed:	2007-07-05	Analyzed By:	\mathbf{ER}
Prep Batch:	33596	QC Preparation:	2007-07-05	Prepared By:	\mathbf{ER}

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	Result	Rec.	\mathbf{Limit}
Nitrate-N	267	$\mathrm{mg/L}$	100	250	3.5228	105	88.4 - 118

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

⁸Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

⁹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹⁰Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

¹¹Matrix spike recovery out of control limits due to matrix interference. Use LCS/LCSD to demonstrate analysis is under control.

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Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec Lim	c. it	RPD	RPD Limit
Nitrate-N	263	mg/L	100	250	3.5228	104	88.4 -	118	2	20
Percent recovery is based on	the spike result.	RPD is	based on	the spike a	and spike d	uplicate	result.			
Matrix Spike (MS-1) S	piked Sample: 12	8758								
QC Batch: 38817 Prep Batch: 33596		Date A QC Pr	malyzed: eparation:	2007-07- 2007-07-	-05 -05			Anal Prep	lyzed By ared By	y: ER 7: ER
	MS	5			Spike	Ma	trix			Rec.
Param	Resu	ılt	Units	Dil.	Amount	Res	sult	Rec.		Limit
Chloride	260	0	mg/L	100	1250	1384	4.18	97	1	0 - 188
Fluoride	221	l	mg/L	100	250	<1	1.9	88	73	.4 - 119
Sulfate	139	0	mg/L	100	1250	97.0	606	103	83	.1 - 114
Percent recovery is based on	the spike result.	RPD is	based on	the spike	and spike d	uplicate	result.			
	MSD			Spike	Matrix		Re	с.		RPD
Param	Result	Units	Dil.	Amount	Result	Rec.	Lin	iit	RPD	Limi
Chloride	2630	mg/L	100	1250	1384.18	100	10 -	188	1	20
Onoride			100	250	< 11.9	89	73.4 -	119	1	20
Fluoride Sulfate	223 1400	mg/L	100	1250	07 0606	104	831 -	114	1	20
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S	223 1400 the spike result. Spiked Sample: 12	mg/L mg/L RPD is 28762	100 based on	1250 the spike	97.0606 and spike d	104 auplicate	83.1 - result.	114	1	20
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644	223 1400 the spike result. Spiked Sample: 12	mg/L mg/L RPD is 28762 Date A QC Pr	100 based on Analyzed: eparation:	1250 the spike 2007-07- 2007-07-	97.0606 and spike d -06 -06	104 Suplicate	83.1 - result.	114 Ana Prep	1 lyzed By pared By	20 y: ER 7: ER
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Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param	223 1400 the spike result. Spiked Sample: 12 MS Resu	mg/L mg/L RPD is 28762 Date A QC Pr S Ilt	100 based on Analyzed: eparation: <u>Units</u>	1250 the spike 2007-07- 2007-07- Dil.	97.0606 and spike d -06 -06 Spike Amount	104 uplicate Ma Res	83.1 - result. trix sult	114 Ana Prep Rec.	1 lyzed B ared By	20 y: ER r: ER Rec. Limit
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N	223 1400 the spike result. Spiked Sample: 12 MS Resu 133	mg/L mg/L RPD is 28762 Date A QC Pr S Ilt	100 based on Analyzed: eparation: Units mg/L	1250 the spike 2007-07 2007-07 2007-07 Dil. 50	97.0606 and spike d -06 -06 Spike Amount 125	104 Juplicate Ma Res 3.4	83.1 - result. trix sult 365	Ana Prep Rec. 108	1 lyzed B bared By 88	20 y: ER 7: ER Rec. Limit .4 - 118
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on	223 1400 the spike result. Spiked Sample: 12 MS Resu 139 the spike result.	mg/L mg/L RPD is 28762 Date A QC Pr 6 Ilt 9 RPD is	100 based on hualyzed: eparation: Units mg/L based on	1250 the spike 2007-07- 2007-07- Dil. 50 the spike	97.0606 and spike d -06 -06 Amount 125 and spike d	104 uplicate Ma Res 3.4 uplicate	83.1 - result. trix sult 365 result.	Ana Prep Rec. 108	1 lyzed By aared By 88	20 y: ER 7: ER Rec. Limit .4 - 118
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on	223 1400 the spike result. Spiked Sample: 12 MSE the spike result. MSD	mg/L mg/L RPD is 28762 Date A QC Pr Sult P RPD is	100 based on analyzed: eparation: <u>Units</u> <u>mg/L</u> based on	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Spike	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06 -06 -06	104 auplicate Ma Res 3.4 uplicate	83.1 - result. trix sult 365 result. Rea	114 Ana Prep Rec. 108 c.	1 lyzed By bared By 88	20 y: ER 7: ER Rec. Limit .4 - 118 RPD
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Fluoride Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N	223 1400 the spike result. Spiked Sample: 12 MS Resu 139 the spike result. MSD Result 130	mg/L mg/L RPD is 28762 Date A QC Pr 6 ult 9 RPD is mg/L	100 5 based on Analyzed: eparation: Units mg/L 5 based on Dil. 50	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Amount 125	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06 -06 -06	104 uplicate Ma Res 3.4 uplicate Rec. 101	83.1 - result. trix sult 365 result. Ree Lim 88.4 -	114 Ana. Prep <u>Rec.</u> 108 c. iit	1 lyzed By aared By 88 <u>RPD</u> 7	20 y: ER 7: ER Rec. Limit 3.4 - 118 RPD Limi 20
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N Percent recovery is based on	223 1400 the spike result. Spiked Sample: 12 MSD Result 130 the spike result.	mg/L mg/L RPD is 28762 Date A QC Pr 6 ult 9 RPD is mg/L RPD is	100 based on analyzed: eparation: Units mg/L based on Dil. 50 based on	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Amount 125 the spike	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06 -06 -06	104 uplicate Ma Res 3.4 uplicate Rec. 101 uplicate	83.1 - result. trix sult 365 result. Ree Lim 88.4 - result.	114 Ana. Prep Rec. 108 c. iit 118	1 lyzed By aared By 88 <u>RPD</u> 7	20 y: ER 7: ER Limit .4 - 118 RPD Limit 20
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N Percent recovery is based on Matrix Spike (MS-1) S	223 1400 the spike result. spiked Sample: 12 MSD Result 130 the spike result. Spiked Sample: 12	mg/L mg/L RPD is 28762 Date A QC Pr 6 nlt 9 RPD is mg/L RPD is 28762	100 5 based on Analyzed: eparation: Units mg/L 5 based on Dil. 50 5 based on	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Amount 125 the spike	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06 -06 -06	104 uplicate Ma Res 3.4 uplicate Rec. 101 uplicate	83.1 - result. trix sult 365 result. Ree Lim 88.4 - result.	114 Ana. Prep Rec. 108 c. iit 118	1 lyzed By aared By 88 <u>RPD</u> 7	20 y: ER 7: ER Limit .4 - 118 RPD Limit 20
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Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644	223 1400 the spike result. Spiked Sample: 12 MSD Result 130 the spike result. Spiked Sample: 12	mg/L mg/L RPD is 28762 Date A QC Pr S llt 9 RPD is mg/L RPD is 28762 Date A QC Pr	100 100 based on Analyzed: eparation: Units mg/L based on Dil. 50 based on Analyzed: eparation:	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Amount 125 the spike 2007-07 2007-07	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06	104 uplicate Ma Res 3.4 uplicate Rec. 101 uplicate	83.1 - result. trix sult 365 result. Ree Lim 88.4 - result.	Ana Prep Rec. 108 c. iit 118 Ana Prep	1 lyzed By aared By 88 <u>RPD</u> 7 lyzed By bared By	20 y: ER r: ER Rec. Limit A - 118 RPD Limit 20 y: ER r: ER
Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644	223 1400 the spike result. Spiked Sample: 12 MS Result 130 the spike result. MSD Result 130 the spike result. Spiked Sample: 12	mg/L mg/L RPD is 28762 Date A QC Pr S llt P RPD is mg/L RPD is 28762 Date A QC Pr	100 100 based on Analyzed: eparation: Units mg/L based on Dil. 50 based on Analyzed: eparation:	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Amount 125 the spike 2007-07 2007-07	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06 -06 -06	104 uplicate Ma Rec 3.4 uplicate Rec. 101 uplicate	83.1 - result. trix sult 365 result. Ree Lim 88.4 - result.	Ana Prep Rec. 108 c. iit 118 Ana Prep	1 lyzed By aared By 88 <u>RPD</u> 7 lyzed By bared By	20 y: ER r: ER Rec. Limit A - 118 RPD Limit 20 y: ER r: ER Rec. Rec.
Fluoride Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param	223 1400 the spike result. Spiked Sample: 12 MSD Result 130 the spike result. Spiked Sample: 12 Spiked Sample: 12 MSD Result	mg/L mg/L RPD is 28762 Date A QC Pr 3 RPD is mg/L RPD is 28762 Date A QC Pr 5 llt	100 100 based on Analyzed: eparation: Units mg/L based on Dil. 50 based on Analyzed: eparation: Units	1250 the spike 2007-07 2007-07 2007-07 Dil. 50 the spike Amount 125 the spike 2007-07 2007-07 2007-07	97.0606 and spike d -06 -06 -06 -06 -06 -06 -06 -06 -06 -06	104 uplicate Ma Res 3.4 uplicate Rec. 101 uplicate	83.1 - result. trix sult 365 result. Ree Lim 88.4 - result.	Ana Prep Rec. 108 c. iit 118 Ana Prep Rec.	1 lyzed By aared By 88 <u>RPD</u> 7 lyzed By bared By	20 y: ER Rec. Limit A - 118 RPD Limit 20 y: ER r: ER Rec. Limit
Fluoride Fluoride Sulfate Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Nitrate-N Percent recovery is based on Param Nitrate-N Percent recovery is based on Matrix Spike (MS-1) S QC Batch: 38871 Prep Batch: 33644 Param Chloride	223 1400 the spike result. Spiked Sample: 12 MSD Result 130 the spike result. Spiked Sample: 12 MSD Result 130 the spike result. Spiked Sample: 12 MSD Result 130	mg/L mg/L RPD is 28762 Date A QC Pr S llt P RPD is mg/L RPD is 28762 Date A QC Pr S llt 0	100 100 based on Analyzed: eparation: Units mg/L based on Dil. 50 based on Analyzed: eparation: Units mg/L	1250 the spike 2007-07- 2007-07- 2007-07- Dil. 50 the spike Amount 125 the spike 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 2007-07- 50	97.0606 and spike d -06 -06 -06 -06 and spike d Matrix Result 3.4365 and spike d -06 -06 -06 -06 Spike Amount 625	104 uplicate Ma Rec 3.4 uplicate Rec. 101 uplicate Ma Res 617	83.1 - result. trix sult 365 result. Rec Lim 88.4 - result. trix sult .094	Ana Prep Rec. 108 c. iit 118 Ana Prep Rec. 108	1 lyzed By aared By 88 <u>RPD</u> 7 lyzed By aared By	20 y: ER r: ER Rec. Limit 20 y: ER r: ER Rec. Limit 0 - 188

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matrix spikes continued

	MS			Spike	Matrix		Rec.
Param	Result	Units	Dil.	Amount	\mathbf{Result}	Rec.	Limit
Sulfate	699	m mg/L	50	625	67.4779	101	83.1 - 114
Percent recovery is based	on the spike result. RPD	is based or	n the spik	e and spike du	plicate result		

	MSD			Spike	Matrix		Rec.		RPD
Param	\mathbf{Result}	Units	Dil.	Amount	Result	Rec.	Limit	RPD	Limit
Chloride	1210	mg/L	50	625	617.094	95	10 - 188	6	20
Fluoride	108	$\mathrm{mg/L}$	50	125	$<\!5.95$	86	73.4 - 119	0	20
Sulfate	681	mg/L	50	625	67.4779	98	83.1 - 114	3	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1)

QC Batch: 38675			Date Analy	zed: 2007-06-2	Analyzed By: AG		
			ICVs	ICVs	ICVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0915	92	85 - 115	2007-06-29
Toluene		m mg/L	0.100	0.0937	94	85 - 115	2007-06-29
Ethylbenzene		mg/L	0.100	0.0878	88	85 - 115	2007-06-29
Xylene		$\mathrm{mg/L}$	0.300	0.265	88	85 - 115	2007-06-29

Standard (CCV-1)

QC Batch: 386	575		Date Analy	29	Anal	yzed By: AG	
			CCVs	CCVs	\mathbf{CCVs}	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Benzene		mg/L	0.100	0.0906	91	85 - 115	2007-06-29
Toluene		mg/L	0.100	0.0923	92	85 - 115	2007-06-29
Ethylbenzene		mg/L	0.100	0.0869	87	85 - 115	2007-06-29
Xylene		mg/L	0.300	0.262	87	85 - 115	2007-06-29

Standard (ICV-1)

 \mathbf{QC} m

QC Batch: 3	38716	Da	te Analyzed:	2007-07-02		Anal	yzed By: JS
			ICVs True	ICVs Found	ICVs Percent	Percent Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Total Alkalini	ty	mg/L as CaCo3	250	242	97	90 - 110	2007-07-02

Standard (CCV-1)

QC Batch: 38716

Date Analyzed: 2007-07-02

Analyzed By: JS

Report Date: Ju DCP Midstream	uly 10, 2007 n-J42 Pipeli	7 ine	Γ	Work Or OCP Midstro	der: 7062821 eam-J42 Pipe	Page Number: 23 of 25 Lea County, NM			
				CCVs True	CCVs Found	CCVs Percent	Percent Recovery	Date	
Param	Flag		Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Total Alkalinity		mg/l	L as CaCo3	250	242	97	90 - 110	2007-07-02	
Standard (ICV	V-1)								
QC Batch: 387	754		Date	Analyzed:	2007-07-02		Analy	vzed By: TP	
				ICVs	ICVs	ICVs	Percent		
				True	Found	Percent	Recovery	Date	
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Dissolved Calciu	1111		mg/L	50.0	51.5	103	90 - 110	2007-07-02	
Dissolved Potas	sium		mg/L	50.0	51.5	103	90 - 110	2007-07-02	
Dissolved Magne	esium		mg/L	50.0	51.4	103	90 - 110	2007-07-02	
Dissolved Sodiu	m		mg/L	50.0	50.8	102	90 - 110	2007-07-02	
Standard (CC	V-1)								
QC Batch: 387	754		Date	Analyzed:	2007-07-02		Analy	vzed By: TP	
				CCVs	CCVs	CCVs	Percent		
				True	Found	Percent	Recovery	Date	
Param		Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Dissolved Calciu	1111		mg/L	50.0	48.8	98	90 - 110	2007-07-02	
Dissolved Potas	sium		$\mathrm{mg/L}$	50.0	47.0	94	90 - 110	2007-07-02	
Dissolved Magne	esium		mg/L	50.0	49.0	98	90 - 110	2007-07-02	
Dissolved Sodiu	m		mg/L	50.0	52.6	105	90 - 110	2007-07-02	
Standard (ICV	V-1)								
QC Batch: 388	817		Date	Analyzed:	2007-07-05		Analy	vzed By: ER	
,			ICVs	s I(CVs	ICVs	Percent		
			True	e Fo	ound	Percent	Recovery	Date	
Param	Flag	Units	Conc	. C	onc.	Recovery	\mathbf{Limits}	Analyzed	
Nitrate-N		mg/L	2.50	2	2.35	94	90 - 110	2007-07-05	
Standard (ICV	V-1)								
QC Batch: 388	817		Date	Analyzed:	2007-07-05		Analy	vzed By: ER	
			ICVs	IC	UVs	ICVs	Percent		
			True	Fo	und	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Co	onc.	Recovery	Limits	Analyzed	
Chloride		mg/L	12.5	1	2.5	100	90 - 110	2007-07-05	
Fluoride		m mg/L	2.50	2	.25	90	90 - 110	2007-07-05	
Sulfate		mg/L	12.5	1	1.9	95	90 - 110	2007-07-05	

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Report Date: July 10, 2007 Work Order: 7062821 DCP Midstream-J42 Pipeline DCP Midstream-J42 Pipeline

Standard (CCV-1)

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QC Batch:	38817		Date Ana	lyzed: 2007-07	7-05	Anal	yzed By: ER
			\mathbf{CCVs}	\mathbf{CCVs}	CCVs	Percent	
			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Nitrate-N		mg/L	2.50	2.36	94	90 - 110	2007-07-05

Standard (CCV-1)

QC Batch:	38817		Date Ana	lyzed: 2007-02	Analyzed By: ER					
			CCVs	CCVs	CCVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Chloride		mg/L	12.5	12.5	100	90 - 110	2007-07-05			
Fluoride		$\mathrm{mg/L}$	2.50	2.46	98	90 - 110	2007-07-05			
Sulfate		mg/L	12.5	11.8	94	90 - 110	2007-07-05			

Standard (ICV-1)

QC Batch: 38844		Ι	Date Analyzed:	2007-07-06		Analyzed By: AR				
			ICVs	ICVs	ICVs	Percent				
			True	Found	Percent	Recovery	Date			
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed			
Total Dissolved Solids		mg/L	1000	1051	105	90 - 110	2007-07-06			

Standard (CCV-1)

QC Batch: 38844		Γ	Date Analyzed:	2007-07-06		Analyzed By: AR			
			CCVs	CCVs	CCVs	Percent	Dutu		
			irue	round	Percent	Recovery	Date		
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed		
Total Dissolved Solids		mg/L	1000	997.0	100	90 - 110	2007-07-06		

Standard (ICV-1)

QC Batch:	38871	`	Date Ana	lyzed: 2007-07	Analyzed By: ER			
			ICVs	ICVs Found	ICVs Porcent	Percent	Data	
			rrue	round	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Nitrate-N		m mg/L	2.50	2.32	93	90 - 110	2007-07-06	

Standard (ICV-1)

QC Batch: 38871

Date Analyzed: 2007-07-06

Analyzed By: ER

Report Date DCP Midstr	e: July 10, 200 ream-J42 Pipe)7 eline	W DCP	ork Order: 706 Midstream-J42	Page Number: 25 of 25 Lea County, NM			
Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed	
Chloride		mg/L	12.5	11.2	90	90 - 110	2007-07-06	
Fluoride		mg/L	2.50	2.27	91	90 - 110	2007-07-06	
Sulfate		mg/L	12.5	11.6	93	90 - 110	2007-07-06	
Standard (CCV-1)							
QC Batch: 38871			Date Ana	lyzed: 2007-0	Analyzed By: ER			
			CCVs	CCVs	\mathbf{CCVs}	Percent		

			True	Found	Percent	Recovery	Date
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed
Nitrate-N		mg/L	2.50	2.33	93	90 - 110	2007-07-06

Standard (CCV-1)

QC Batch:	38871		Date Ana	alyzed: 2007-0	Analyzed By: ER			
			CCVs	\mathbf{CCVs}	CCVs	Percent		
			True	Found	Percent	Recovery	Date	
Param	Flag	Units	Conc.	Conc.	Recovery	Limits	Analyzed	
Chloride		mg/L	12.5	11.2	90	90 - 110	2007-07-06	
Fluoride		$\mathrm{mg/L}$	2.50	2.26	90	90 - 110	2007-07-06	
Sulfate		$\mathrm{mg/L}$	12.5	11.8	94	90 - 110	2007-07-06	

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May 15, 2007

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

RE: 1st Quarter 2007 Groundwater Monitoring Results DCP Midstream, LP J-4-2 Pipeline Release Unit C, Section 27, Township 19 South, Range 35 East Lea County, New Mexico

DCP Midstream 370 17th Street, Suite 2500 Denver, CO 80202 303-595-3331 303-605-2226 FAX

CARL, MAKE A VEW IRP SON THIS PERMITS FAMILIEY FON RBAMS V SCAN;

Dear Mr. Price:

DCP Midstream, LP (DCP) formerly Duke Energy Field Services, LP is pleased to submit for your review, a copy of the 1st Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release located in Lea County, New Mexico (Unit C, Section 27, Township 19 South, Range 35 East). At this time, no RP number has been assigned to this remediation project.

If you have any questions regarding the report, please call at 303-605-1718 or e-mail me swweathers@dcpmidstream.com.

Sincerely

DCP Midstream, LP

Stephen Weathers, PG Sr. Environmental Specialist

Carl Chavez, OCD Santa Fe Office cc: Larry Johnson, OCD Hobbs District Office (Copy on CD) Lynn Ward, DCP Midland Office **Environmental Files**

www.dcpmidstream.com

May 14, 2007

Mr. Stephen Weathers DCP Midstream, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Summary of the First Quarter 2007 Groundwater Monitoring Results for the DCP J-4-2 Pipeline Release in Lea County New Mexico Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This report summarizes the first quarter 2007 groundwater monitoring activities completed at the J-4-2 release location for DCP Midstream, LP (DCP, formerly Duke Energy Field Services, LP). The site is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.647° north and 103.447° west.

The monitoring network includes the seven groundwater monitoring wells shown on Figure 2. Table 1 summarizes construction information for each well. Note that monitoring well MW-5 was not installed.

GROUNDWATER SAMPLING

Trident Environmental collected groundwater samples on March 14, 2007. The depth to water was measured in each well prior to conducting the purging and sampling activities. The calculated groundwater elevations for all monitoring episodes are summarized in Table 2. Wells MW-1 and MW-2 both contained measurable free phase hydrocarbons (FPH). Approximate water-table elevations for the wells containing FPH were estimated 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 FPH density (assumed at 0.73).

The historic FPH thickness values are summarized in Table 3. Well MW-1 did not contain FPH during the January 2006 and the September 2006 sampling events. The FPH

Mr. Stephen Weathers May 14, 2007 Page 2

thickness in MW-2 remained relatively constant at 0.10 feet between September 2006 and December 2006 after a substantial decline between January 2006 (0.57 feet) and September 2006 (0.15 feet).

The five wells that did not contain FPH were purged and sampled using the standard protocols for this site. Purging was completed using dedicated bailers until a minimum of three casing volumes of water was removed and the field parameters temperature, pH and conductivity 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 well purging using the dedicated bailers. All samples were placed in an ice-filled chest immediately upon collection and delivered to the analytical laboratory (Accutest Laboratories) using standard chain-of-custody protocol. The samples were analyzed for benzene, toluene, ethylbenzene and total xylenes (BTEX), chlorides and total dissolved solids. The laboratory analyses for the sampling episode are summarized in Table 4. The laboratory report is attached.

Table 5 provides the quality assurance/quality control (QA/QC) information. The QA/QC evaluation includes:

- The sample temperature was 2.6° centigrade when the lab received them.
- No BTEX constituents were detected in the trip blank.
- All of the individual surrogate spikes were within their control limits.
- The relative percentage difference (RPD) values could not be calculated because the constituents for both samples were below the method reporting limits.
- The matrix spike and matrix spike duplicate results from the MW-7 sample were all within the control limits for all four constituents.

The above data indicate that the data is suitable for all uses.

RESULTS AND INTERPRETATIONS

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Figure 3 includes hydrographs for the corrected water-table elevations for all site wells. The water table elevation in MW-2 recovered to an elevation above MW-1 and MW-3 and equivalent to MW-4. The resulting March 2007 calculated groundwater contours as generated using the Surfer® program with the kriging option are shown on Figure 4. The water table that was measured in March 2007 exhibits a consistent gradient toward the southeast at a gradient that is similar to that exhibited in December 2006.

Mr. Stephen Weathers May 14, 2007 Page 3

Figure 5 depicts the spatial March 2007 benzene distribution. Benzene was reported below the method reporting limit of 0.002 mg/l in MW-3 and in down-gradient wells MW-6, MW-7 and MW-8. The 0.0044 mg/l benzene concentration decreased substantially in MW-4 from the December 2006 value of 0.0295 mg/l (Table 6).

Passive FPH collection bailers were installed in wells MW-1 and MW-2. These bailers will be emptied on a regular basis. This effort will then be evaluated as a long-term removal strategy. Samples will also be collected and analyzed for chlorides in all wells (including any containing FPH) to better evaluated that distribution.

The next groundwater-monitoring event is scheduled for the second quarter of 2007. The second quarter 2007 monitoring event should also be completed to provide a full year of data before conducting a temporal evaluation of the dissolved phase hydrocarbon data trends.

Do not hesitate to contact me if you have any questions or comments on this letter.

Sincerely, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Mechael H. Stewart

Michael H. Stewart, P.E., C.P.G. Principal Engineer MHS/tbm TABLES

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Name	Date	Stickup	Total	Screen	Sand
	Installed	_	Depth	Interval	Interval
			(btoc)	(ground)	
MW-1	2/06	3.17	43.05	19-39	17-39
MW-2	2/06	3.08	43.30	19-39	17-39
MW-3	2/06	3.21	43.00	19-39	17-39
MW-4	9/06	3.12	38.12	20-35	18-35
MW-5	N	ot installed	because	of drilling re	fusal
MW-6	9/06	3.32	38.32	20-35	18-35
MW-7	9/06	2.95	39.45	21.5-36.5	19.5-36.5
MW-8	9/06	3.32	38.32	20-35	18-35

Table I – Summary of Monitoring Well Completions at the J-4-2 Site

All units are feet

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	2/15/06	9/25/06	12/21/06	3/14/07
MW-1	3713.61	3712.60	3712.63	3712.29
MW-2	3713.93	3713.48	3712.49	3712.75
MW-3	3713.36	3712.57	3712.57	3712.55
MW-4		3712.80	3712.82	3712.78
MW-6		3711.76	3712.00	3711.96
MW-7		3711.03	3710.80	3710.73
MW-8		3709.22	3708.95	3708.79

Table 2 - Summary of Water Table Elevations for the J-4-2 Site

Units are feet

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Blank cells: wells not installed

Date	MW-1	MW-2
2/15/06	0.00	0.57
9/25/06	0.00	0.15
12/21/06	0.09	0.13
3/14/07	0.07	0.10
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Units are feet

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Well	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chlorides	Total Dissolved Solids
Standard	0.01	0.75	0.75	0.62		
MW-3	< 0.002	< 0.002	< 0.002	< 0.006	7800	16800
MW-3 Dup	< 0.002	< 0.002	< 0.002	< 0.006	NA	NA
MW-4	0.0044	0.0006	< 0.002	0.0032	1300	2940
MW-6	< 0.002	< 0.002	< 0.002	< 0.006	669	1240
MW-7	< 0.002	< 0.002	< 0.002	< 0.006	1230	3380
MW-8	< 0.002	< 0.002	< 0.002	< 0.006	609	467

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Notes: Units are mg/l,

MW-1 and MW-2 contained free phase hydrocarbon so they were not sampled. MW-5 was never installed

The duplicate sample was not analyzed for chlorides and total dissolved solids

Table 5 - Quality Assurance Evaluation for the March 2007 Data

MW-3 Duplicate Samples

	Benzene	Toluene	Ethylbenzene	Total Xylenes	
RPD (%)	NA	NA	NA	NA	

NA: Not analyzed because one or both of the constituents are below their method reporting limit(s).

t

MW-7 MS/MSD (percent recovery)

	Benzene	Toluene	Ethylbenzene	Total Xylenes	
MS	92	88	112	94	
MSD	93	99	101	96	

MS: matrix spike

MSD: matrix spike duplicate

Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	TPH GRO	TPH DRO
Standard		0.01	0.75	0.75	0.62		
	······						
MW-1	2/06	0.139	0.326	0.34	0.31		
	9/06	0.0418	0.0048	0.0247	0.0605	0.604	0.108J
Dup	9/06	0.0555	0.0068	0.032	0.0782	0.483	0.107J
	12/06	FPH	FPH	FPH	FPH		
	3/07	FPH	FPH	FPH	FPH		
<u>MW-3</u>	2/06	< 0.001	< 0.001	< 0.001	< 0.002		
	9/06	< 0.002	< 0.002	< 0.002	<0.006	< 0.25	< 0.25
	12/06	< 0.002	< 0.002	< 0.002	< 0.006		
	3/07	< 0.002	< 0.002	< 0.002	< 0.006		
Dup	3/07	< 0.002	< 0.002	< 0.002	< 0.006		
MW-4	9/06	0.0086	0.000931	0.0092	0.0061	0.111	0.669
	12/06	0.0295	0.0058	< 0.002	0.0075		
Dup	12/06	0.0207	0.004	< 0.002	0.0054		
	3/07	0.0044	0.0006	< 0.002	0.0032		
MW 6	9/06	<0.002	<0.002	<0.002	<0.006	<0.05	0.70
101 00 -0	12/06	<0.002	<0.002	<0.002			0.79
	3/07	<0.002	<0.002	<0.002	<0.000		
						• • •	
MW-7	9/06	< 0.002	< 0.002	< 0.002	< 0.006	< 0.05	0.0668J
	12/06	< 0.002	< 0.002	< 0.002	< 0.006		
	3/07	< 0.002	< 0.002	< 0.002	< 0.006		
	0.000		0.005				
MW-8	9/06	<0.002	<0.002	<0.002	<0.006	< 0.05	0.0631J
	12/06	<0.002	<0.002	<0.002	<0.006		
	3/07	< 0.002	<0.002	<0.002	< 0.006		1

Table 6 – Summary of Groundwater Data

Notes: Units are mg/l,

FPH: No sample because FPH is present:

Blank cell: no sample collected

MW-2 has contained FPH since he was installed

MW-5 was never installed

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GROUNDWATER SAMPLING NOTES

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	CLIENT:	DCP Mi	dstream			WELL ID:	MW-1			
S	ITE NAME:	J42				DATE:	3/14/2007			
PRO	DJECT NO.	F-119			. 9	SAMPLER:	J. Fergerson			
PURGING METHOD: If Hand Bailed I Pump If Pump, Type:										
SAMPLIN	SAMPLING METHOD: 🖸 Disposable Bailer 🗌 Direct from Discharge Hose 🗌 Other:									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Gloves Alconox Distilled Water Rinse Other:										
DISPOSAL METHOD OF PURGE WATER: 🗵 Surface Discharge 🔲 Drums 🔲 Disposal Facility										
TOTAL D	EPTH OF V	VELL:	43.05	Feet						
DEPTH T	O WATER:		28.21	Feet		73	Minimum Gallons to			
WELL DI	AMETER:	2.0	Inch	1 661		1.0	purge 3 well volumes			
					00	·	(Water Column Height x 0.49)			
TIME	PURGED	°C	m S/cm	рН	mg\L	Turb	REMARKS			
							Begin Hand Bailing			
		_								
0:00	:Total Tim	e (hr:min)	0	:Total Vol ((gal)	#DIV/0!	:Flow Rate (gal/min)			
SAMP	LE NO.:	Collected S	ample No.:	070314						
ANAL	YSES:	BTEX (826	0), Major lor	ns, TDS						
COM	COMMENTS: Did Not Purge & Sample Due to FF					nitoring We	! !			

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	CLIENT:	DCP Mi	dstream		_	WELL ID:	MW-2			
S	ITE NAME:		J42			DATE:	3/14/2007			
PRO	DJECT NO.		F-119			SAMPLER:	J. Fergerson			
PURGING	3 METHOD	:	☑ Hand Bai	iled 🗌 Pu	mp If Pu	mp, Type:				
SAMPLIN	SAMPLING METHOD: 🖸 Disposable Bailer 🗌 Direct from Discharge Hose 🔲 Other:									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Glove	☑ Gloves □ Alconox □ Distilled Water Rinse □ Other:									
DISPOSA		OF PURG	E WATER:	Surface	e Discharç	ge 🗌 Drui	ms 🗹 Disposal Facility			
TOTAL D	EPTH OF V	VELL:	43.30	Feet						
DEPTH T	O WATER:	00111111	27.94	Feet						
WELL DI	OF WATER AMETER:	: COLUMN: 2.0	15.36 Inch	Feet		7.5	purge 3 well volumes			
						<u></u>	(Water Column Height x 0.49)			
TIME	PURGED	°C	m S/cm	рН	mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
							Begin Hand Bailing			
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			······							
0:00	:Total Tim	e (hr:min)	0	:Total Vol	(gal)	#DIV/0!	:Flow Rate (gal/min)			
SAMP	LE NO.:	Collected S	ample No.:	070314						
ANAI	_YSES:	BTEX (826	0), Major lor	ns, TDS						
COMMENTS: Did Not Purge & Sample Due to FF				e Due to Fl	PH in Mo	nitoring We	//!			

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	CLIENT:	DCP Mi	dstream			WELL ID:	MW-3			
S	ITE NAME:		J42			DATE:	3/14/2007			
PRC	DJECT NO.		F-119			SAMPLER:	J. Fergerson			
PURGING	G METHOD	:	☑ Hand Bai	iled 🗆 Pu	mp If Pu	mp, Type:				
SAMPLIN	SAMPLING METHOD: 🛛 Disposable Bailer 🗆 Direct from Discharge Hose 🗆 Other:									
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Gloves 🗇 Alconox 🗇 Distilled Water Rinse 🔅 Other:										
DISPOSAL METHOD OF PURGE WATER: 🛛 Surface Discharge 🛛 Drums 🗹 Disposal Facility										
TOTAL DEPTH OF WELL:43.00 FeetDEPTH TO WATER:26.84 FeetHEIGHT OF WATER COLUMN:16.16 FeetWELL DIAMETER:2.0 Inch						7.9	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)			
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
9:50	0.0	_	-		_	-	Begin Hand Bailing			
9:56	2.7	20.0	3.51	7.11						
10:02	5.4	20.0	>4.00	6.77		<u> </u>				
10:08	8.1	20.0	>20.00	6.78	-					
ļ										
-										
0:18	:Total Time	e (hr:min)	8.1	:Total Vol ((gal)	0.45	:Flow Rate (gal/min)			
SAMP	LE NO.:	Collected S	ample No.:	070314	0955					
ANAL	YSES:	BTEX (826	0), Major lor	is, TDS						
COMMENTS: Collected Duplicate Sample No.: 0703141100 for BTEX (8260)							X (8260)			

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SITE NAME:	CLIENT:		DCP Midstream			WELL ID:		MW-4	
PROJECT NO. F-119 SAMPLER: J. Fergerson PURGING METHOD:	SITE NAME:		J42			_	DATE:	3/14/2007	
PURGING METHOD: Hand Bailed Pump If Pump, Type: SAMPLING METHOD: Disposable Bailer Direct from Discharge Hose Other: DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL: Gloves Alconox Distilled Water Rinse Other: DISPOSAL METHOD OF PURGE WATER: Surface Discharge Drums Disposal Facility TOTAL DEPTH OF WELL: 38.12 Feet 27.46 Feet 5.2 Minimum Gallons to DEPTH TO WATER: 2.0 Inch Durge 3 well volumes (Water Column Height x 0.49) TIME VOLUME TEMP COND. pH mgL Turb PHYSICAL APPEARANCE AND 10:00 0.0 - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - 10:03 3.6 20.1 4.12 6.91 - - - 10:04 10:04 10:04 10:04 10:04 10:04 10:04 10:04 10:04 10:04 10:04 10:04 <	PROJECT NO.		F-119				SAMPLER:	J. Fergerson	
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SAMPLING METHOD: Disposable Bailer Direct from Discharge Hose Other: DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL: Image: Solution of the state of	PURGING METHOD: If Hand Bailed I Pump If Pump, Type:								
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL: Image: Solution of the state	SAMPLING METHOD: 🖸 Disposable Bailer 🗌 Direct from Discharge Hose 🗌 Other:								
Sloves Alconox Distilled Water Rinse Other: DISPOSAL METHOD OF PURGE WATER: Surface Discharge Drums Disposal Facility TOTAL DEPTH OF WELL: 38.12 Feet Ench Disposal Facility TOTAL DEPTH OF WELL: 38.12 Feet Disposal Facility DISPOSAL METHOD OF PURGE WATER: 27.46 Feet 5.2 Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49) TIME VOLUME TEMP. COND. pH DO mgL Turb PHYSICAL APPEARANCE AND REMARKS 10:00 0.0 - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - 10:03 3.6 20.1 4.12 6.91 - - 10:04 5.6 20.0 4.20 7.03 - - 10:05 3.6 20.1 4.12 6.91 - - - 10:05 3.6 20.0 4.20 7.03 - - - - 10:08 5.6 20.0 4.20 7.03 - -	DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:								
DISPOSAL METHOD OF PURGE WATER: Surface Discharge Drums Disposal Facility TOTAL DEPTH OF WELL: 38.12 Feet	Gloves Alconox Distilled Water Rinse Other:								
TOTAL DEPTH OF WELL: 38.12 Feet DEPTH TO WATER: 27.46 Feet HEIGHT OF WATER COLUMN: 10.66 Feet 5.2 Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49) TIME VOLUME TEMP COND pH DO mgL Turb PHYSICAL APPEARANCE AND REMARKS 10:00 0.0 - - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - 10:05 3.6 20.1 4.12 6.91 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 - - - 10:08 5.6 20.0 4.20 - - - 10:08 10 10 <td colspan="9">DISPOSAL METHOD OF PURGE WATER: 🗹 Surface Discharge 🔲 Drums 🗍 Disposal Facility</td>	DISPOSAL METHOD OF PURGE WATER: 🗹 Surface Discharge 🔲 Drums 🗍 Disposal Facility								
DEPTH TO WATER: 27.46 Feet HEIGHT OF WATER COLUMN: 10.66 Feet 5.2 Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49) TIME VOLUME TEMP. COND. pH DO mg\L Turb PHYSICAL APPEARANCE AND REMARKS 10:00 0.0 - - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - 10:02 2.0 20.0 4.39 7.04 - - 10:05 3.6 20.1 4.12 6.91 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:	TOTAL DEPTH OF WELL: 38.12 Feet								
WELL DIAMETER:	DEPTH TO WATER: 27.46 Feet								
TIME VOLUME TEMP COND. mS/cm pH DO mg/L Turb PHYSICAL APPEARANCE AND REMARKS 10:00 0.0 - - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - 10:05 3.6 20.1 4.12 6.91 - - 10:05 3.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 1.01 1.01 1.01 1.01 1.01 - - 10:08 1.01 1.01 1.01	WELL DIAMETER: 2.0 Inch						<u> </u>	purge 3 well volumes	
TIME VOLUME TLM* COND pH DO Turb PHTSDL APPEARANCE AND REMARKS 10:00 0.0 - - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - Begin Hand Bailing 10:05 3.6 20.1 4.12 6.91 - - - 10:05 3.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 1.01 1.01 1.01 1.01 1.01 - - - - - - - - - -	г		темр					(Water Column Height x 0.49)	
10:00 0.0 - - - - Begin Hand Bailing 10:02 2.0 20.0 4.39 7.04 - - - 10:05 3.6 20.1 4.12 6.91 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 5.6 20.0 4.20 7.03 - - - 10:08 1 1 1 1 1 1 - - 10:01 1 1 1 1 1 1 - - 10:02 1 1 1 1 1 1 - -<	TIME	PURGED	°C	m S/cm	pН	mg\L	Turb	REMARKS	
10:02 2.0 20.0 4.39 7.04 - - 10:05 3.6 20.1 4.12 6.91 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 1 1 1 1 1 1 10:08 1 1 1 1 1 1 10:09 1 1 1 1 1 1 10:09 1 1 1 1 1 1 10:09 1 1 1 1 1 1 10:09 1 1 1 1 1 1 1 10:00 1 1 1 1 </td <td>10:00</td> <td>0.0</td> <td>-</td> <td>-</td> <td>-</td> <td>-</td> <td></td> <td>Begin Hand Bailing</td>	10:00	0.0	-	-	-	-		Begin Hand Bailing	
10:05 3.6 20.1 4.12 6.91 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 4.20 7.03 - - 10:08 5.6 20.0 1.0 1.0 1.0 1.0 10:08 1.0 1.0 1.0 1.0 1.0 1.0 10:08 1.0 1.0 1.0 1.0 1.0 1.0 10:08 :Total Time (hr:min) 5.6 :Total Vol (gal) 0.70 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: 070314 1010 100 1.0 ANALYSES: BTEX (8260), Major Ions, TDS .0 .0 .0 .0	10:02	2.0	20.0	4.39	7.04	-	-		
10:08 5.6 20.0 4.20 7.03 - - Image:	10:05	3.6	20.1	4.12	6.91	-	-		
Image: Solution of the second seco	10:08	5.6	20.0	4.20	7.03	-	_		
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0:08 :Total Time (hr:min) 5.6 :Total Vol (gal) 0.70 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: 070314 1010 ANALYSES: BTEX (8260), Major Ions, TDS COMMENTS:									
0:08 :Total Time (hr:min) 5.6 :Total Vol (gal) 0.70 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: 070314 1010 ANALYSES: BTEX (8260), Major Ions, TDS COMMENTS:									
0:08 :Total Time (hr:min) 5.6 :Total Vol (gal) 0.70 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: 070314 1010									
0:08 :Total Time (hr:min) 5.6 :Total Vol (gal) 0.70 :Flow Rate (gal/min) SAMPLE NO.: Collected Sample No.: 070314 1010 070314 1010 070314 1010 ANALYSES: BTEX (8260), Major lons, TDS 000000000000000000000000000000000000	-								
SAMPLE NO.: Collected Sample No.: 070314 1010 ANALYSES: BTEX (8260), Major Ions, TDS COMMENTS:	0:08 :Total Time (hr:min) 5.6 :Total Vol (gal) 0.70 :Flow Rate (gal/min)								
ANALYSES: BTEX (8260), Major Ions, TDS COMMENTS:	SAMPLE NO.: Collected Sample No.: 070314 1010								
COMMENTS:	ANALYSES: BTEX (8260), Major Ions, TDS								
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	CLIENT:	DCP Mi	dstream			WELL ID:	MW-6
SI	TE NAME:		 J42		•	DATE:	3/14/2007
PRC	JECT NO.	· · · · ·	F-119		:	SAMPLER	J. Fergerson
PURGING	METHOD:		☑ Hand Bai	led 🗌 Pu	mplfPu	np, Type:	
SAMPLIN):	Disposab	le Bailer 🛾] Direct f	rom Disch	arge Hose Other:
DESCRIB	E EQUIPMI	ENT DECO	NTAMINATI	ON METH	DD BEFO	RE SAMP	LING THE WELL:
Glove:	s 🗆 Alcono	x 🛛 Distill	ed Water Ri	nse 🗆 C	Other:		
DISPOSA	L METHOD	OF PURG	E WATER:	Surface	Discharg	je 🗆 Dru	ms 🔲 Disposal Facility
TOTAL DI DEPTH TO HEIGHT (WELL DIA	EPTH OF W O WATER: OF WATER METER:	VELL: COLUMN: 2.0	38.32 28.00 10.32 Inch	Feet Feet Feet		5.1	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
9:30	0.0	-	-	-	-		Begin Hand Bailing
9:32	2.0	19.6	1.91	7.15	-	-	
9:35	4.0	19.8	1.72	1.91 7.15 - - 1.72 7.22 - - 1.69 7.14 - -			
9:38	6.0	19.8	1.69	7.14			
0:08	:Total Time	e (hr:min)	6	:Total Vol ((gal)	0.75	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	070314	0945		
ANAL	YSES:	BTEX (826	0), Major Ion	is, TDS			
COMM	IENTS:						

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	CLIENT:	DCP Mi	dstream			WELL ID:	MW-7
SI	TE NAME:		J42		_	DATE:	3/14/2007
PRC	JECT NO.		F-119		. 8	SAMPLER:	J. Fergerson
PURGING	6 METHOD		☑ Hand Bai	led 🗆 Pu	mp If Pu	np, Type:	
SAMPLIN	G METHO	D:	🖸 Disposab	le Bailer] Direct f	rom Disch	arge Hose 🔲 Other:
DESCRIB		ENT DECO	NTAMINATI		DD BEFO	RE SAMP	LING THE WELL:
Glove:	s 🗌 Alcono	ox 🗆 Distill	ed Water Ri	nse 🗆 C	Other:		
DISPOSA) of purg	E WATER:	Surface	e Discharç	ge 🗌 Dru	ms 🛛 Disposal Facility
TOTAL DI DEPTH TO HEIGHT (WELL DIA	EPTH OF V O WATER: DF WATER AMETER:	VELL: COLUMN: 2.0	39.45 30.00 9.45 Inch	Feet Feet Feet		4.6	Minimum Gallons to purge 3 well volumes (Water Column Height x 0 49)
TIME	VOLUME PURGED	TEMP.	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
8:55	0.0	-	<u> </u>	-	-		Begin Hand Bailing
8:59	2.0	19.6	3.21	7.11	-		
9:04	4.0	19.6	3.21	6.96	-	-	
9:08	6.0	19.5	3.21	7.13	-	~	
				····			
		L					
0:13	:Total Time	e (hr:min)	6	:Total Vol ((gal)	0.46	:Flow Rate (gal/min)
SAMPI	LE NO.:	Collected S	ample No.:	070314	1540		
ANAL	YSES:	BTEX (826	0), Major lor	is, TDS			······································
COMN	IENTS:	Collected M	IS/MSD San	nples!			

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	CLIENT:	DCP Mi	dstream		_	WELL ID	MW-8
SI	TE NAME:		J42		_	DATE	3/14/2007
PRC	JECT NO.		F-119			SAMPLER	:J. Fergerson
					-		
PURGING	METHOD	:	Hand Ba	iled 🗆 Pu	mp If Pu	mp, Type:	
SAMPLIN	G METHO	D:	🖸 Disposat	ole Bailer	Direct f	from Disch	arge Hose 🛛 Other:
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
Gloves	s 🗆 Alcono	ox 🗌 Distill	ed Water Ri	nse 🗆 C	Other:		
DISPOSA	L METHOD	OF PURG	E WATER:	⊡ Surface	e Discharg	je 🔲 Dru	ims 🛛 Disposal Facility
Total de Depth to Height (Well dia	EPTH OF V O WATER: OF WATER METER:	VELL: COLUMN: 4.0	38.32 28.53 9.79 Inch	Feet Feet Feet		19.2	_Minimum Gallons to purge 3 well volumes (Water Column Height x 1.96)
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS
8:38	0.0	-	-	-	_		Began Hand Bailing
8:42	2.0	19.1	1.84	7.22	-	-	
8:45	4.0	19.3	1.83	1.83 7.23 - 1.83 7.16 -			
8:48	6.0	19.4	1.83	7.16	7.23 - 7.16 -		
				7.16			
10.2							
0:10	:Total Time	e (hr:min)	6	:Total Vol (gal)	0.60	:Flow Rate (gal/min)
SAMPL	E NO.:	Collected S	ample No.:	070314	0850		
ANAL	YSES:	BTEX (8260), Major Ion	s, TDS			
COMM	ENTS:	Collected M	S/MSD San	nples!			

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Accutest Job Number: T16723

Sampling Date: 03/14/07

Lea County, New Mexico

DCP Midstream, LLC

DEFS J-4-2

Technical Report for





American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 31



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.

Ron Martino Laboratory Manager

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Accutest LabLink@25981 11:14 14-May-2007

Sample Summary

DCP Midstream, LLC

Job No: T16723

DEFS J-4-2 Project No:	Lea Co	ounty, New	Mexico				
Sample Number	Collected Date	Time By	Received	Matri Code	Type	Client Sample ID	
T16723-1	03/14/07	08:50 JF	03/16/07	AQ	Ground Water	MW-8 (0703140850)	
T16723-2	03/14/07	09:10 JF	03/16/07	AQ	Ground Water	MW-7 (0703140910)	
T16723-2D	03/14/07	09:10 JF	03/16/07	AQ	Water Dup/MSD	MW-7 (0703140910)	
T16723-2S	03/14/07	09:10 JF	03/16/07	ΑQ	Water Matrix Spike	MW-7 (0703140910)	
T16723-3	03/14/07	09:45 JF	03/16/07	AQ	Ground Water	MW-6 (0703140945)	
T16723-4	03/14/07	09:55 JF	03/16/07	AQ	Ground Water	MW-3 (0703140955)	
T16723-5	03/14/07	10:10 JF	03/16/07	ΑQ	Ground Water	MW-4 (0703141010)	
T16723-6	03/14/07	11:00 JF	03/16/07	AQ	Ground Water	DUPLICATE (0703141100)	_
T16723-7	03/14/07	00:00 JF	03/16/07	AQ	Trip Blank Water	TRIP BLANK	

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				Repo	rt of An	alysis		Page 1 of 1	
Client San Lab Samp Matrix: Method: Project:	1ple ID: le ID:	MW-8 T16723 AQ - G SW846 DEFS J	(0703140850) -1 round Water 8260B			Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a		
Run #1 Run #2	File ID Y00111	70.D	DF 1	Analyzed 03/24/07	By L.J	Prep Date n/a	Prep Batch n/a	Analytical Batch VY1175	
Run #1 Run #2	Purge ¹ 5.0 ml	Volume							
Purgeable	Aromati	cs			a E				

CAS No.	Compound	Result	RL	MDL	Units	Ø
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.0020 0.0020 0.0020 0.0060	0.00023 0.00054 0.00048 0.0011	mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	ŝ	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	95% 88% 1114%		73-13 66-13 77-141 84-15	86 86	

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		Repo	rt of An	alysis				Page 1 of 1	
Client Sample ID: Lab Sample ID: Matrix:	MW-8 (0703140850) T16723-1 AQ - Ground Water			Date S Date F	ampled: teceived:	03/14/07 03/16/07			
Project:	DEFS J-4-2			r er cer	Spilos 1	II/a			
General Chemistry									
Analyte	Result	RL	Units	DF	Analyz	ed	y Meth	po	
Chloride	609	20	mg/l	20	03/21/0	17 07:45 EI	3 EPA 32	25.3	
Solids, Total Dissolv	ed 467	10	mg/l	1	03/30/0	17 RI	M EPA 16	60.1	

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Report of Analysis

				Repoi	rt of An	lalysis		Page 1 of 1	
Client Sai Lab Sam Matrix: Method: Project:	mple ID: ple ID:	MW-7 T1672: AQ - C SW846 DEFS	(0703140910) 3-2 3round Water 3 8260B J-4-2			Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a		
Run #1 Run #2	File ID B01274	07.D	DF 1	Analyzed 03/19/07	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1382	$ \longrightarrow $
Run #1 Run #2	Purge ' 5.0 ml	Volume							
Purgeable	s Aromati	8							

CAS No.	Compound	Result	RL	MDL	Units	0
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.0020 0.0020 0.0020 0.0020	0.00023 0.00054 0.00048 0.0011	mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	S	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	100% 99% 106% 102%		73-13 66-13 77-14 84-15	%6 %6	

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Page 1 of 1 03/14/07 03/16/07 n/a Date Sampled: Date Received: Per cent Solids: **Report of Analysis** Client Sample ID: MW-7 (0703140910) Lab Sample ID: T16723-2 Matrix: AQ - Ground Water DEFS J-4-2 General Chemistry Project:

EPA 325.3 EPA 160.1 Method 03/21/07 07:45 EB 03/30/07 RM By Analyzed DF 1 Units mg/l mg/l RL 50 Result 1230 3380 Chloride Solids, Total Dissolved Analyte

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Client Sar Lab Samp Matrix: Method: Project:	nple ID: ole ID:	MW-6 T16723 AQ - G SW846 DEFS]	(0703140945 -3 round Water 8260B -4-2	(Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a		
Run #1 Run #2	File ID B01274	10.D	DF I	Analyzed 03/19/07	By L.J	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1382	
Run #1 Run #2	Furge V 5.0 ml	/olume							
Purgeable	Aromatic	S							

CAS No.	Compound	Result	RL	MDL	Units	Ø
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	QN QN QN QN	0.0020 0.0020 0.0020 0.0060	0.00023 0.00054 0.00048 0.0011	mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	50	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	98% 96% 111%		73-13 66-13 77-14 84-15	86 86	

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		Repo	rt of An	alysis				Page 1 of 1	2
Client Sample ID: Lab Sample ID: Matrix:	MW-6 (0703140945) T16723-3 AQ - Ground Water			Date S Date F	ampled: teceived:	03/14/07 03/16/07			
Project:	DEFS J-4-2			r er cei	SDIIOC 11	II/a			
General Chemistry									
Analyte	Result	RL	Units	DF	Analyz	ed	By	Method	
Chloride Solids, Total Dissol	669 ved 2040	20 10	mg/l mg/l	20 1	03/21/0 03/30/0	17 07:45 17	EB RM	EPA 325.3 EPA 160.1	

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Client Sar Lab Samp Matrix: Method: Project:	aple ID: le ID:	MW-3 T1672: AQ - G SW846 DEFS	(0703140955 3-4 5round Water 8 8260B J-4-2			Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a	
Run #1 Run #2	File ID B01274	111.D	DF 1	Analyzed 03/19/07	By L.J	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1382
Run #1 Run #2	Purge 5.0 ml	Volume						
Purgeable	Aromati	cs						

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CAS No.	Compound	Result	RL	MDL	Units	0
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.0020 0.0020 0.0020 0.0060	0.00023 0.00054 0.00048 0.0011	mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	94% 91% 112% 111%		73-13 66-13 77-14 84-15	9% 8% 0%	

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Client Sample ID: Lab Sample ID: Matrix:	MW-3 (0703140955) T16723-4 AQ - Ground Water			Date Sa Date Re	mpled: sceived:	03/14/07 03/16/07		
Project:	DEFS J-4-2			Percent	Solids:	n/a		
General Chemistry								
Analyte	Result	RL	Units	DF	Analyz	ed By	Method	

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Chloride Solids, Total Dissolved

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Client Sau Lab Sam <u>r</u> Matrix: Method: Project:	mple ID: ple ID:	MW-4 T16723 AQ - G SW846 DEFS J	(0703141010) 3-5 sround Water 8260B J-4-2			Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a	
Run #1 Run #2	File ID B01274	.12.D	DF 1	Analyzed 03/19/07	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1382
Run #1 Run #2	Purge ¹ 5.0 ml	Volume						
Purgeable	: Aromati	cs						

CAS No.	Compound	Result	RL	MDL	Units	0
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	0.0044 0.00060 ND 0.0032	0.0020 0.0020 0.0020 0.0060	0.00023 0.00054 0.00048 0.0011	mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	S	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	91% 80% 113%		73-13 66-13 77-14 84-15	86 86 86	

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Page 1 of 1 03/14/07 03/16/07 n/a Date Sampled: (Date Received: (Per cent Solids: 1 MW-4 (0703141010) T16723-5 AQ - Ground Water DEFS J-4-2 Client Sample ID: Lab Sample ID:

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EPA 325.3 EPA 160.1 Method 03/21/07 07:45 EB 03/30/07 RM By Analyzed DF 50 1 Units mg/l mg/l R 50 10 Result 1300 2940 Chloride Solids, Total Dissolved General Chemistry Analyte

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Client Sau Lab SamJ Matrix: Method: Project:	mple ID: ple ID:	DUPLJ T1672: AQ - G SW846 DEFS	ICATE (070: 3-6 5round Water 8260B J-4-2	3141100)		Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a	
Run #1 Run #2	File ID Y00111	71.D	DF 1	Analyzed 03/24/07	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VY1175
Run #1 Run #2	Purge 7 5.0 ml	Volume						
Purgeable	Aromati	cs						

CAS No.	Compound	Result	RL	MDL	Units	Ø
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.0020 0.0020 0.0020 0.0060	$\begin{array}{c} 0.00023\\ 0.00054\\ 0.00048\\ 0.00048\\ 0.0011 \end{array}$	mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	8	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	104% 94% 114%		73-13 66-13 77-14 84-15	86 86 86	

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Client Sar Lab Samp Matrix: Method: Project:	nple ID: ile ID:	TRIP E T16723 AQ - T SW846 DEFS J	3LANK 3-7 rip Blank V 8260B J-4-2	Vater		Date Sampled: Date Received: Per cent Solids:	03/14/07 03/16/07 n/a		
Run #1 Run #2	File ID B01274	01.D	DF	Analyzed 03/19/07	By L.J	Prep Date n/a	Prep Batch n/a	Analytical Batch VB1382	
Run #1 Run #2	Purge ¹ 5.0 ml	Volume							
Purgeable	Aromati	cs							

CAS No.	Compound	Result	RL	MDL	Units	Ø
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)		0.0020 0.0020 0.0020 0.0060	0.00023 0.00054 0.00048 0.00048	mg/l mg/l mg/l mg/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	98% 102% 97%		73-139 66-139 77-148 84-150	% % % %	

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SAMPLE RECEIVED: SAMPLE RECEIVED IN CONSTRUCTION OF CONSTR	AN ,21< ,5> ,U	9'5'†'E'Z'L						~
SAMPLE RECEIPT LOG SAMPLE RECEIPT LOG 100 #: TILTAL 100 #: TILTA	VN 'Z1< 'Z> 'N	9,2,4,5,5,1					· · · · · · · · · · · · · · · · · · ·	
SAMPLE of PIELDE SAMPLE RECEIVED: SAMPLE RECEIVED: SAMPLE RECEIPT LOG LIGN Sample received in undamged condition. 2. N. M. M. Custody seal received in start sample in a sample received in undamged condition. 2. N. M. M. Custody seal received in start sample in a sample received in undamged condition. 2. N. M. M. Custody seal received in the received in a sample received in the rece	AN ,≤1< ,≤> ,U	8,8,4,5,5,1						
JOB #: TURTICKAL UW SAMPLE RECEIPT LOG JOB #: TURTICKAL UW JUL TURTICKAL UW JOB #: TURTICKAL UW JUL TURTICKAL UW JUL TURTICKA	AN ,SI< ,S ,U	1,2,3,4,5,6						
JOB #: TILIZAS SAMPLE RECEIPT LOG JOB #: TILIZAS DATE/TIME RECEIVED: JLS,4,5,6 U, 2,3,4,5,6 U, 2,32,4,5,6 U, 2,3,4,5,6 U, 2,32,4,5,6 U, 2,32,4,5,6 <td>AN ,ST< ,S> ,U</td> <td>9,2,4,5,5,1</td> <td></td> <td></td> <td></td> <td>\mathbf{i}</td> <td></td> <td></td>	AN ,ST< ,S> ,U	9,2,4,5,5,1				\mathbf{i}		
Date of the second indication of the second of the second indication of the second of the second indication of the second of t	AN ,21< ,5> ,U	8,8,4,5,2,1				×		
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JOB#: TILING SAMPLE RECEIVED: SAMPLE RECEIVED: SAMPLE RECEIVED: JOB#: TILING DATETIME RECEIVED: JUL/09/130 JOB#: TILING N Sample received with crossing times: JOB N MA Custody static sand and insci and sampler not evident on containers: MA JON N Sample received with crossing insci and sampler is crossing with crossing times: JON N Sample received intact and sampler not evident on containers: JON N Sample received intact and samper not evident on containers: JON N Sample received with chain remp. rank JON N Sample received with chain ranges JON N Sample received with chain ranges JON N Sample received with chain ranges Sample received in undamos MA Sample received ininda samper not evident	N, <2; ≤12, NA	9,2,4,5,5,1			01/2	0		
JOCUTEST: SAMPLE RECEIVED: JUL 09 43 JOB#: TILTAS DATETIME RECEIVED: JUL 09 130 JOB#: TILTAS JUL 09 130 JUL 09 130 JOB#: ACM Sample received with proper print Sample received with proper print JOC N Sample received with proper print SAMPLE or FIELD ID BOTTLE # DATE SAMPLED JOC Y Sample received with proper print SAMPLE or FIELD ID BOTTLE # DATE SAMPLED SAMPLE or PREND ACM Sample received in proper containers. JOC Y Sample received with proper print ACM Sample received with proper containers. ACM Sample received in proper containers. JOC Y N Sample received in proper containers. ACM Sample received in proper containers. JOC Y N Sample received in proper containers. ACM Sample received in proper containers. JOC Y N Sample received in proper containers. ACM HOM. </td <td>AN ,S1<, S, U</td> <td>9,2,4,5,5,1</td> <td></td> <td>Ð</td> <td>P</td> <td></td> <td></td> <td></td>	AN ,S1<, S, U	9,2,4,5,5,1		Ð	P			
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JULY SAMPLE RECEIVED: SAMPLE RECEIVED: SAMPLE RECEIVED: JOB#: TULY3 DATETIME RECEIVED: ALL/04/130 JOB#: TULY3 DATETIME RECEIVED: ALL/04/0130 JOB#: ALL/04/04/04/04/04/04/04/04/04/04/04/04/04/	VN 'ZI< '⊅()	9'\$'7'8'8'9	206	(295)			カ	5-8'1
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SAMPLE RECEIVED: SAMPLE RECEIVED: SAMPLE RECEIVED: JOB #: TLV 701 DATETIME RECEIVED: JLL 00131 JOB #: TLV 701 DATETIME RECEIVED: JLL 00131 JOB #: TLV 701 DATETIME RECEIVED: JLL 00131 CLIENT: ADDUCTIONATION DATETIME RECEIVED: JLL 00131 JOB #: ADDUCTIONATIONATION INTINUE: MC Condition/Variance (Circle TY" for yes and analysis ADDUCTIONATION ADDUCTIONATION Condition/Variance (Circle TY" for yes and analysis ADDUCTIONATIONATIONATIONATIONATIONATIONATIONA				,1910 29[100	oo no mebive 1 no trebive t	r and tamper not act and tamper no	stri beviecen lises	N AN Custody
Sample received with proper pPL ACCUTEST: Ample received with proper containers: Job #: TLV JAS DATETINE RECEIVED: JLL GPL JAS Job #: TLV JAS DATETINE RECEIVED: JLL GPL JAS Job #: TLV JAS DATETINE RECEIVED: JLL GPL JAS Job #: TLV JAS DATETINE RECEIVED: JLL GPL JAS Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation): Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation): Condition/Variance (Circle "Y" for yes and "N" for no or NA. If "N" is circled, see variance for explanation): A A Sample received with proper FPL A A Sample received with proper for analysis. 6.0 N A Sample received with constiners: 6.0 N A Sample received with constiners: 6.0 N A Circle Tot analysis. 6.0 N A Constrainers. 6.0 N A Circle Tot analysis. 6.	[ele	adspace acceptad	eH selqms2 N 🖉 8
ACCUTEST: ATTURNE RECEIPT LOG LIENT: ATTURNE MARKE RECEIVED: A LUNCH ON SAMPLE RECEIPT LOG CONDITION/VARIANCE (CIRCLE "Y" for yes and "N" for no or NA. If "N" is CIRCLED: A Manual of Condition. CONDITION/VARIANCE (CIRCLE "Y" for yes and "N" for no or NA. If "N" is CIRCLED: A Manual of Condition. CONDITION/VARIANCE (CIRCLE "Y" for yes and "N" for no or NA. If "N" is CIRCLED: A Manual of Condition. CONDITION/VARIANCE (CIRCLE "Y" for yes and "N" for no or NA. If "N" is CIRCLED: A Manual of Condition. CONDITION/VARIANCE (CIRCLE "Y" for yes and "N" for no or NA. If "N" is CIRCLED: A Manual of CIRCLED: A Manual of CONDITION. CONDITION/VARIANCE (CIRCLE "Y" for yes and "N" for no or NA. If "N" is CIRCLED: A MANUAL OF CONDITIONS. A Manual of CIRCLE THE ACCURATION OF THE ACCURA	1000		1000 0940000	tainers.	Nosis on con	sna bna eOl eign	stody matches sai	N Chain of Cur
CLIENT: ACCUTEST: SAMPLE RECEIPT LOG LOB #: TIV 733 DATEMINE RECEIVED: JUL (0/ 91 30 CONDITION/VARIANCE (CITCLE TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 CONDITION/VARIANCE (CITCLE TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 CONDITION/VARIANCE (CITCLE TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 INTELS: ANNUTICUL TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 INTELS: ANNUTICUL TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 CONDITION/VARIANCE (CITCLE TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 INTELS: ANNUTICUL TWO OF MAR. II'N'' IS CITCLED: JUL (0/ 91 30 INTELS: ANNUTICUL TWO OF MARCHINE RECEIVED: JUL (0/ 91 30 INTELS: ANNUTICUL TWO OF MARCHINE RECEIVED: JUL (0/ 91 30 INTELS: ANNUTICUL TWO OF MARCHINE RECEIVED: JUL (0/ 91 30 INTELS: ANNUTICUL TO O	sterk.	iternoo requi	received in pr	alqme2 v (.n. zizvl6r	nvea wan proper p me sufficient for a	niov elones N V S
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CLIENT: ATMUTICUL EIN. COMPLE RECEIPT LOG DATENTINE RECEIVED: AUCULATION CLIENT: ATMUTICUL EIN. COMMENDIA CLIENT: ATMUTICUL EIN.	l		ance for expla	nev ees ,bel	otio si "N" il	AN TO ON TOT "N" t	cle "Y" for yes and	iO) sonsins VnotitionoO
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T16723: Chain of Custody Page 3 of 3

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Section 4	4			
TT S ALL IN THE CHEMISTRY	GC/MS Volatiles	QC Data Summaries	Includes the following where applicable: Method Blank Summaries Blank Spike Summaries Matrix Spike and Duplicate Summaries	
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Method Blank Summary Job Number: T16723 Account: DUKE DCP Midstream, LLC Project: DEFS J-4-2

Page 1 of 1

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ple File ID DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
1382-MB B0127399.D 1	03/19/07		n/a	n/a	VB1382
QC reported here applies to	the following sam	ples:		Method: S	W846 8260B

T16723-2, T16723-3, T16723-4, T16723-5, T16723-7

CAS No.	Compound	Result	RL	MDL	Units	\circ
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)		2.0 2.0 6.0	0.23 0.48 0.54 1.1	l/gu l/gu l/gu	
CAS No.	Surrogate Recoveries		Limits			
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	102% 99% 106% 101%	73-1399 66-1399 77-1489 84-1509	****		

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Method Blank Summary Job Number: T16723 Account: DUKE DCP Midstream, LLC Project: DEFS J-4-2

Page 1 of 1

Project:	DEFS J-4-2						
Sample VY1175-MB	File ID Y0011168.D	DF 1	Analyzed 03/24/07	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VY1175

4.1 4

Method: SW846 8260B

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T16723-1, T16723-6

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	MDL	Units
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene Xylene (total)		2.0 2.0 6.0	0.23 0.48 0.54 1.1	l/gu l/gu
CAS No.	Surrogate Recoveries		Limits		
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	98% 93% 119%	73-1399 66-1399 77-1489 84-1509	* * * *	

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Blank Spike Summary Job Number: T16723 Account: DUKE DCP Midstream, LLC Project: DEFS J-4-2

Page 1 of 1

Project:	DEFS J-4-:	2				
Sample VB1382-BS	File ID B0127398.	DF D 1	Analyzed 03/19/07	By LJ	Prep Date n/a	Prep Batch n/a

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Analytical Batch VB1382

The QC reported here applies to the following samples:

Method: SW846 8260B

T16723-2, T16723-3, T16723-4, T16723-5, T16723-7

		Spike	BSP	BSP	
CAS No.	Compound	ug/l	ug/l	%	Limits
71-43-2	Benzene	25	23.9	96	67-118
100-41-4	Ethylbenzene	25	24.7	66	71-119
108-88-3	Toluene	25	25.1	100	70-121
1330-20-7	Xylene (total)	75	71.3	95	72-120
CAS No.	Surrogate Recoveries	BSP	Lin	lits	
1868-53-7	Dibromofluoromethane	101%	73-	139%	
17060-07-0	1,2-Dichloroethane-D4	38 %	-99	139%	
2037-26-5	Toluene-D8	102%	-11	148%	
460-00-4	4-Bromofluorobenzene	101%	84-	150%	

Page 1 of 1

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Blank Spil Job Number: Account: Project:	ke Summ T16723 DUKE DCI DEFS J-4-2	. ary P Midstream 2	, LLC				Page 1 of
Sample VY1175-BS	File ID Y0011167.	DF D 1	Analyzed 03/24/07	By LJ	Prep Date n/a	Prep Batch n/a	Analytical Batch VY1175
The QC repor	ted here app	lies to the fo	llowing sam	oles:		Method: SW	846 8260B

T16723-1, T16723-6

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	23.7 26.6 25.8 71.9	95 106 103 96	67-118 71-119 70-121 72-120
CAS No.	Surrogate Recoveries	BSP	Lim	its	
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	107% 99% 114% 120%	73-1 66-1 77-1 84-1	39% 39% 50%	

Matrix Spike/Matrix Spike Duplicate Summary Job Number: T16723 Account: DUKE DCP Midstream, LLC Project: DEFS J-4-2

Page 1 of 1

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Sample T16723-2MS T16723-2MSD T16723-2MSD T16723-2	Fi le ID B0127408.D B0127409.D B0127407.D	DF 0 1 0 1 0 1	Analyzed 03/19/07 03/19/07 03/19/07	L L BY	Prep Date n/a n/a n/a	Prep Batch n/a n/a n/a	Analytical Batch VB1382 VB1382 VB1382
The QC report	ed here appli	ies to the fo	llowing samp	oles:		Method: SW	/846 8260B

T16723-2, T16723-3, T16723-4, T16723-5, T16723-7

CAS No.	Compound	T16723-2 ug/l Q	Spike ug/l	MS ug/j	WS %	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)	QN QN QN QN QN	25 25 25 75	22.9 22.0 28.0 70.4	92 88 94	23.2 24.7 25.3 71.9	93 99 96	1 12 2 2	65-122/15 70-123/18 70-123/18 71-122/16
CAS No.	Surrogate Recoveries	WS	MSD	T16	6723-2	Limits			
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethane 1,2-Dichloroethane-D4 Toluene-D8 4-Bromofluorobenzene	99% 95% 124%	98% 98% 115% 102%	100 99% 106	%	73-139% 66-139% 77-148% 84-150%			

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Matrix Spike/Matrix Spike Duplicate Summary Job Number: T16723 Account: DUKE DCP Midstream, LLC Project: DEFS J-4-2

Page 1 of 1

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Analytical Batch VY1175 VY1175 VY1175	
Prep Batch n/a n/a n/a	
Prep Date n/a n/a n/a	

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Analyzed 03/24/07 03/24/07 03/24/07

File ID DF Y0011176.D 1 Y0011177.D 1 Y0011175.D 1

Sample F T16649-7MS 7 T16649-7MSD 7 T16649-7 Method: SW846 8260B

4.3 4

T16723-1, T16723-6

The QC reported here applies to the following samples:

CAS No.	Compound	T16649-7 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2 100-41-4	Benzene Ethvlbenzene	QN QN	25 25	23.7 24.8	95 99	24.5 25.7	98 103	6 4	65-122/15 70-123/18
108-88-3	Toluene	QN	25	24.0	96	24.8	66	3	70-123/18
1330-20-7	Xylene (total)	QN	75	70.4	94	70.8	94	Ţ	71-122/16
CAS No.	Surrogate Recoveries	MS	MSD	TIC	649-7	Limits			
1868-53-7 17060-07-0	Dibromofluoromethane 1,2-Dichloroethane-D4	98% 88%	103% 90%	103 889	% %	73-1399 66-1399	<u>,0 ,0</u>		
2037-26-5	Toluene-D8	107%	110%	108	%	77-1489	6		
460-00-4	4-Bromofluorobenzene	108%	110%	125	%	84-1509	9		



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METHOD BLANK AND SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

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Login Number: T16723 Account: DUKE - DCP Midstream, LLC Project: DEFS J-4-2

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP &Recov	QC Limits	
Chloride Solids, Total Dissolved	GN11467 GN11464	1.0 10	<1.0 <10	1∕6m 1/6m	1000	994	0.66	92-107%	5.1
Associated Samples:									

control comptots -1, T16723-1, T16723-3, T16723-4, T16723-5 Batch GN11467: T16723-1, T16723-2, T16723-3, T16723-4, T16723-5 (*) Outside of QC limits

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DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

Login Number: T16723 Account: DUKE - DCP Midstream, LLC Project: DEFS J-4-2

	5.2	5
QC Limits	0-5% 0-15%	
RPD	0.0	
DUP Result	1230 3540	
Original Result	1230 3380	
Units	mg/1 mg/1	23 - 5 23 - 5
QC Sample	T16723-2 T16723-2	T16723-4, T167: T16723-4, T167:
Batch ID	GN11467 GN11464	T16723-2, T16723-3, T16723-2, T16723-3,
Analyte	Chloride Soliås, Total Dissolved	Associated Samples: Batch GN11464: T16723-1, Batch GN11467: T16723-1,

Batch GN11464: T16723-1, T16723-2, T16723-3, T16723-4, T16723-5 Batch GN11467: T16723-1, T16723-2, T16723-3, T16723-4, T16723-5 (*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

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Login Number: T16723 Account: DUKE - DCP Midstream, LLC Project: DEFS J-4-2

ß	5.3
QC Limit	81-13
\$Rec	103.0
MS Result	1750
l Spike Amount	500
Origina. Result	1230
Units	mg/1
QC Sample	T16723-2
Batch ID	GN11467
Analyte	Chloride

Associated Samples: Batch GN11467: T16723-1, T16723-2, T16723-3, T16723-4, T16723-5 (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits



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

September 8, 2006

Mr. Ben Stone Environmental Bureau New Mexico Oil Conservation Division 1220 S. St. Francis Dr. Santa Fe, NM 87505

RE: DEFS 2nd Quarter 2006 Groundwater Monitoring Summary Report X-Line Pipeline Release (Etcheverry Ranch Lea County, NM) Unit B, Section 7, T15S, R34E (Lat 33° 02' 11", Long 103° 32' 48")

Dear Mr. Stone:

Duke Energy Field Services, LP (DEFS) is pleased to submit for your review, an electronic copy of the 2nd Quarter 2006 Groundwater Monitoring Results for the DEFS X-Line Pipeline Release Site located within the Etcheverry Ranch, Lea County, New Mexico.

If you have any questions regarding the report, please call me at 303-605-1718.

Sincerely

Duke Energy Field Services, LP

Stephen Weathers, PG Sr. Environmental Specialist

cc: Larry Johnson, OCD Hobbs District Office
 Lynn Ward, DEFS Midland Office
 Mrs. Etcheverry – Certified Mail 91 7108 2133 3931 3926 3259
 Environmental Files

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

August 31, 2006

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Mr. Stephen Weathers Duke Energy Field Services, LP 370 Seventeenth Street, Suite 2500 Denver, Colorado 80202

Re: Second Quarter 2006 Groundwater Monitoring Summary at the X-Line Pipeline Release, Etcheverry Ranch, Lea County, New Mexico Unit B, Section 7, Township 15 South, Range 34 East

Dear Mr. Weathers:

This letter summarizes the results of the second quarter 2006 groundwater monitoring activities completed June 26, 2006 for Duke Energy Field Services, LP (DEFS) at the X-Line Pipeline Release on the Etcheverry Ranch at latitude 33 degrees 02 minutes 11 seconds, longitude 103 degrees 32 minutes 48 seconds (Figure 1).

Seven groundwater-monitoring wells, MW-1 through MW-7, were sampled at the site. The well locations are shown on Figure 2. Monitoring well construction information is summarized in Table 1. An eighth well, MW-8, was not sampled because 0.03 feet of free phase hydrocarbons (FPH) were measured.

The depths to water were measured in each well first. This data was used to calculate the casing-volume storage in each well.

The wells were then purged and sampled using disposable bailers. Well purging consisted of removing a minimum of three casing volumes of water and then continuing bailing until the field parameters temperature, pH and conductivity stabilized. The field sampling forms are attached.

Unfiltered samples were collected from each well upon stabilization. Each sample was analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX). A field duplicate was collected from well MW-3. A matrix spike/matrix spike duplicate was also collected from MW-4. The laboratory also provided a trip blank as the final quality assurance/quality control measure.

The samples were placed in an ice-filled chest immediately upon collection and documented using standard chain-of-custody protocol. The samples were delivered directly to the analytical laboratory Environmental Labs of Texas in Midland Texas. All affected development and purge water was disposed of at the DEFS Linam Ranch facility

The groundwater elevation measurements for all sampling episodes are summarized in Table 2. Hydrographs for wells MW-1 through MW-7 are shown on Figure 3. Well MW-8 is not included because its casing elevation is not established.

6885 South Marshall St., Suite 3, Littleton, CO 80128 phone 303-948-7733 fax 303-948-7739
Mr. Stephen Weathers August 31, 2006 Page 2

Figure 3 shows that the water-table elevations have remained essentially constant in all seven wells between June 2005 and June 2006. A water-table contour map based upon the March 2006 measurements was generated using the Surfer program with a kriging option (Figure 4). The water-table configuration reflects the historical conditions because of the unchanging groundwater elevations.

The FPH values measured in MW-8 during the monitoring program are summarized in Table 3. Only 0.03 feet of FPH was measured on June 2006 after the soil vapor extraction (SVE) system had been down for approximately two days to provide sufficient time for rebound. The SVE system was restarted following completion of the sampling episode.

Table 4 summarizes the June 2006 sampling results. None of the BTEX constituents were detected above the method reporting limits. Benzene, toluene and xylenes were measured below the method limits so the concentrations are considered estimates. The June 2006 benzene distribution is shown on Figure 5. A copy of the laboratory report is attached.

The quality assurance/quality control evaluation is summarized on Table 5. Important facts include:

- 1. The sample temperature was measured at 2.5° C upon receipt by the laboratory
- 2. There were no BTEX constituents detected in the trip blank.
- 3. All of the surrogate spikes fell within their respective control ranges.
- 4. The duplicate samples from MW-3 could not be evaluated because the measured concentrations in both samples were below the method reporting limits.
- 5. The matrix spike and the matrix spike duplicate results contained in the attached laboratory report were all within the acceptable range for all four BTEX constituents.

The above results establish that the samples are suitable for their intended uses.

All of the historical data for benzene, toluene, ethylbenzene and total xylenes is summarized in Tables 6, 7, 8, and 9 respectively. Important facts resulting from the evaluation of the data include:

- None of the seven monitoring wells contained benzene above the 0.001 mg/l method reporting limit. This is the sixth consecutive sampling episode for MW-2 and the fourth consecutive sampling episode for MW-3 where they met this condition. Figure 6 graphs their attenuation histories.
- FPH was measured at a trace (0.03 foot) thickness in MW-8.

- Eight consecutive monitoring episodes (2 years) have elapsed since benzene was measured above the 0.010 mg/l New Mexico Water Quality Control Commission groundwater standard in wells MW-1 through MW-7 (Figure 6). Benzene was measured in MW-2 at 0.0103 mg/l or 0.0003 mg/l above the standard in October 2004 (Table 6).
- Toluene, ethylbenzene and xylenes were not measured above the method reporting limit in any of the seven monitoring wells for the third consecutive episode.

AEC recommends that soil vapor extraction operation should continue at a 6-hour-perday frequency until the next monitoring episode.

The next monitoring episode is scheduled for September 2006. AEC recommends that the SVE system be shut down approximately one week prior to sampling to allow sufficient time for FPH recovery and any potential dissolved phase rebound. The air sparge system remains operational but will not be used unless warranted.

Thank you for allowing me to complete these activities. Do not hesitate to contact me if you have any questions or comments on this report.

Respectfully Submitted, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Muchael H. Stewart

Michael H. Stewart, P.E. Principal Engineer

MHS:tbm

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	Date	Well	Completion	Top of
Well	Installed	Depth	Interval	Sand
MW-1	3/02	91	71-91	68
MW-2	3/02	88	68-88	62
MW-3	3/02	91	71-91	61
MW-4	4/02	91	71-91	68
MW-5	4/02	89	69-89	56
MW-6	4/02	90	70-90	68
MW-7	5/02	85	65-85	59

Table 1 – Monitoring Well Completions

Notes: Units are Feet

Hydrocarbon extraction well (MW-8) completed between approximately 80 and 100 feet

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Table 2- Measured Water Table Elevations

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	34	58	24	79	73	83	78
3/3/05	4,089.	4,089.0	4,089.2	4,088.	4,088.	4,088.8	4,087.
12/09/04	4,089.18	4,089.03	4,088.82	4,088.71	4,088.62	4,088.68	4,087.65
10/18/04	4,089.22	4,089.06	4,088.84	4,088.73	4,088.63	4,088.71	4,087.68
6/25/04	4,089.12	4,089.03	4,088.81	4,088.70	4,088.60	4,088.66	4,087.63
2/18/04	4,089.19	4,088.90	4,088.82	4,088.74	4,088.65	4,088.69	4,087.66
11/20/03	4,088.59	4,089.13	4,088.95	4,088.78	4,088.70	4,088.74	4,088.08
10/29/03	4,088.60	4,089.11	4,088.90	4,088.78	4,088.70	4,088.74	4,088.08
9/22/03	4,088.53	4,089.06	4,088.84	4,088.71	4,088.65	4,088.68	4,088.03
8/20/03	4,088.54	4,089.09	4,088.87	4,088.72	4,088.66	4,088.70	4,088.04
7/17/03	4,088.52	4,089.04	4,088.82	4,088.70	4,088.63	4,088.66	4,088.01
6/19/03	4,088.55	4,089.07	4,088.85	4,088.73	4,088.65	4,088.69	4,088.04
4/28/03	4,088.55	4,089.05	4,088.86	4,088.73	4,088.67	4,088.70	8
9/6/02	4088.53	4089.03	4088.86	4088.73	4088.68	4088.71	-
5/1/02	4,088.54	4,089.02	4,088.83	4,088.63	4,088.60	4,088.69	
Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7

Well	6/3/05	9/28/05	12/12/05	3/1/06	6/26/06
MW-1	4,089.26	4,089.25	4,089.23	4,089.23	4,089.22
MW-2	4,089.10	4,089.10	4,089.07	4,089.08	4,089.05
MW-3	4,088.91	4,088.89	4,088.88	4,088.88	4,088.85
MW-4	4,088.79	4,088.77	4,088.76	4,088.75	4,088.73
MW-5	4,088.68	4,088.67	4,088.66	4,088.66	4,088.63
MW-6	4,088.75	4,088.74	4,088.73	4,088.72	4,088.70
MW-7	4,087.71	4,087.70	4,087.70	4,087.70	4,087.67

Units are feet

Maguramant	Draduat
D	
Date	Thickness
09/06/02	5.20
04/28/03	5.65
06/19/03	4.01
07/17/03	3.93
09/22/03	3.42
10/29/03	1.42
11/20/03	0.79
02/18/04	FPH
06/25/04	0.03
10/18/04	3.26 ¹
12/09/04	2.71 ¹
03/03/05	0.00
06/03/05	0.12
09/28/05	1.01
12/12/05	0.00
3/1/06	0.04
6/26/06	0.03

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Table 3 – Summary of Product Thickness in MW-8

 6/26/06
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 Notes:
 1) Soil vapor extraction system running at 37 inches of water vacuum but product recovery system not operating.

2) FPH recovery system running so value does not represent equilibrated condition

3) Units are feet

Well	Benzene	Toluene	Ethyl Benzene	Total Xylenes
MW-1	<0.001	< 0.001	< 0.001	< 0.001
MW-2	0.000641J	0.00114	< 0.001	0.00125J
MW-3	< 0.001	< 0.001	< 0.001	<0.001
MW-3 (duplicate)	< 0.001	< 0.001	< 0.001	< 0.001
MW-4	< 0.001	< 0.001	< 0.001	< 0.001
MW-5	< 0.001	< 0.001	< 0.001	<0.001
MW-6	< 0.001	< 0.001	<0.001	< 0.001
MW-7	< 0.001	< 0.001	< 0.001	< 0.001
MW-8	FPH	FPH	FPH	FPH
Trip blank	< 0.001	< 0.001	< 0.001	< 0.001

Table 4 – June 26, 2006 Groundwater Monitoring Results

Notes: Units are mg/l

J modifier is for estimated values whose measured concentrations fall between the method detection limit and the method reporting limit.

Table 5 –June 26, 2006 Quality Assurance and Quality Control Results

Field Duplicate Relative Percentage Difference Values for MW-3

	Benzene	Toluene	Ethyl Benzene	Xylenes p,m/o
RPD (%)	NA	NA	NA	NA

NA: Calculation could not be completed because constituent was not detected above method reporting limits..

MW-4 Matrix Spike/Matrix Spike Duplicate Results

	Benzene	Toluene	Ethyl Benzene	Xylenes p,m	Xylenes o
Matrix Spike	111	109	103	112	110
Matrix Spike Duplicate	111	110	102	114	113

Note: Units are percent recovered

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Table 6 - Summary of Laboratory Data for Benzene

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2/12/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.561
9/28/05	 <0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
6/3/05	<0.001	<0.001	0.00332	<0.001	<0.001	<0.001	< 0.001	FPH
3/3/05	<0.001	<0.001	0.00167	<0.001	<0.001	<0.001	<0.001	NS
12/9/04	<0.001	0.00342	0.006137	<0.001	<0.001	<0.001	<0.001	FPH
10/18/04	<0.001	0.0103	.00584	<0.001	<0.001	<0.001	<0.001	FPH
6/25/04	<0.001	0.00156	0.0173	<0.001	<0.001	<0.001	<0.001	FPH
2/18/04	<0.001	<0.001	0.0280	<0.001	<0.001	<0.001	<0.001	FPH
11/20/03	<0.001	0.013	0.048	<0.001	<0.001	<0.001	0.001	FPH
10/29/03	<0.001	0.001	0.044	<0.001	<0.001	<0.001	0.001	FPH
9/22/03	<0.001	0.022	0.049	<0.001	<0.001	<0.001	<0.001	FPH
8/20/03	<0.001	0.024	0.017	<0.001	<0.001	<0.001	<0.001	FPH
7/17/03	<0.001	0.155	0.063	<0.001	<0.001	<0.001	<0.001	FPH
6/19/03	<0.001	0.074	0.047	<0.001	<0.001	<0.001	<0.001	FPH
4/28/03	<0.001	0.182	0.099	<0.001	0.005	0.003	<0.001	FPH
5/21/02	0.002	0.145	0.176	<0.002	<0.002	0.002		
4/24/02	<0.002	0.0255	0.061	<0.002	<0.002	<0.002		
Well	MW-I	MW-2	MW-3	MW-4	MW-5	9-WM	MW-7	MW-8

Well	3/1/06	6/26/06
MW-1	<0.001	<0.001
MW-2	<0.001	0.000641J
MW-3	<0.001	<0.001
MW-4	<0.001	<0.001
MW-5	<0.001	<0.001
MW-6	<0.001	<0.001
MW-7	<0.001	<0.001
MW-8	FPH	FPH

Notes:

Units are mg/l. Duplicate sample results were averaged together Indicators for estimated (J) values not shown FPH: Free phase hydrocarbons present, no sample collected

Table 7 - Summary of Laboratory Data Toluene

12/05	.001	.001	.001	.001	.001	.001	.001	98
12/	 1 <0	1 <0	82 <0	1 <0	1 <0	1 <0	1 <0	5
9/28/0	<0.00	<0.00	0.0004	<0.00	<0.00	<0.00	<0.00	FPH
6/3/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
3/3/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NS
12/9/04	<0.001	0.00206	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
10/18/04	<0.001	0.00648	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
6/25/04	<0.001	0.00108	0.000158	<0.001	<0.001	<0.001	<0.001	FPH
2/18/04	<0.001	0.00652	<0.001 (<0.001	<0.001	<0.001	<0.001	FPH
11/20/03	<0.001	0.017	0.003	<0.001	<0.001	<0.001	<0.001	FPH
10/29/03	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	0.001	FPH
9/22/03	<0.001	0.051	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
8/20/03	<0.001	0.092	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
7/17/03	<0.001	0.15	0.002	<0.001	<0.001	<0.001	<0.001	FPH
6/19/03	<0.001	0.066	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
4/28/03	<0.001	0.092	0.005	<0.001	<0.001	<0.001	<0.001	FPH
5/21/02	0.003	0.833	0.004	<0.002	<0.002	<0.002	1	!
4/24/02	<0.002	0.107	<0.002	<0.002	<0.002	<0.002	1	-
Well	MW-1	MW-2	MW-3	MW-4	MW-5	9-WM	MW-7	MW-8

0> I-WW	.001 .001	<0.001 0.001 14
MW-1 <0 MW-2 <0	.001 .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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <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 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0.001 <0
0 > c - MM	.001	0.00114
A		
MW-3 <0	.001	<0.001
MW-4 <0	.001	<0.001
MW-5 <0	.001	<0.001
0> 9-MM	001	<0.001
MW-7 <0	.001	<0.001
MW-8 F	ΗЧ	FPH

Notes:

Units are mg/l. Duplicate sample results were averaged together Indicators for estimated (J) values not shown FPH: Free phase hydrocarbons present, no sample collected

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Table 8 - Summary of Laboratory Data Ethylbenzene

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12/12/05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.928
9/28/05	<0.001	<0.001	0.00101	<0.001	<0.001	<0.001	<0.001	FPH
6/3/05	<0.001	<0.001	0.00574	<0.001	<0.001	<0.001	<0.001	FPH
3/3/05	<0.001	<0.001	0.00167	<0.001	<0.001	<0.001	<0.001	NS
12/9/04	<0.001	0.00122	0.00884	<0.001	<0.001	<0.001	<0.001	FPH
10/18/04	<0.001	0.00336	0.00692	<0.001	<0.001	<0.001	<0.001	FPH
6/25/04	<0.001	0.0005	0.0136	<0.001	<0.001	<0.001	<0.001	FPH
2/18/04	<0.001	0.00301	0.0138	<0.001	<0.001	<0.001	<0.001	FPH
11/20/03	<0.001	0.005	0.017	<0.001	<0.001	<0.001	<0,001	FPH
10/29/03	<0.001	0.002	0.018	<0.001	<0.001	<0.001	0.001	FPH
9/22/03	<0.001	0.012	0.02	<0.001	<0.001	<0.001	<0.001	FPH
8/20/03	<0.001	0.012	0.006	<0.001	<0.001	<0.001	<0.001	FPH
7/17/03	<0.001	0.112	0.023	<0.001	<0.001	0.004	<0.001	FPH
6/19/03	<0.001	0.069	0.02	<0.001	<0.001	<0.001	<0.001	FPH
4/28/03	<0.001	0.121	0.03	<0.001	<0.001	0.002	<0.001	FPH
5/21/02	<0.002	0.062	0.023	<0.002	<0.002	0.002	1	1
4/24/02	<0.002	0.013	0.023	<0.002	<0.002	0.004	-	1
Well	MW-1	MW-2	MW-3	MW-4	MW-5	9-WM	MW-7	MW-8

6/26/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	FPH	
3/1/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	FPH	
Well	MW-1	MW-2	£-WM	MW-4	MW-5	9-WM	7-WM	8-WM	

Notes:

Units are mg/l. Duplicate sample results were averaged together Indicators for estimated (J) values not shown FPH: Free phase hydrocarbons present, no sample collected

Table 9 - Summary of Laboratory Data (continued)

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12/12/05		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	9.89
9/28/05		<0.001	<0.001	0.000997	<0.001	<0.001	<0.001	<0.001	FPH
6/3/05		<0.001	<0.001	0.00173	<0.001	<0.001	<0.001	<0.001	FPH
3/3/05	_	<0.001	<0.001	0.00044	<0.001	<0.001	<0.001	<0.001	NS
12/9/04		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
10/18/04		<0.001	0.0052	0.0015	<0.001	<0.001	<0.001	<0.001	FPH
6/25/04		<0.001	0.00106	0.000118	<0.001	<0.001	<0,001	<0.001	FPH
2/18/04		0.0514	0.00067	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
11/20/03		<0.001	0.034	0.004	<0.001	<0.001	<0.001	0.001	FPH
10/29/03		<0.001	0.017	0.001	<0.001	<0.001	0.003	0.006	FPH
9/22/03		<0.001	0.079	0.001	<0.001	<0.001	<0.001	<0.001	FPH
8/20/03		<0.001	0.179	0.001	<0.001	<0.001	<0.001	<0.001	FPH
7/17/03		<0.001	0.186	0.007	<0.001	0.002	0.004	<0.001	FPH
6/19/03		<0.001	0.103	0.006	<0.001	0.003	<0.001	<0.001	FPH
4/28/03		<0.001	0.133	0.039	<0.001	0.003	0.01	<0.001	FPH
5/21/02		<0.006	1.27	0.451	<0.006	<0.006	0.047	1	1
4/24/02		<0.006	0.38	0.189	<0.006	0.011	0.123	1	I
Well		MW-1	MW-2	MW-3	MW-4	MW-5	9-WM	MW-7	MW-8

6/26/06	<0.001	0.00125J	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
3/1/06	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	FPH
Well	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8

Notes:

Units are mg/l. Duplicate sample results were averaged together Indicators for estimated (J) values not shown FPH: Free phase hydrocarbons present, no sample collected

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		Duke E	nergy Field Se	ervices	_	WELL ID:	MW-1
S		X Line	(Etcheverry F	lanch)	_	DATE	6/26/2006
PRC	JECT NO.		F-106			SAMPLER	J. Fergerson/D. Littlejohn
PURGING	G METHOD:	:	🗹 Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:	
SAMPLIN	IG METHOD	D:	🗹 Disposab	le Bailer [Direct 1	from Disch	arge Hose 🔲 Other:
DESCRIE		ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
Glove	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗌 🤇	Other:		
DISPOSA		OF PURG	E WATER:	Surface	e Discharg	ge 🗌 Dru	ms 🗌 Disposal Facility
TOTAL D	EPTH OF V	VELL:	94.30	Feet			
DEPTH T HEIGHT (O WATER:	COLUMN	<u> </u>	Feet Feet		8.2	Minimum Gallons to
WELL DI	AMETER:	2.0	Inch				purge 3 well volumes
	VOLUME	TEMP.	COND.		DO	- 1	(Water Column Height x 0.49) PHYSICAL APPEARANCE AND
	PURGED	°C	<i>m</i> S/cm	рн	L		REMARKS
14:05	0.0	-			-		Begin Hand Bailing
14:19	2.7	19.1	0.63	7.26	6.9		
14:32	5.4	18.9	0.61	7.34	7.1		
14:48	8.1	19.1	0.61	7.36	6.9	-	
			· · · · · · · · · · · · · · · · · · ·				
	_						
							· · · · · · · · · · · · · · · · · · ·
0:43	:Total Time	e (hr:min)	8.1	:Total Vol	(gal)	0.19	:Flow Rate (gal/min)
SAMP	LE NO.:	Collected S	ample No.:	060626	1455		
ANAL	YSES:	BTEX (802	1-B)				
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	CLIENT:	Duke E	nergy Field Se	ervices		WELL ID:	MW-2			
SI		X Line	(Etcheverry F	Ranch)		DATE:	6/26/2006			
PRC	JECT NO.		F-106		. :	SAMPLER:	J. Fergerson/D. Littlejohn			
PURGING			☑ Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:				
SAMPLIN			Uisposab							
						RE SAMPL	LING THE WELL:			
	s 🔝 Alcono		ed vvater Ri	nse 🔟 C	Juner.					
DISPOSA	L METHOD	OF PURG	E WATER:	Surface	e Discharç	ge 🗌 Drur	ns 🗹 Disposal Facility			
total di Depth t Height (Well dia	TOTAL DEPTH OF WELL: 89.90 Feet DEPTH TO WATER: 77.47 Feet HEIGHT OF WATER COLUMN: 12.43 Feet WELL DIAMETER: 2.0 Inch Well DIAMETER: 2.0 Inch Output 0.49)									
TIME VOLUME TEMP. COND. pH DO Turb PHYSICAL APPEARANCE AND PURGED °C mS/cm pH mg\L Turb REMARKS										
14:01	0.0		-	-	-	-	Begin Hand Bailing			
14:05	2.3	19.2	0.85	7.06	1.1					
14:14	4.7	19.3	0.83	7.15	2.1	-				
14:23	7.0	18.9	0.82	7.12	3.1	-				
	·									
1 										
<u> </u>										
 										
0:22	:Total Time	e (hr:min)	7	:Total Vol	(gal)	0.32	Flow Rate (gal/min)			
SAMPLE NO.: Collected Sample No.: 060626 1					1430					
ANAL	YSES:	BTEX (802	1-B)							
COMMENTS:										

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	CLIENT:	Duke E	nergy Field S	ervices	_	WELL ID:	MW-3	
s	ITE NAME:	X Line	(Etcheverry F	Ranch)	_	DATE:	6/26/2006	
PRO	DJECT NO.		F-106		-	SAMPLER:	J. Fergerson/D. Littlejohn	
PURGIN	G METHOD	:	🗹 Hand Bai	led 🗌 Pu	imp If Pu	mp, Type:		
SAMPLIN	IG METHO	D:	🗹 Disposab	le Bailer [Direct	from Discha	arge Hose 🗌 Other:	
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPI	LING THE WELL:	
Glove	s 🗌 Alcono	x 🗌 Distil	led Water Ri	nse 🗌 (Other:		<u></u>	
DISPOSA) of purg	E WATER:	Surface	e Discharç	ge 🗌 Drui	ms 🗹 Disposal Facility	
TOTAL D	EPTH OF V	VELL:	92.80	Feet				
DEPTH T	O WATER:	COLUMN	77.48	Feet		75	Minimum Gallons to	
WELL DI	AMETER:	2.0	7.5	purge 3 well volumes				
TIME	PURGED	°C	m S/cm	pН	mg\L	Turb	REMARKS	
14:48	0.0	-	-		-		Begin Hand Bailing	
14:54	3.0	19.2	0.83	7.08	3.0	-		
15:09	6.0	19.4	0.83	7.11	3.6			
15:22	9.0	19.3	0.80	7.12	3.8	-		
							· · · · · · · · · · · · · · · · · · ·	
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						<u></u>		
0:34	:Total Time	e (hr:min)	9	:Total Vol	(gal)	0.26	Flow Rate (gal/min)	
SAMP	SAMPLE NO.: Collected Sample No.: 060626				1530			
ANAL	ANALYSES: BTEX (8021-B)							
COM	MENTS:	Collected D	Juplicate Sar	mple No.:	06062620	00 for BTE	Х (8021-В)	

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	CLIENT:	Duke E	nergy Field S	ervices	-	WELL ID:	MW-4		
S	ITE NAME:	X Line	(Etcheverry F	anch)	_	DATE:	6/26/2006		
PRO	JECT NO.		F-106		_	SAMPLER:	J. Fergerson/D. Littlejohn		
PURGING	G METHOD	:	🗹 Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:			
SAMPLIN	IG METHO	D:	🗹 Disposab	le Bailer [Direct	from Discha	arge Hose 🗌 Other:		
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPL	LING THE WELL:		
✓ Glove	s 🗹 Alcono	ox 🗹 Distil	led Water Ri	nse 🗌 C	Other:				
DISPOSA) of purg	E WATER:	Surface	e Dischar	ge 🗌 Drur	ns 🗌 Disposal Facility		
TOTAL D	EPTH OF V	VELL:	93.40	Feet					
DEPTH T	O WATER:		77.60	Feet Feet		77	Minimum Gallons to		
WELL DIAMETER: 2.0 Inch purge 3 well v							purge 3 well volumes		
		(Water Column Height x 0.49)							
TIME	PURGED	<u>°C</u>	<i>m</i> S/cm	pН	mg\L	Turb	REMARKS		
15:08	0.0		-	-	-		Begin Hand Bailing		
15:24	2.7	<u>1</u> 9.5	0.63	7.24	6.4				
15:38	5.4	19.8	0.61	7.26	6.3	-			
15:54	8.1	20.1	0.62	7.26	6.5				
				<u></u>					
						-			
ļ									
	<u> </u>			<u></u>					
0:46	0:46 :Total Time (hr:min) 8.1 :Total Vol ((gal)	0.18	:Flow Rate (gal/min)			
SAMP	SAMPLE NO.: Collected Sample No.: 060626			1605	_				
ANALYSES: BTEX (8021		21-B)							
COMMENTS: C		Collected M	IS/MSD San	nple					

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	CLIENT: Duke Energy Field Services					WELL ID:	MW-5	
SI		X Line	(Etcheverry R	Ranch)		DATE:	6/26/2006	
PRC	JECT NO.		F-106			SAMPLER:	J. Fergerson/D. Littlejohn	
PURGING			✓ Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:		
SAMPLIN	G METHO	D:	🗸 Disposab	le Bailer	Direct f	rom Discha	arge Hose 🗌 Other:	
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMPI	LING THE WELL:	
Glove:	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗌 C	Other:			
DISPOSAL METHOD OF PURGE WATER: 🗹 Surface Discharge 🗌 Drums 🔲 Disposal Facility								
TOTAL DEPTH OF WELL:91.10 FeetDEPTH TO WATER:77.27 FeetHEIGHT OF WATER COLUMN:13.83 FeetWELL DIAMETER:2.0 InchGalary Structure(Water Column Height x 0.49)								
TIME	VOLUME PURGED	TEMP. °C	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS	
15:43	0.0	-	-		-	_	Begin Hand Bailing	
15:52	2.8	19.8	0.65	7.23	5.2	-		
16:04	5.5	19.9	0.64	7.27	6.1	-		
<u> 16:16</u>	8.3	19.7	0.64	7.25	6.0	-		
							· · ·	
····								
		·····						
0.33	·Total Time	hr:min)	83	·Total Vol-		0 25	Elow Rate (gal/min)	
SAMP	SAMPLE NO Collected Sample No 0606			060626	1620	V.LV		
		1-B)						
COMN	MENTS:							

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	CLIENT:	Duke E	nergy Field S	ervices	_	WELL ID:	MW-6			
S	ITE NAME:	X Line	(Etcheverry F	Ranch)	-	DATE	6/26/2006			
PRC	DJECT NO.		F-106		_	SAMPLER	. J. Fergerson/D. Littlejohn			
PURGINO SAMPLIN DESCRIB	PURGING METHOD: Image: Constrained image: C									
DISPOSA) of purg	E WATER:	Surface	e Dischar	ge 🗌 Dru	ms 🗌 Disposal Facility			
TOTAL D DEPTH T HEIGHT (WELL DI/	TOTAL DEPTH OF WELL: 92.90 Feet DEPTH TO WATER: 77.19 Feet HEIGHT OF WATER COLUMN: 15.71 Feet WELL DIAMETER: 2.0 Inch WELL DIAMETER: 2.0 Inch UVOLUME TEMP UVOLUME COND									
TIME	TIME VOLUME TEMP. COND. pH DO Turb PHYSICAL APPEARANCE AND PURGED °C m S/cm pH mg\L Turb REMARKS									
16:28	0.0	-	-	_	-	-	Begin Hand Bailing			
16:36	2.8	20.0	0.61	7.26	6.9	-				
16:47	5.5	19.3	0.62	7.16	6.9	-				
17:03	8.3	19.8	0.60	7.28	7.6	-				
		······								
							· · · · · · · · · · · · · · · · · · ·			
0.05		(1 i)		T-1-13/-1/	(
U:35		Collected S	8.3		(gai)	0.24	Triow Rate (gal/min)			
SAIVIPI			ampie NO.:	000020	17 10					
	I SES. IFNTS'	DIEA (802)	<u></u>							
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	CLIENT: Duke Energy Field Services				_	WELL ID:	MW-7		
SI		X Line	(Etcheverry F	Ranch)	_	DATE:	6/26/2006		
PRC	JECT NO.		<u>F</u> -106		. :	SAMPLER:	J. Fergerson/D. Littlejohn		
PURGING	METHOD:	:	🗹 Hand Bai	led 🗌 Pu	mp If Pu	mp, Type:			
SAMPLIN	G METHO	D:	🗹 Disposab	le Bailer [Direct f	rom Discha	arge Hose 🗌 Other:		
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMPI	LING THE WELL:		
Glove	s 🗌 Alcono	x 🗌 Distill	ed Water Ri	nse 🗌 C	Other:				
DISPOSA	DISPOSAL METHOD OF PURGE WATER: 🗹 Surface Discharge 🗌 Drums 🗌 Disposal Facility								
TOTAL DEPTH OF WELL: 92.80 Feet DEPTH TO WATER: 76.76 Feet HEIGHT OF WATER COLUMN: 16.04 Feet 7.9 Minimum Gallons to WELL DIAMETER: 2.0 Inch purge 3 well volumes (Water Column Height x 0.49)									
TIME	VOLUME TEMP. COND. pH DO Turb PHYSICAL APPEARANCE AND PURGED °C mS/cm pH mg\L Turb REMARKS								
16:25	0.0	-	_		-		Begin Hand Bailing		
16:37	2.7	19.7	0.61	7.29	6.4				
16:50	5.4	19.5	0.60	7.29	6.2				
17:06	8.1	19.3	0.60	7.31	6.4				
	,								
							· · · · · · · · · · · · · · · · · · ·		
		-tanica							
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0:41 :Total Time (hr:min) 8.1 :Total Vol (:Total Vol	(gal)	0.20	:Flow Rate (gal/min)		
SAMP	SAMPLE NO.: Collected Sample No.: 06		060626	1715	_				
ANALYSES: BTEX (8021-B)									
COM	COMMENTS:					·····			

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	CLIENT:	Duke E	nergy Field S	ervices	_	WELL ID:	RW-1
SI	TE NAME:	X Line	(Etcheverry F	Ranch)	_	DATE:	6/26/2006
PRC	JECT NO.		F-106		_	SAMPLER:	J. Fergerson/D. Littlejohn
PURGING	B METHOD	:	🗹 Hand Bai	iled 🗌 Pu	mp If Pu	mp, Type:	
SAMPLIN	G METHO	D:	🗹 Disposab	le Bailer [Direct	from Discha	arge Hose 🗌 Other:
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFC	RE SAMPL	ING THE WELL:
Glove:	s 🗌 Alcono	ox 🗌 Distil	led Water Ri	nse 🗌 C	Other:		
DISPOSA		OF PURG	E WATER:	Surface	e Dischar	ge 🗌 Drur	ns 🗌 Disposal Facility
TOTAL DI	EPTH OF V	VELL:	85.10	Feet			
DEPTH T	O WATER:	COLUMN	77.99	Feet		13 9	Minimum Gallons to
WELL DIA	METER:	4.0	Inch		10.0	purge 3 well volumes	
<u>г</u>		TEMP		r			(Water Column Height x 1.96)
TIME	PURGED	°C	<i>m</i> S/cm	рН	mg\L	Turb	REMARKS
	0		_		-	_	
		-	-			-	
							· · · · · · · · · · · · · · · · · · ·
	•						
0:00	:Total Time	e (hr:min)	0	:Total Vol	(gal)	#DIV/0!	:Flow Rate (gal/min)
SAMPI	SAMPLE NO.: Collected Sample No.: 060626				1340		
ANAL	ANALYSES: BTEX (8021-B)						
COMM	COMMENTS: DID NOT SAM			E TO FPH	GAUGED	IN MONIT	ORING WELL!



Analytical Report

Prepared for:

Michael Stewart American Envionmental Consultants 6885 South Marshall St., Ste. 3 Littleton, CO 80128

Project: DEFS X-Line (Etcheverry Ranch) Project Number: None Given Location: Lea County, New Mexico

Lab Order Number: 6F28011

Report Date: 07/06/06

American Envionmental Consultants 6885 South Marshall St., Ste. 3 Littleton CO, 80128

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Project: DEFS X-Line (Etcheverry Ranch) Project Number: None Given Project Manager: Michael Stewart Fax: (303) 948-7793

ANALYTICAL REPORT FOR SAMPLES

Sample 1D	Laboratory ID	Matrix	Date Sampled	Date Received
MW-2 (0606261430)	6F28011-01	Water	06/26/06 14:30	06/28/06 14:10
MW-1 (0606261455)	6F28011-02	Water	06/26/06 14:55	06/28/06 14:10
MW-3 (0606261530)	6F28011-03	Water	06/26/06 15:30	06/28/06 14:10
MW-4 (0606261605)	6F28011-04	Water	06/26/06 16:05	06/28/06 14:10
MW-5 (0606261620)	6F28011-05	Water	06/26/06 16:20	06/28/06 14:10
MW-6 (0606261710)	6F28011-06	Water	06/26/06 17:10	06/28/06 14:10
MW-7 (0606261715)	6F28011-07	Water	06/26/06 17:15	06/28/06 14:10
Duplicate (0606262000)	6F28011-08	Water	06/26/06 20:00	06/28/06 14:10
Trip Blank	6F28011-09	Water	06/26/06 00:00	06/28/06 14:10

American Envionmental Consultants 6885 South Marshall St., Ste. 3 Littleton CO, 80128

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Project:DEFS X-Line (Etcheverry Ranch)Project Number:None GivenProject Manager:Michael Stewart

Organics by GC

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-2 (0606261430) (6F28011-01) V	Vater		···						
Benzene	J {0.000641}	0.00100	mg/L	1	EF62914	06/29/06	06/30/06	EPA 8021B	
Toluene	0.00114	0.00100	"		n	"	11		
Ethylbenzene	ND	0.00100	"	"		"	"	11	
Xylene (p/m)	J [0.000773]	0.00100	"	11	н	U II	11	11	
Xylene (0)	J [0.000476]	0.00100		11	11	"	u	"	
Surrogate: a,a,a-Trifluorotoluene		83.5 %	80-12	20	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.2 %	80-12	20	"	"	"	"	
MW-1 (0606261455) (6F28011-02) W	Vater								
Benzene	ND	0.00100	mg/L	1	EF62914	06/29/06	06/29/06	EPA 8021B	
Toluene	ND	0.00100	"	11	11	11	"		
Ethylbenzene	ND	0.00100	"	н	11	*	u.	"	
Xylene (p/m)	ND	0.00100	"		"	"	"	11	
Xylene (o)	ND	0.00100	"	**	"	"	"	11	
Surrogate: a,a,a-Trifluorotoluene		98.0 %	80-12	20	"	"	"	IJ	
Surrogate: 4-Bromofluorobenzene		95.5 %	80-12	20	"	"	"	"	
MW-3 (0606261530) (6F28011-03) W	ater								
Benzene	ND	0.00100	mg/L	1	EF62914	06/29/06	06/30/06	EPA 8021B	
Toluene	ND	0.00100	11	**	"	"		"	
Ethylbenzene	ND	0.00100	11		R.	"		"	
Xylene (p/m)	ND	0.00100			"	"	"	11	
Xylene (o)	ND	0.00100	"	"	"	"	"	u.	
Surrogate: a,a,a-Trifluorotoluene		105 %	80-12	20	"	"	"	n	
Surrogate: 4-Bromofluorobenzene		91.2 %	80-12	20	"	"	"	"	
MW-4 (0606261605) (6F28011-04) W	ater								
Benzene	ND	0.00100	mg/L	1	EF62914	06/29/06	06/29/06	EPA 8021B	
Toluene	ND	0.00100	n	"	"	n		"	
Ethylbenzene	ND	0.00100	11	"		"		"	
Xylene (p/m)	ND	0.00100		11		"	"	11	
Xylene (o)	ND	0.00100	н	11		11	"	"	
Surrogate: a,a,a-Trifluorotoluene		89.0 %	80-12	20	"	"	11	"	
Surrogate: 4-Bromofluorobenzene		84.0%	80-12	20	n	"	n	"	

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Project: DEFS X-Line (Etcheverry Ranch) Project Number: None Given Project Manager: Michael Stewart

Organics by GC

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	No
MW-5 (0606261620) (6F28011-05) Water			· · ·	· · ·					
Benzene	ND	0.00100	mg/L	I	EF62914	06/29/06	06/29/06	EPA 8021B	
Toluene	ND	0.00100	"		n	11	"	"	
Ethylbenzene	ND	0.00100		"	"	0	11	н	
Xylene (p/m)	ND	0.00100	"	"	u.	11	"	"	
Xylene (o)	ND	0.00100	"	"	u.	11	"	"	
Surrogate: a,a,a-Trifluorotoluene		81.0 %	80-12)	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		80.8 %	80-12)	"	"	"	"	
MW-6 (0606261710) (6F28011-06) Water									
Benzene	ND	0.00100	mg/L	1	EF62914	06/29/06	06/30/06	EPA 8021B	
Toluene	ND	0.00100	H	11	"	"	"		
Ethylbenzene	ND	0.00100	0	"	"	"	**	"	
Xylene (p/m)	ND	0.00100	u.	"	"	"		"	
Xylene (o)	ND	0.00100	11	*	11	"	"		
Surrogate: a,a,a-Trifluorotoluene		103 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		88.0 %	80-12	0	"	"	"	"	
MW-7 (0606261715) (6F28011-07) Water									
Benzene	ND	0.00100	mg/L	1	EF62914	06/29/06	06/30/06	EPA 8021B	
Toluene	ND	0.00100	"	"	0	и		"	
Ethylbenzene	ND	0.00100	11	11	0	"	"	**	
Xylene (p/m)	ND	0.00100	"	11		"		**	
Xylene (o)	ND	0.00100	"	"		11	u	"	
Surrogate: a,a,a-Trifluorotoluene		86.2 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.0 %	80-12	0		"	"		
Duplicate (0606262000) (6F28011-08) Water									
Benzene	ND	0.00100	mg/L	1	EF62914	06/29/06	06/30/06	EPA 8021B	
Toluene	ND	0.00100	"		0	u.	н	11	
Ethylbenzene	ND	0.00100	"	11	0	"		11	
Xylene (p/m)	ND	0.00100	"	11			"	"	
Xylene (0)	ND	0.00100	"	"	"		11	n	
Surrogate: a,a,a-Trifluorotoluene		93.2 %	80-12	0	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		83.5 %	80-12	0	,,	"	"	"	

Surrogate: 4-Bromofluorobenzene

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Project:DEFS X-Line (Etcheverry Ranch)Project Number:None GivenProject Manager:Michael Stewart

Organics by GC

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Trip Blank (6F28011-09) Water	· · · · · · · · · · · · · · · · · · ·							<u></u>	
Benzene	ND	0.00100	mg/L	l	EF62914	06/29/06	06/30/06	EPA 8021B	
Toluene	ND	0.00100		"	"	0	"	11	
Ethylbenzene	ND	0.00100	"	**	"	U.	"	**	
Xylene (p/m)	ND	0.00100	"	"	*	"	11	17	
Xylene (o)	ND	0.00100.0	n	"	u	"	u	"	
Surrogate: a,a,a-Trifluorotoluene		95.8 %	80-	120	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.8 %	80-	120	"	"	"	"	

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Project: DEFS X-Line (Etcheverry Ranch) Project Number: None Given Project Manager: Michael Stewart

Organics by GC - Quality Control

		Environm	ental I	lab of Te	kas					
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EF62914 - EPA 5030C (GC)										
Blank (EF62914-BLK1)				Prepared: 0)6/29/06 A	nalyzed: 06	/30/06			
Benzene	ND	0.00100	mg/L							
Toluene	ND	0.00100	**							
Ethylbenzene	ND	0.00100	н							
Xylene (p/m)	ND	0.00100	u							
Xylene (o)	ND	0.00100	"							
Surrogate: a,a,a-Trifluorotoluene	41.9		ug/l	40.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	34.2		"	40.0		85.5	80-120			
LCS (EF62914-BS1)				Prepared &	Analyzed:	06/29/06				
Benzene	0.0583	0.00100	mg/L	0.0500		117	80-120			
Toluene	0.0578	0.00100	"	0.0500		116	80-120			
Ethylbenzene	0.0541	0.00100		0.0500		108	80-120			
Xylene (p/m)	0.119	0.00100	11	0.100		119	80-120			
Xylene (o)	0.0573	0.00100	"	0.0500		115	80-120			
Surrogate: a,a,a-Trifluorotoluene	40.2		ug/l	40.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	42.4		"	40.0		106	80-120			
Calibration Check (EF62914-CCV1)				Prepared: 0)6/29/06 A	nalyzed: 06	6/30/06			
Benzene	56.8		ug/l	50.0		114	80-120			
Toluene	55.1		"	50.0		110	80-120			
Ethylbenzene	57.9		17	50.0		116	80-120			
Xylene (p/m)	111		"	100		111	80-120			
Xylene (0)	56.2		"	50.0		112	80-120			
Surrogate: a,a,a-Trifluorotoluene	37.2	······································	"	40.0		93.0	80-120			
Surrogate: 4-Bromofluorobenzene	40.7		"	40.0		102	80-120			
Matrix Spike (EF62914-MS1)	Sou	rce: 6F28011-	04	Prepared: ()6/29/06 A	nalyzed: 06	6/30/06			
Benzene	0.0557	0.00100	mg/L	0.0500	ND	111	80-120			
Toluene	0.0544	0.00100	17	0.0500	ND	109	80-120			
Ethylbenzene	0.0515	0.00100		0.0500	ND	103	80-120			
Xylene (p/m)	0.112	0.00100		0.100	ND	112	80-120			
Xylene (o)	0.0550	0.00100		0.0500	ND	110	80-120			

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Surrogate: a,a,a-Trifluorotoluene

Surrogate: 4-Bromofluorobenzene

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Project: DEFS X-Line (Etcheverry Ranch) Project Number: None Given Project Manager: Michael Stewart

Organics by GC - Quality Control

Environmental Lab of Texas

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EF62914 - EPA 5030C (GC)

Matrix Spike Dup (EF62914-MSD1)	Sou	rce: 6F28011-	04	Prepared: 06/29/06 Analyzed: 06/30/06					
Benzene	0.0555	0.00100	mg/L	0.0500	ND	111	80-120	0.00	20
Toluene	0.0548	0.00100	u	0.0500	ND	110	80-120	0.913	20
Ethylbenzene	0.0508	0.00100	"	0.0500	ND	102	80-120	0.976	20
Xylene (p/m)	0.114	0.00100	"	0.100	ND	114	80-120	1.77	20
Xylene (o)	0.0563	0.00100	"	0.0500	ND	113	80-120	2.69	20
Surrogate: a,a,a-Trifluorotoluene	41.5		ug/l	40.0	·····	104	80-120		
Surrogate: 4-Bromofluorobenzene	39.0		"	40.0		97.5	80-120		

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Notes and Definitions

- DETAnalyte DETECTEDNDAnalyte NOT DETECTED at or above the reporting limitNRNot ReporteddrySample results reported on a dry weight basisRPDRelative Percent DifferenceLCSLaboratory Control SpikeMSMatrix Spike
 - Dup Duplicate

Report Approved By:

Raland K Jut

7/6/2006

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

Date:

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If you have received this material in error, please notify us immediately at 432-563-1800.

Environmental Lab of Texas

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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

1	variance / Corrective #
Client:	Amenican Env.
Date/Time:	U/28/120
Order #: _	10F28011
Initials:	Clk

No.

Sample Receipt Checklist

Temperature of container/cooler?	Yes	No	25 CI
Shipping container/cooler in good condition?	Xe3	No	}
Custody Seals intact on shipping container/cooler?	Yes	No	Not present
Custody Seals intact on sample bottles?	200	No	Not present
Chain of custody present?	X53	No	
Sample Instructions complete on Chain of Custody?	133	No	
Chain of Custody signed when relinquished and received?	E I	No	
Chain of custody agrees with sample label(s)	YES	No	
Container labels legible and intact?	XES	No	
Sample Matrix and properties same as on chain of custody?	Ves.	No	
Samples in proper container/bottle?	1/25	No	,
Samples properly preserved?	1 Xeg	No	
Sample bottles intact?	Yes	No	
Preservations documented on Chain of Custody?	1 200	No	
Containers documented on Chain of Custody?	Tes	No	
Sufficient sample amount for indicated test?	Ves	No	
All samples received within sufficient hold time?	(Ares	No	
VOC samples have zero headspace?	Yes	No	Not Applicable?

Other observations:

Contact Person: Regarding:	Variance Documentation: Date/Time:	_ Contacted by:	í
Corrective Action Taken:			

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

May 26, 2006

Mr. Stephen Weathers Duke Energy Field Services, LP 370 17th Street, Suite 2500 Denver, CO 80202

Re: Work Plan Proposal for the J-4-2 Pipeline Release in Lea County, Unit C, Section 27 Township 19 South, Range 35 East

Dear Mr. Weathers:

This letter provides the proposed scope of work for a groundwater and soil investigation program for the Duke Energy Field Services (DEFS) J-4-2 release. The program purpose and objectives and a background section are presented first. A description of the field program is presented next. The last section describes the report organization and scheduling.

PURPOSE AND OBJECTIVES

The purpose of this program is to characterize the affected medium distribution and groundwater conditions beneath the J-4-2 study area at a level of detail sufficient to formulate an appropriate remediation program. Specific objectives include:

- Delineating the plume boundaries associated with the release.
- Defining the groundwater flow direction and gradient.
- Evaluating the degree and extent of natural biodegradation processes on the hydrocarbon distribution.
- Measuring the hydraulic properties of the affected saturated materials.

BACKGROUND INFORMATION

The background topics include the release specifics, land use, topography and surface drainage, a regional geologic summary, and a summary of past site investigative activities. Each topic is discussed separately below.



6885 South Marshall St., Suite 3, Littleton, CO 80128 phone 303-948-7733 fax 303-948-7739

Release Location, History and Volume

The study area is located in the northeastern quarter of the northwestern quarter (Unit C) of Section 27, Township 19 South, Range 35 East approximately 3 miles south of the of intersection of US Highway 82 and State Highway 483 (Utah Junction) in Lea County New Mexico (Figure 1). The approximate coordinates are 32.6470 degrees north and 103.4470 degrees west.

The release, reportedly of less than 5 barrels, occurred on August 3, 2005. DEFS contracted Environmental Plus Incorporated (EPI) of Eunice, New Mexico to complete the initial remediation activities and prepare the C-141 document. The approximate extent of the spill, depicted on Figure 2, is based upon GPS mapping completed by EPI. The spill was limited to an approximate 2,800 square foot (0.064 acres) area. The spill did not migrate to any defined surface water feature.

Land Use

The RR Ext release site is in an isolated and sparsely populated part of Lea County. The land is used for oil and/or gas extraction, conveyance and processing and stock grazing.

There is one residence approximately 1,800 feet northwest of the site. There may be another residence approximately 1600 feet southeast of the site. The presence and locations of all residences within one mile of the site will be defined during the investigative field program described below.

Topography and Surface Water Drainage.

The topography for the area surrounding the site is shown in Figure 3. The area lies on a slope with a relatively uniform gradient toward the southeast. Runoff from this area does not appear to migrate to any defined surface water body within several miles of the site. Instead, runoff would percolate into the sandy soils as it migrated away from the site.

The surface drainage within this area are poorly defined because of the porous nature of the surface and subsurface materials. Runoff to defined surface features will be restricted to high intensity and/or long-duration precipitation events.

Regional Geology and Groundwater Flow

Information contained in Nicholson and Clebsch¹ indicates the following:

- The materials consist of a thin veneer of dune sand that overlies sandy Quaternary alluvial deposits. The Nicholson and Clebsch map shows the site to be outside the boundaries of the Ogallala Formation; however, the Quaternary alluvial deposits and the Ogallala Formation are composed of similar materials and probably possess similar hydraulic properties.
- Bedrock beneath the site is shown on the Nicholson and Clebsch map at an elevation of 3,745 feet. The site elevation is approximately 3,735 feet (Figure 3) so their bedrock value is high. The Nicholson and Clebsch estimate is based upon regional data. The comparison does indicate that the dune sand is probably not thick beneath the site. The EPI soil boring logs indicated that sand was present to a depth of approximately 35 feet.
- The groundwater contour map in the Nicholson and Clebsch report indicates that the regional groundwater flow in the saturated sands is to the southeast.

A copy of the map prepare by EPI showing the neighboring water wells is included in Figure 4. No wells are shown within 1,000 feet radius of the site. Three wells are shown within one mile of the location in the down gradient (southeast). Eleven wells are shown at five locations up gradient (northwest) of the site. The well positions will be verified during the field program.

Summary of Past Investigative Activities

Investigative activities are limited because of the recent nature of the spill. EPI completed initial investigation programs in September 2005 and February, 2006. The following summary is based upon a preliminary review of their data.

EPI advanced three soil borings, SB-1 through SB-3, and a temporary monitoring well (MW Temp) in September 2005 at the locations shown on Figure 2. Soil samples from various depths were submitted for laboratory analyses for benzene, toluene, ethylbenzene and xylenes (BTEX) and for total petroleum hydrocarbons in the gasoline range (GRO) and the diesel range (DRO). Those results are summarized in Table 1 along with potentially-applicable regulatory standards.

EPI installed three permanent monitoring wells MW-1, MW-2 and MW-3 in February 2006 (Figure 2). The completion information for these three wells is summarized in

¹ Nicholson, Alexander, Jr. and Clebsch, Alfred, Jr., 1961, Geology and Ground-Water Conditions in Southern Lea County New Mexico. New Mexico State Bureau of Mines and Mineral Resources, Ground-Water Report 6, 123 pp.

Table 2. Fluid level data is also included in Table 2. The depth to water in the three wells varied between approximately 23 and 24 feet below ground surface (bgs). Free phase hydrocarbons (FPH) were measured in MW-2 at a thickness of 0.57 feet. Fine-grained sand was the predominant material in boring logs generated by EPI. Varying percentages are fines are also present along with discrete intervals that contained gravels. Caliche was noted to varying depths in all of the borings and wells that were advanced at the site.

The soil data for these wells is included in Table 1. The data collected from the September 2005 borings conflicts both internally (between SB-3 and SB-4) and with the February 2006 data. The photoionization (PID) data provided by EPI is summarized below:

	PID Readings (ppm)					
Depth	SB-1	SB-2	SB-3			
2	64.7	565	330			
5	3	23.7	439			
10		5.4	788			
15		54	759			
20		4.1	77.2			
25			1.9			

The above readings indicate that the higher concentrations measured in the September 2005 (SB) borings are probably more representative than the non-detect values from the February 2006 samples.

EPI collected groundwater samples from MW-1 and MW-3, the two wells that did not contain FPH, and the results are summarized in Table 3 along with the September 2005 sample from the temporary monitoring well. The results indicate that MW-1 contains benzene above the New Mexico Water Quality Control Commission groundwater standards while the water in MW-3 was not impacted.

PROPOSED PROGRAM COMPONENTS

The field program described in this section was designed to provide the data necessary to formulate an appropriate remediation plan. The tasks include: 1) installation, development and sampling of additional monitoring wells; 2) well gauging and water table contouring; and 3) physical property measurement. Each task is described below.

Additional Monitoring Well Installation

Five new monitoring wells will be installed, developed and sampled. The proposed well locations are shown on Figure 5. Well MW-4 will be installed in the probable up gradient (northeast) direction. Wells MW-5 and MW-6 will be located at cross-gradient locations away from the release. Wells MW-7 and MW-8 will be installed in the probable down gradient direction progressively away from the release. The exact locations may be altered based upon subsurface obstacles, access constraints, or changed conditions such as a different groundwater flow component.

Each well will be drilled to a depth approximately 10 feet below the first evidence of saturated materials or to a maximum depth of 40 feet if no saturated materials are encountered. The borings will be advanced using hollow-stem auger. All drilling and installation procedures will be supervised by an experienced geologist or engineer with an appropriate background. Continuous soil samples will be collected from the surface to the top of the saturated zone. Each sample will be split into two sealable plastic bags. One set will be subjected to PID measurement. The second set will be placed in a ice-filled cooler. Soil samples from the zones that produce the highest PID measurements will be submitted for analyses for benzene, toluene, ethylbenzene and xylenes (BTEX) and for total petroleum hydrocarbons in the gasoline range (GRO) and the diesel range (DRO).

Fifteen feet of 2-inch, threaded, factory-slotted Schedule 40 PVC will be placed in each well. The annular space will then be backfilled with artificially-graded sand to a minimum depth of 2 feet above the top of the slotted PVC interval. The remaining annular space will then be backfilled with hydrated bentonite. Wells will be allowed to set a minimum of 24 hours prior to development to allow the grout to set.

The surface completion for each well will included an above-ground well protector and a minimum 2 foot by 2 foot concrete pad. Well completion forms will be prepared for each well and included in the addendum report. The coordinates and elevation of each well will be measured by a licensed surveyor.

Well Gauging And Water Table Contouring;

The depth to water will be measured in each well to the nearest 0.01 foot a minimum of 24 hours following installation to ensure that the water table has fully equilibrated. A water table map will be prepared based upon the data collected. The map will include the water table elevations, a set of water table contours and indications of groundwater flow directions.

Monitoring Well Development, Purging And Sampling,

Each new well will be developed using a dedicated bailer or a submersible pump depending upon the volume of water present and the potential well-production rate. Well development will be completed when a minimum of 10 casing volumes of water are removed and the field parameters of temperature, pH and conductivity for the last three casing volumes are stable. In the event the well cannot be continuously purged, it will be bailed dry a minimum of one time.

A well will not be developed and sampled if free product is present after installation. A well will not be sampled if free product enters the well during its development.

A minimum of three casing volumes will then be purged from all of the wells that do not contain FPH using a dedicated bailer. The field parameters temperature, pH, conductivity and dissolved oxygen will be measured after the collection of each casing volume. The wells will be considered stable with the temperature and conductivity stabilize within 10 percent and pH readings remain within 0.2 pH units for three consecutive readings.

Each purged well will then be sampled using the dedicated bailer following the stabilization of the parameters. Unfiltered samples will be collected from each well. The unfiltered samples will be analyzed for BTEX, GRO and DRO for characterization purposes. The suite may be adjusted prior to implementing routine groundwater monitoring.

A field duplicate, matrix spike, matrix spike duplicate (MS/MSD) and a trip blank will be used to evaluated quality control. The field duplicate will be collected from a well with detectable constituents so that the relative percentage difference can be calculated. The MS/MSD sample will be collected from a well that appears to contain unimpacted groundwater. The laboratory will provide the trip blank. The trip blank and the field duplicate will both be analyzed for BTEX.

All development and purge water will be disposed of at the DEFS Linam Ranch facility. All cuttings generated during the drilling process will be stockpiled and sampled and then disposed of in an appropriate fashion. Unaffected cuttings will be thin spread.

Physical Property Measurement

The final field activity will be to measure the physical properties of the saturated materials. Slug tests will be completed on all wells that do not contain FPH to estimate the saturated hydraulic conductivity.

Laboratory testing will also be conducted on one sample collected using a Shelby tube from the saturated zone. The samples will be analyzed by a soils laboratory for:

- Organic matter using ASTM D2974;
- Unified Soil Classification using ASTM D2487;
- Atterburg Limits using ASTM D4318 (as applicable);
- Particle analysis using ASTM D422; and
- Bulk density using ASTM D2937.

Measurement of the biodegradation indicators in the groundwater will be completed during the second sampling episode that will be completed the third quarter of 2006. Waiting until the second sampling episode allows the water to fully equilibrate from any disturbances caused by the drilling process. Also, installation of additional monitoring wells may be necessary to fully delineate the plume. Collecting the indicator samples from all wells at the same time following final plume delineation results in a more reliable assessment of bioremediation potential.

Finally, the following procedure will be followed in any well (including MW-2) where free phase hydrocarbons (FPH) are measured either before or during development or purging:

- Water extraction will cease;
- No water sample will be collected;
- The FPH level will be measured several times to verify equilibration;
- A baildown test of the FPH will be completed; and
- A sample of the FPH will be collected for PIANO analyses.

REPORT PREPARATION AND SCHEDULE

A report will be prepared to present the results of the field investigation and discuss important conclusions. The report will include the following components:

- A summary of the field methods used to install the wells and collect the data.
- A summary of the data collected during the field program.
- Interpretations of the data collected.
- Conclusions on groundwater flow direction and velocity.
- Recommendations (if any) for the completion of additional work prior to the preparation of a remediation plan.

All analytical laboratory reports, slug test analyses, boring logs, and well completion diagrams will be appended to the report. The report will also include recommendations for additional characterization activities and/or remediation components necessary to remediate the site.

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Do not hesitate to contact me if you have any questions or comments on this document.

Respectfully Submitted, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Muchael H. Stewart

Michael H. Stewart, P.E., C.P.G. Principal Engineer

TABLES

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Boring	Depth (feet)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	Gasoline Range Organics	Diesel Range Organics	Oil Range Organics
		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Standard		10				100 (total)		
SB-1	2	< 0.025	0.0130J	0.0936	0.328	192	818	
SB-1	5					10.3	47.6	
SB-2	2	0.466	2.55	1.63	10.73			
SB-2	5					13.4	42.7	
SB-3	2	1.15	2.32	1.22	8.39	670	924	
SB-3	5					1,350	2,270	
SB-3	10					2,730	4,480	
SB-3	15					1,940	5,550	
SB- 3	25					11.5	26.9	
SB-4	20	0.112	0.842	0.796	6.67	1790	4830	
MW-1	5-6	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-1	10-11	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-1	15-16	< 0.025	< 0.025	<0.025	< 0.025	<10	<10	<10
MW-1	20-21	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-1	25-26	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-1	30-31	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-2	5-6	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-2	10-11	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-2	15-16	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-2	20-21	< 0.025	< 0.025	< 0.025	< 0.025	<10	15.2	<10
MW-2	25-26	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10
MW-2	30-31	< 0.025	< 0.025	< 0.025	< 0.025	<10	<10	<10

Table 1 – Summary of Soil Analytical Results from the EPI September 2005 and February 2006 Investigative Episodes at the J4-2 Release Site

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Notes: Blank cells denote interval that was not sampled.

Bold cells indicate exceedance of regulatory standard

Name	Date	Stickup	Total	Screen	Sand	Depth to	FPH
	Installed		Depth	Interval	Interval	Fluid	Thickness
			(btoc)	(ground)		(btoc)	
MW-1	2/06	3.17	43.05	19-39	17-39	26.84	0
MW-2	2/06	3.08	43.30	19-39	17-39	27.11	0.57
MW-3	2/06	3.21	43.00	19-39	17-39	26.03	0
A 11						20.00	<u> </u>

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Table 2 – Summary of Monitoring Well Completion and Fluid Level Information for the J4-2 Site

All units are feet

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Well	Sampling Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
		(mg/l)	(mg/l)	(mg/l)	(mg/l)
Standard		0.01	0.75	0.75	0.62
TMW	9/05	0.766	1.190	0.14	1.14
MW-1	2/06	0.139	0.326	.0.34	0.31
MW-3	2/06	< 0.001	< 0.001	< 0.001	< 0.002

Table 3 – Summary of Groundwater Sample Data

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FIGURES

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Martin, Ed, EMNRD

From:	lain Olness [iolness@envplus.net]					
Sent:	Tuesday, December 20, 2005 7:00 AM					
То:	Martin , Ed, EM NBD					
Cc:	Johnson, Larry, EMNRD; Steve Weathers (DEFS)					
Subject: DEFS J-4-2 (Ref. #130028) - Piperine						

Dear Mr. Martin:

This is a follow-up to the telephone message I left yesterday regarding the above-referenced site.

EPI, on behalf of Duke Energy Field Services, is reporting impacts to groundwater due to a release of natural gas liquids (NGL) at the above-referenced site. The site is located as follows:

UL-C, Section 27, Township 19 South, Range 35 East _____ II MILES WEST N 32° 38' 18.85" and W 103° 26' 49.02"

A soil boring was advanced to groundwater, encountered at approximately 24 feet below ground surface (bgs), and a temporary well installed to collect a groundwater sample. Analytical results for the sample indicated concentrations as follows:

Chloride:	944 mg/L	250
Benzene:	766 μg/L	10
Toluene:	1,190 µg/L	750
Ethylbenzene:	135 µg/L	625
Total Xylenes:	1,135 µg/L	620

Additional groundwater monitoring wells will be installed to determine lateral extent of impacts to groundwater and to determine the groundwater gradient in the area. Upon final scheduling for the installation of the wells, EPI will notify you and the NMOCD Hobbs office of the date at least 48 hours in advance.

Should you have any questions or concerns, please feel free to contact me at (505) 394-3481 or via email at <u>iolness@envplus.net</u>. All official correspondence should be directed to Mr. Steve Weathers at the following address:

> Mr. Steve Weathers, Senior Environmental Specialist Duke Energy Field Services 370 17th Street, Suite 2500 Denver, CO 80202

Sincerely, ENVIRONMENTAL PLUS, INC. Iain A. Olness, P.G. Hydrogeologist - NEEO (-141 - WRITEN Remensional PLAN (AP - LETTEN FRAME DUKE AUTHORING EPITO AET AS ALLONT

Environmental Plus, Inc. P.O. Box 1558 Eunice, NM 88231 (505) 394-3481 (505) 394-2601 (facsimile) Scanned by McAfee e250 Appliance

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LETTER OF TRANSMITTAL



Date:	14 February 2004 2004	2008 EFD	
10:	Glen Von Gonten	<i>COUTEB</i> 17	Pm .
Company Name:	New Mexico oil Conservation Division	- •	11 00
Address:	1220 South St. Francis Drive		
City / State / Zip:	Santa Fe, NM 87505		
From:	lain Olness		
CC:	Larry Johnson, NMOCD – Hobbs	-	
	Steve Weathers, DEFS – Denver		
	Lynn Ward, DEFS – Midland		
	Mark Owens, DEFS - Hobbs		
Project #:	130028		
Project Name:	J-4-2		
Subject:	Revised C-141		

# of originals	# of copies	Description
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1	Revise	ed copy of the Initia	I C-141	<u> </u>	

Dear Mr. von Gonten

Enclosed is a revised copy of the *Initial C-141* for the Duke Energy Field Services (DEFS) release of natural gas and associated natural gas liquids (NGL) from the J-4-2 transmission line. Should you have any questions or concerns, please feel free to contact me at (505) 394-3481 or via e-mail at <u>iolness@envplus.net</u>. All official correspondence should be submitted to Mr. Steve Weathers at the following address:

Mr. Steve Weathers, Senior Environmental Specialist Duke Energy Field Services, L.P. 370 17th Street, Suite 2500 Denver, CO 80202

Sincerely,

ENVIRONMENTAL PLUS, INC.

lain A. Olness, P.G. Hydrogeologist

P. O. Box 1558 Eunice, NM 88240 (505) 394-3481 Fax: (505) 394-2601 District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

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State of New Mexico **Energy Minerals and Natural Resources**

> **Oil Conservation Division** 1220 South St. Francis Dr. Santa Fe, NM 87505

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

		Rel	ease Notific	ation and	Corrective	Action		
OP	ERATOR			🗌 Initia	l Report	Revised Report		Final Report
Name	of Company	·····			Conta	ct		
Duke Energy Field Services				Steve V	Steve Weathers			
Address 370 17 th Street, Suite 2500, Denver, CO 80202					Telephone No. (303) 605-1718			
Facility Name J-4-2					Facility Type8" Steel/Driscoll Transmission Line			
Surface Owner State of New Mexico			Mineral O	wner	<u>ک</u> ۲		Lease No.	
			State of New Mexico				<u>E0-5839-0005</u>	
			LOCAT	TION OF 1	RELEASE			
Unit Letter C	Section 27	Township T19S	Range R35E	Feet from the North/South Line		Feet from the East/West Co Line La Lo		County: Lea Lat. N 32° 38' 18.85'' Lon. W 103° 26' 49.02''
			NATU	RE OF R	ELEASE			
Type of Release Natural Gas and Natural Gas Liquids			Volume of Release <5 barrels		Volu No	Volume Recovered No Recovery		
Source of Release Internal corrosion of an 8" steel/driscoll transmission line operating at 15 to 25 psi				Date and Hour of Occurrence August 3, 2005		Date Augi	Date and Hour of Discovery August 3, 2005	
Was Im	mediate Notic	e Given?	🗌 No 🖾 No	ot Required	If YES, To V	Whom?	I	
By Who	om?				Not Require	d		
Was a Watercourse Reached? 🔲 Yes 🛛 No			If YES, Volume Impacting the Watercourse. NA					
If a Wa	tercourse was	Impacted, Describe	Fully.* NA		L			<u> </u>
Describ line. The	e Cause of Pro	blem and Remedial in, the leak origin exc	Action Taken. avated and a se	*The release ction of the li	occurred due t ine replaced.	o internal corrosion of a	n 8" st	eel/driscoll transmission
Describ Soil bor	e Area Affecte ings have been vater has been i	ad and Cleanup Action advanced at the site to mpacted due to the re-	on Taken.*The o delineate the d	release impa	cted approxim amination and	ately 2,800 square feet of a temporary monitoring troundwater sample col	of right- y well in lected f	-of-way and pasture land. nstalled to determine if

Soil borings hav nstalled to determine if groundwater has been impacted due to the release. Analytical results received from the groundwater sample collected from the temporary groundwater monitoring well indicated impacts to the groundwater in excess of the New Mexico Water Quality Control Commission Groundwater Standards. Three permanent groundwater monitoring wells were installed on February 9, 2006 to determine the groundwater gradient at the site. Upon gauging the wells on February 13, 2006, 0.04 feet of phase separated hydrocarbons (PSH) were encountered on the water column in groundwater monitoring well MW-3. The groundwater monitoring well network is to be surveyed on February 14, 2006 and samples collected from groundwater monitoring wells MW-1 and MW-3. The samples are to be submitted to an independent laboratory for quantification of benzene, toluene, ethylbenzene and total xylenes (BTEX constituents), chlorides and sulfates. Upon receipt of analytical results, remedial alternatives will be evaluated and discussed with the NMOCD.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:		<u>OIL CONSERV</u>	<u>OIL CONSERVATION DIVISION</u>			
Printed Name: Steve Weathers E-mail Address: swweathers@duke-energy.com Title: Senior Environmental Specialist		Approved by District Supervisor:				
		Date:	Phone: (432) 620-4207	Conditions of Approval:		Attached 🗌

* Attach Additional Sheets If Necessary