

# **MONITORING REPORT**

# DATE: 2<sup>nd</sup> QTR 2009



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

September 28, 2009

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

#### RE: 2nd Quarter 2009 Groundwater Results DCP Midstream, LP RR Ext. Pipeline Release (AP #55) Unit C, Section 19, Township 20 South, Range 37 East Lea County, New Mexico

RECEIVED OOD

Dear Mr. Lowe:

DCP Midstream, LP (DCP) is pleased to submit for your review, one copy of the 2<sup>nd</sup> Quarter 2009 Groundwater Results for the DCP RR Ext. Pipeline Release located in Lea County, New Mexico (Unit C, Section 19, Township 20 South, Range 37 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 September 16, 2009

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

Re: Second Quarter 2009 Groundwater Monitoring Report
 RR Ext Pipeline Release
 Unit C, Section 19 Township 20 South, Range 37 East (AP #55)

Dear Mr. Weathers:

This letter report summarizes the second quarter 2009 groundwater monitoring event that was completed on May 19, 2009 at the DCP Midstream (DCP) RR Ext Site (Figure 1). The well locations are shown on Figure 2. All eight monitoring wells were purged and sampled.

#### SUMMARY OF GROUNDWATER MONITORING ACTIVITIES

The construction information for the wells is summarized in Table 1. The wells were first purged to equilibration using dedicated bailers based on the field parameters of temperature, pH and conductivity. They were then sampled for benzene, toluene, ethylbenzene, xylenes (BTEX, Using EPA Method SW846 8260B) and for chlorides (Method SM 4500 CL C). A field duplicate from MW-2 and a matrix spike/matrix spike duplicate (MS/MSD) from MW-6 were also collected to evaluate quality control. All affected purge water was disposed of at the DCP Linam Ranch facility.

The water gauging data are summarized in Table 2. Well hydrographs are plotted on Figure 3. Figure 3 indicates that the water table declined the same approximate amount in all wells except MW-1 where the decline was much greater. The MW-1 hydrograph shows that the May 2009 value returned to historic position near to MW-3. The most obvious explanation for this return is that any residual mounding effects related to the remediation excavation (now filled) have dissipated.

The measured water table elevations were also used to generate a groundwater contour map using the Surfer program with a kriging option. This map is included as Figure 4. Groundwater appears to flow to the south-southeast down gradient of MW-4, MW-5 and MW-7.

The quality control evaluation can be summarized as follows:

- The method blanks were all within their control limits;
- The blank spikes were all within their control limits;
- The individual sample surrogates results were within the method ranges;

Mr. Stephen Weathers September 16, 2009 Page 2

- The matrix spike and matrix spike duplicate values were acceptable.
- The relative percentage difference (RPD) values for benzene, toluene and ethylbenzene were all less than 20 percent (Table 3). The RPD values for xylenes and chlorides were 23.5 percent and 27.1 percent respectively.

The above results indicate that the data are suitable for evaluation as groundwater monitoring data.

The sampling data are summarized in Table 3. The measured field parameters and a copy of the laboratory report are attached. The New Mexico Water Quality Control Commission (NMWQCC) groundwater standards are included at the top of Table 3. Wells MW-1, MW-2, MW-3 and MW-4 exceeded the benzene standard. Wells MW-2, MW-3 and MW-4 exceeded the toluene and xylenes standards. Wells MW-2 and MW-3 exceeded the ethylbenzene standard. There were no exceedences in wells MW-5, MW-6, MW-7 and MW-8.

Figure 5 shows the benzene isopleths for the second quarter 2009 based upon contouring with the Surfer program using the kriging option. There extent of benzene effects is delineated to the east, at MW-7, and to the southeast at MW-6. Additional control is necessary to delineate the extent of affected groundwater to the south and southwest .

The BTEX data collected for this project are summarized in Table 4. Figure 6 graphs the benzene concentration verses time for MW-1, MW-2, MW-3, MW-4, and MW-5. Three trends are evident:

- 1. The concentrations in MW-2 and MW-5 have remained relatively constant over the duration of the project.
- 2. The concentrations in MW-1 and MW-3 have increased over the last one or two sampling events. This pattern indicates a potential link to enhanced infiltration from when the remediation excavation was open; and
- 3. The concentration has steadily increased in MW-4 over the duration of the project. This trend indicates that the dissolved phase hydrocarbon plume has expanded to the south.

The samples were also submitted for chlorides analysis. Chloride data are summarized in Table 5. Figure 7 shows the chlorides isopleths for the second quarter 2009 based . upon contouring with the Surfer program using the kriging option. The distribution is similar to that shown for the benzene except the lowest chloride concentration is at MW-2. This pattern is opposite of that shown for benzene where the highest concentration was present at MW-2. This distribution may have resulted from fresh water infiltration in the source area into an area of overall higher chloride concentrations.

The chloride concentrations verses time are plotted on Figure 8. The concentrations increased in MW-1, MW-3, MW-5, MW-6 and MW-7. The concentrations decreased in MW-2, MW-4 and MW-8. The long-term chloride trend in MW-4 is similar to that of the benzene trend except that the lower chloride concentrations in the infiltrating water have

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produced a decreasing trend rather than an increasing trend. This fact establishes that the chlorides that are present in the groundwater predate the DCP release.

#### RECOMMENDATIONS

The data from MW-4 indicates that the dissolved-phase hydrocarbon plume is probably expanding to the south or southwest. AEC believes that the recently-completed soils remediation activities should stabilize and eventually reduce the extent of the dissolved phase hydrocarbon plume but it will take time for the indications of these changes to appear.

The plume boundaries have to be defined under any remediation option. AEC recommends that the third quarter data be reviewed prior to formulating additional characterization activities. A letter work plan will be prepared as necessary following receipt and validation of the third-quarter data so that any additional field work can be completed between sampling events.

The next sampling event will be completed during the third quarter of 2009. Do not hesitate to contact me if you have any questions or comments on this document.

Respectfully Submitted, AMERICAN ENVIRONMENTAL CONSULTING, LLC

Michael H. Stewart

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

attachments

TABLES

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Well	Date Installed	Stickup	Total Depth (ground)	Screen Interval (ground)	Sand Interval
MW-1	3/08	2.06	37.5	17.5-37.5	16-37.5
MW-2	3/08	2.41	37.5	17.5-37.5	16-37.5
MW-3	3/08	2.53	37.5	17.5-37.5	16-37.5
MW-4	3/08	3.16	37.5	17.5-37.5	16-37.5
MW-5	3/08	2.15	37.5	17.5-37.5	16-37.5
MW-6	6/08	2.18	37.5	17.5-37.5	16-37.5
MW-7	6/08	2.36	37.5	17.5-37.5	16-37.5
MW-8	6/08	2.76	37.5	17.5-37.5	16-37.5

Table 1 – Summary of Well Construction at the DCP RR Ext Location

Notes: Units are feet

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All wells are 2-inch diameter

Wells were grouted to the surface with hydrated bentonite pellets and completed with above-ground well protectors

Depth to Water	Water Table Elevation
29.55	3505.02
30.31	3504.87
31.54	3505.03
30.57	3504.63
31.28	3504.64
31.65	3504.51
32.37	3504.72
31.27	3505.14
	Water 29.55 30.31 31.54 30.57 31.28 31.65 32.37

Table 2 - Summary of May 19, 2009 Water Table Data

Notes: Units are Feet

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Well	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chlorides
NMWQCC Standards	.010	0.75	0.75	0.62	250*
MW-1	1.38	0.175	0.0705	0.065	462
MW-2	32.7	1.31	0.791	1.69	94.4
MW-2 Dup	30.7	1.43	0.907	2.14	124
MW-3	14.7	12.6	0.808	1.64	313
MW-4	4.7	2.94	0.428	1.03	226
MW-5	0.0064	0.0089	0.0025	0.0045 J	363
MW-6	< 0.002	< 0.002	< 0.002	< 0.006	308
MW-7	< 0.002	< 0.002	< 0.002	< 0.006	298
MW-8	0.0098	0.0049	< 0.002	< 0.006	450
TRIP BLANK	< 0.002	< 0.002	< 0.002	< 0.006	

#### Table 3 - RR Ext Second Quarter 2009 Groundwater Sampling Results

Notes: Units mg/l

NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards J qualifier: Estimated value that falls between the method detection and method reporting limits Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards \* The chloride is a secondary (non-health based) standard.

Average and Relative Percentage Difference	Values for MW-2 and MW-2 Duplicate
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	Benzene	Toluene	Ethylbenzene	Xylene (total)	Chloride
Average (mg/l)	31.7	1.37	0.849	1.915	109.2
RPD (%)	6.3	8.8	13.7	23.5	27.1

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
WQCC Standards		.010	0.75	0.75	0.62
MW-1	3/08	1.4	0.948	0.0395	0.128
	6/08	2.75	2.17	0.054	0.232
	9/08	1.1	0.845	0.0375	0.131
Dup	9/08	1.22	0.883	0.0506	0.197
	12/08	0.869	0.581	0.0385	0.0709
	3/09	0.288	0.107	0.0149	0.0395
	5/09	1.38	0.175	0.0705	0.065
MW-2	3/08	8.98	6.58	0.135J	0.765
Duplicate	3/08	10	7	0.156J	0.93
	6/08	24.3	18.5	0.319	2.58
Duplicate	6/08	23.5	19.2	0.309	2.36
	9/08	21.7	9.79	0.443	4.25
	12/08	N	ot sample	d: Remediation	activities
	3/09	23.7	2.34	0.583	1.25
Duplicate	3/09	4.07	1.91	0.268 J	0.49 J
	5/09	32.7	1.31	0.791	1.69
Duplicate	5/09	30.7	1.43	0.907	2.14
MW-3	3/08	0.759	0.849	0.0355	0.0786
	6/08	6.18	9.46	0.287	1.23
	9/08	2.45	3.62	0.145	1.14
	12/08	0.761	0.938	0.0492	0.158
	3/09	4.03	2.83	0.18 J	0.61
	5/09	14.7	12.6	0.808	1.64
MW-4	3/08	0.0102	0.0093	< 0.002	0.0023J
	6/08	0.0439	0.0256	0.0068	0.0147
	9/08	0.514	0.443	0.0203	0.125
	12/08	1.32	1.35	0.0812	0.239J
	3/09	3.61	3.4	0.164 J	0.831
	5/09	4.7	2.94	0.428	1.03

#### Table 4 - RR Ext BTEX Groundwater Monitoring Results Summary

Notes: Units mg/l

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NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards J qualifiers indicate an estimated concentration between the method detection and method reporting limits. Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards

Well	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes
WQCC Standards		.010	0.75	0.75	0.62
MW-5	3/08	0.0019J	0.0012J	< 0.002	< 0.006
	6/08	0.0037	0.0037	< 0.002	< 0.006
	9/08	0.0038	0.0037	< 0.002	< 0.006
	12/08	0.0031	0.004	< 0.002	< 0.006
	3/09	0.0067	0.0074	< 0.002	< 0.006
	5/09	0.0064	0.0089	0.0025	0.0045 J
MW-6	6/08	< 0.002	< 0.002	< 0.002	< 0.006
	9/08	< 0.002	< 0.002	< 0.002	< 0.006
·	12/08	< 0.002	< 0.002	< 0.002	< 0.006
	3/09	< 0.002	< 0.002	< 0.002	< 0.006
	5/09	< 0.002	< 0.002	< 0.002	< 0.006
MW-7	6/08	< 0.002	< 0.002	< 0.002	< 0.006
·····	9/08	< 0.002	< 0.002	< 0.002	< 0.006
	12/08	< 0.002	< 0.002	< 0.002	< 0.006
	3/09	< 0.002	< 0.002	< 0.002	< 0.006
	5/09	< 0.002	< 0.002	< 0.002	< 0.006
MW-8	6/08	0.0384	0.0255	0.00049J	0.0016J
1 <b>11 11 10</b>	9/08	0.0301	0.0233	<0.002	0.0010J
	12/08	0.0233	0.011	<0.002	<0.002 \$
Dup	12/08	0.0122	0.006	<0.002	< 0.006
<u>~ up</u>	3/09	0.0218	0.0066	<0.002	< 0.006
	5/09	0.0098	0.0049	<0.002	< 0.006

Table 4 - RR Ext BTEX Groundwater Monitoring Results Summary (continued)

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NMWQCC Standards New Mexico Water Quality Control Commission Groundwater Standards J qualifiers are not included

Bold values exceed the New Mexico Water Quality Control Commission Groundwater Standards

Client ID	9/08	12/08	3/09	5/09
MW-1	507	447	432	462
MW-2	109	NS	114	109
MW-3	363	301	273	313
MW-4	318	281	229	226
MW-5	373	318	288	363
MW-6	363	325	298	308
MW-7	378	348	283	298
MW-8	512	393	472	450

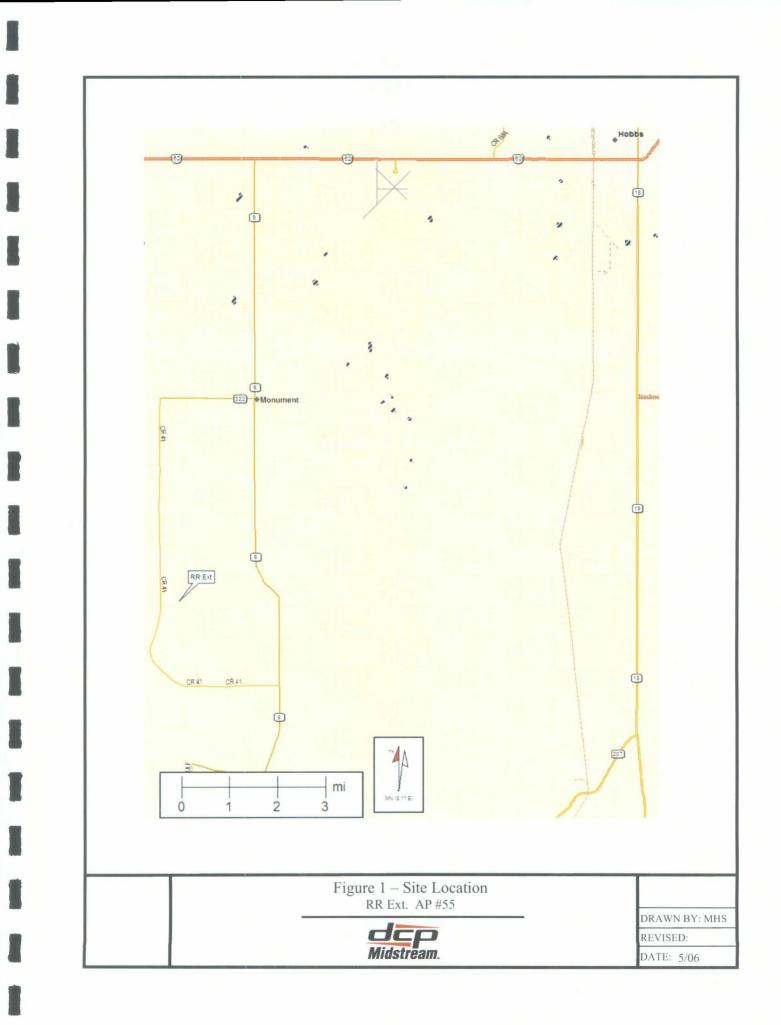
Table 5 - RR Ext Chlorides Groundwater Monitoring Results Summary

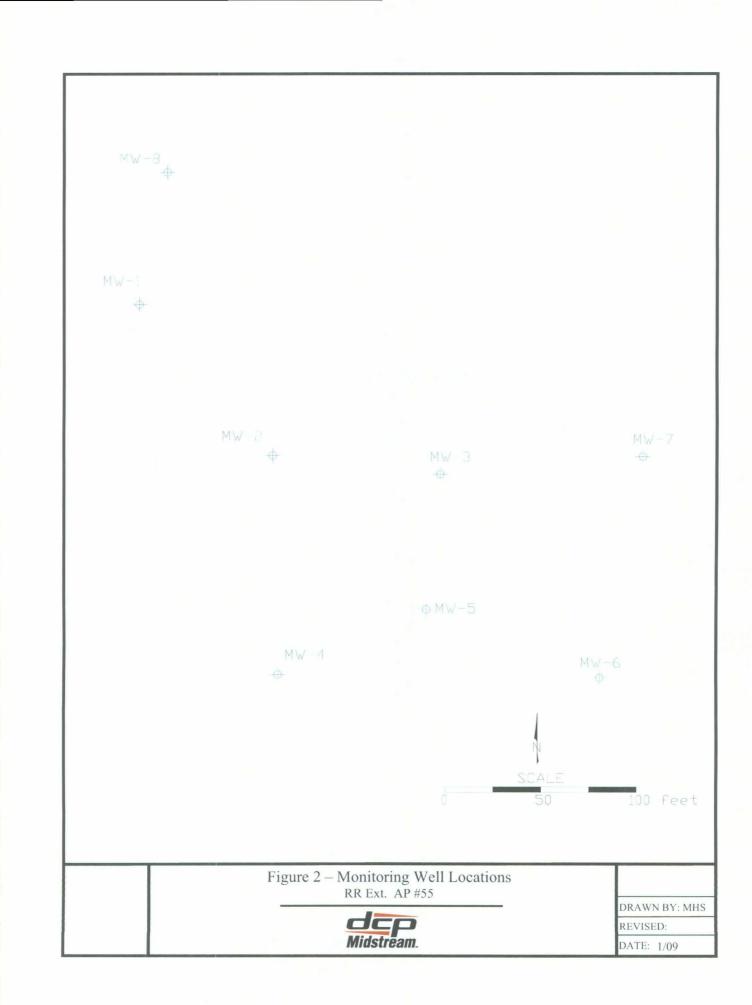
Notes: Units are mg/l

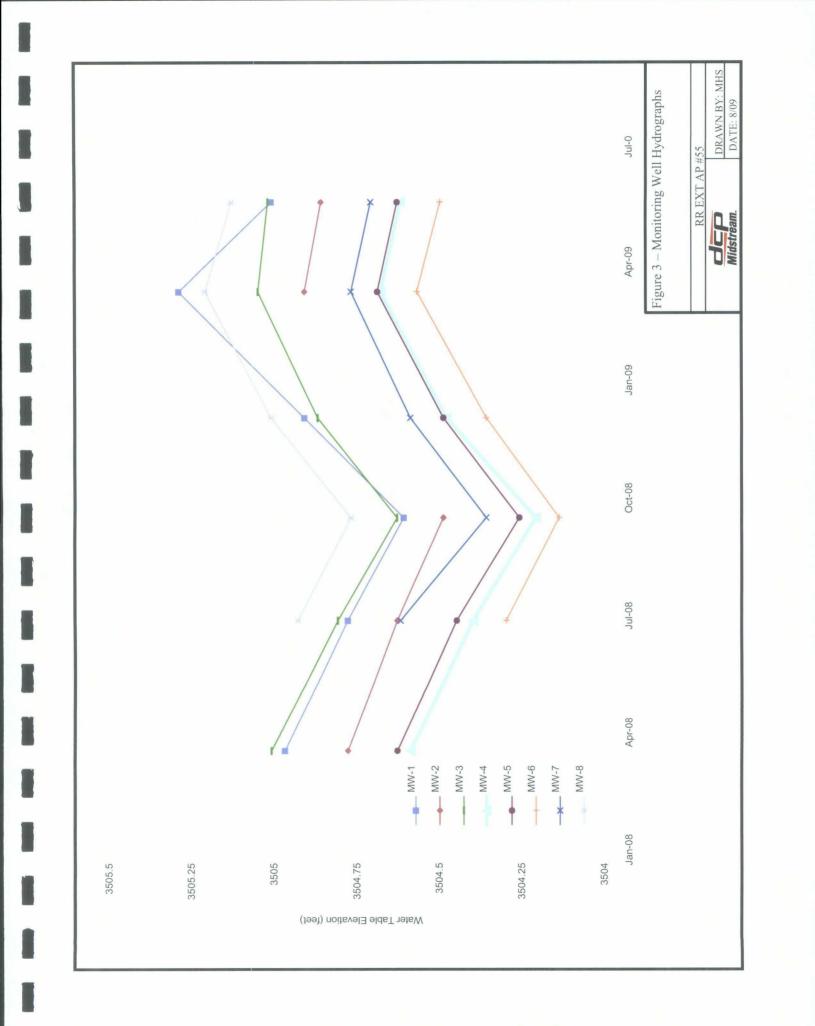
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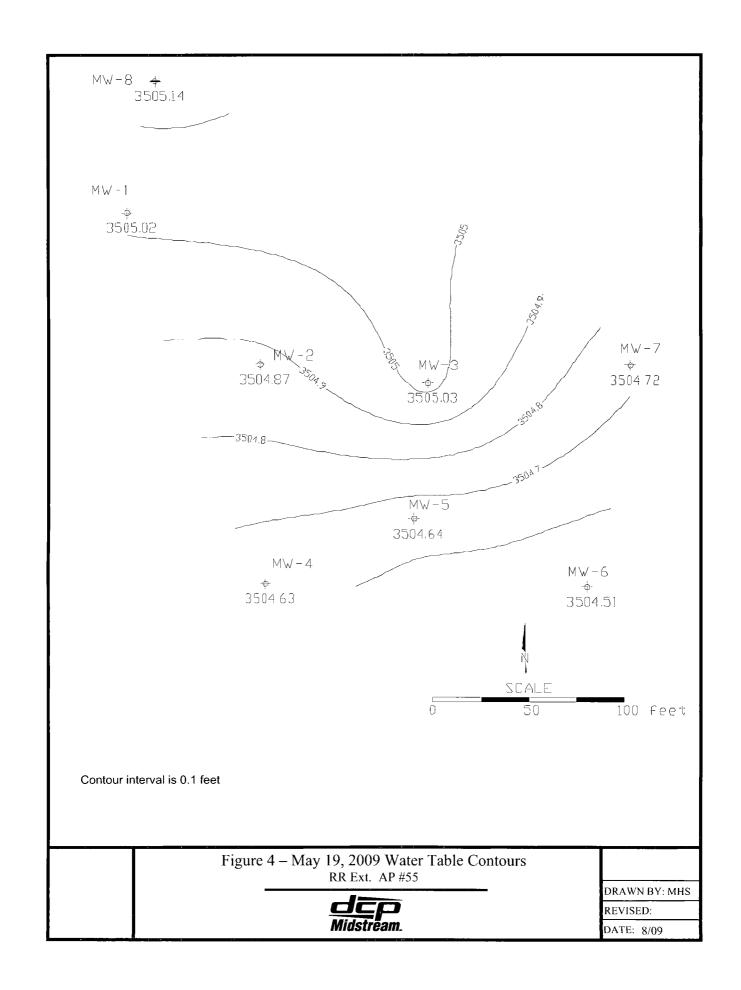
FIGURES

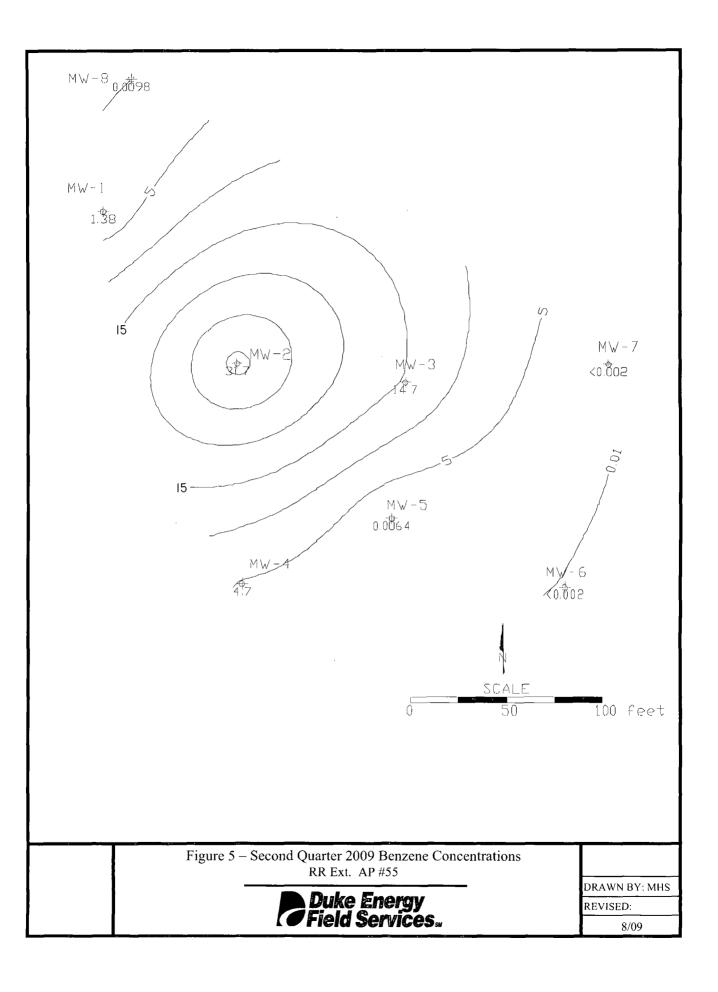
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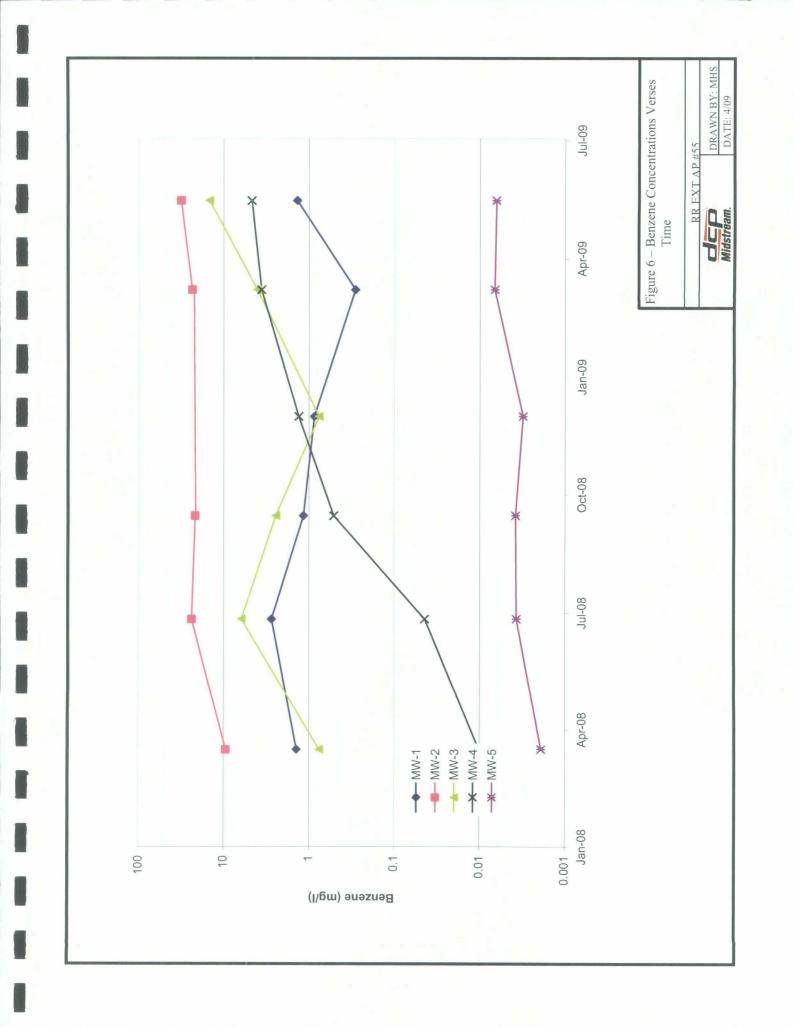


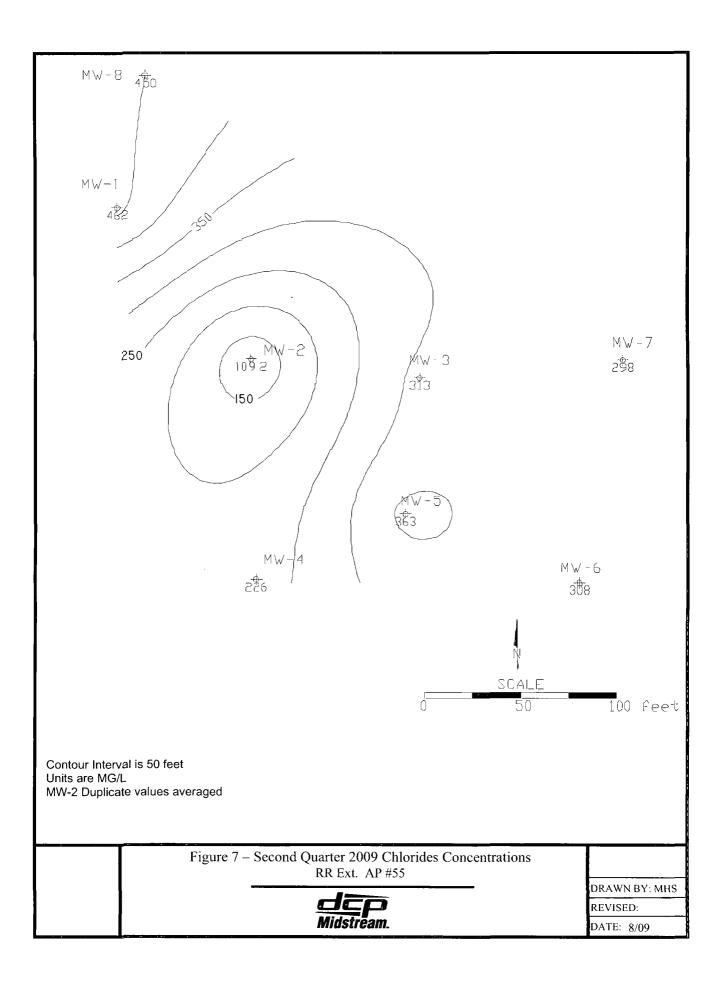












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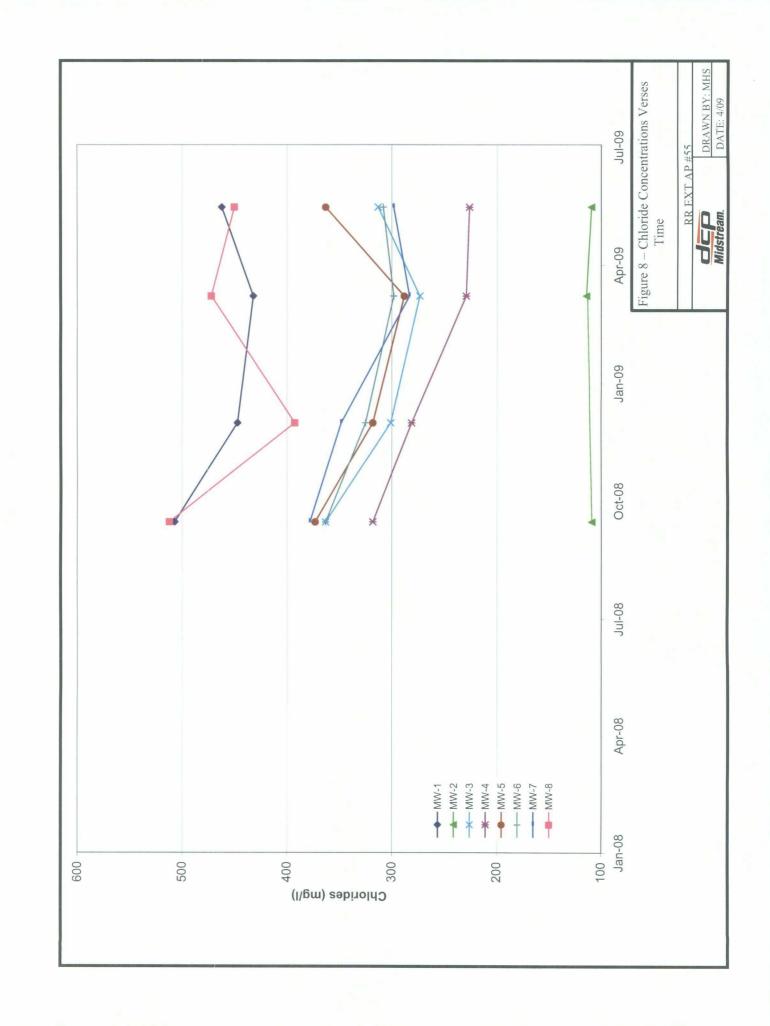
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# WELL SAMPLING DATA AND ANALYTICAL LABORATORY REPORT

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	CLIENT:	DC	P Midstrea	am		WELL ID:	MW-1			
			RR-EXT			DATE:	5/19/2009			
PRO	DJECT NO.					SAMPLER:	M. Stewart/A. Taylor			
PURGING	6 METHOD	:								
SAMPLING METHOD: 🛛 Dedicated Bailer 🗋 Direct from Discharge Hose 🗍 Other:										
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Glove:	s 🗌 Alconc	ox 🗌 Distill	ed Water Ri	nse 🗆 O	ther:					
DEPTH T HEIGHT (	O WATER: OF WATER AMETER:	COLUMN: 2.0	•	Feet		1.7	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)			
ТІМЕ	VOLUME PURGED	TEMP. ° <b>C</b>	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
	1.7									
	3.4						Black Very Strong HC Odor			
1100	5.1						No Parameters			
		· · · · · · · · · · · · · · · · · · ·								
		· · · · ·								
			1							
			- (  )	• • • •						
SAMD	5.1 LE NO.:	Volume: (ga Collected S		MW-1						
		BTEX (826	·	10100-1						
	AENTS:	DILA (0.201	<u> </u>							
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	CLIENT:	DC	DCP Midstream			WELL ID	e: MW-2
S	SITE NAME:		RR-EXT		_	DATE	5/19/2009
PR	OJECT NO.				_	SAMPLER	R: M. Stewart/A. Taylor
PURGIN	G METHOD:		🖸 Hand Ba	ump If Pur	пр, Туре:		
SAMPLIN	NG METHOE	D:	Dedicate	d Bailer	Direct fr	om Discha	arge Hose
DESCRIE	BE EQUIPMI	ENT DECO	NTAMINATI	OD BEFO	RE SAMP	PLING THE WELL:	
⊡ Glove	es 🗆 Alcono	x 🛛 Distill	ed Water Ri	nse 🗌 (	Other:		
DEPTH T HEIGHT (	EPTH OF W O WATER: OF WATER AMETER:	COLUMN:	30.31 9.60		1.6	Minimum Gallons to purge 3 well volumes	
	VOLUME	TEMP.	COND.		DO		(Water Column Height x 0.49) PHYSICAL APPEARANCE AND
TIME	PURGED	°C	<i>m</i> S/cm	рН	mg\L	Turb	REMARKS
	1.6						
	3.2						Black Very Strng HC Odor
1150	4.8						No Parameters
						<u></u>	
,							
	4.8	Volume: (ga	allons)			- <u> </u>	
	-	Collected S BTEX (826)		MW-2			
	-		uplicate sam	nple "DUP"	·		

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	CLIENT:	DC	P Midstrea	am	_	WELL ID: MW-3				
SI	TE NAME:		RR-EXT		_	DATE:	5/19/2009			
PRC	JECT NO.		SAMPLER: M. Stewart/							
					np, Type:					
SAMPLIN	G METHOD	D:	Dedicated	d Bailer [	Direct fro	om Dischar	rge Hose			
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:										
Gloves	s 🗌 Alcono	x 🛛 Distill	ed Water Rin	nse 🗆 C	Other:					
DEPTH TO HEIGHT O	O WATER: OF WATER		40.03 31.54 8.49 Inch		1.4	Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)				
TIME	VOLUME PURGED	TEMP. ° <b>C</b>	COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS			
	1.5		·							
	3.0						Black Very Strng HC Odor			
1125	4.5						No Parameters			
						İ				
	4.5	Volume: (ga	allons)							
SAMPI	LE NO.:	Collected S	ample No.:	MW-3						
ANAL	YSES:	BTEX (826)	)							
COMM	IENTS:					·				

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	CLIENT:	DCP Midstream			_	WELL ID	
S	ITE NAME:		RR-EXT		_	DATE	5/19/2009
PRO	DJECT NO.					SAMPLER	:M. Stewart/A. Taylor
PURGING	G METHOD:		Hand Bai	led 🗌 Pı	ump If Pur	np, Type:	
SAMPLIN	IG METHOD	D:	Dedicate	d Bailer	Direct fr	om Discha	arge Hose □Other:
DESCRIB	E EQUIPM	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMP	LING THE WELL:
Glove	s 🗆 Alcono	x 🛛 Distill	ed Water Ri	nse 🗆 (	Other:		
TOTAL DEPTH OF WELL:40.66FeetDEPTH TO WATER:30.57FeetHEIGHT OF WATER COLUMN:10.09FeetWELL DIAMETER:2.0Inch						1.7	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)
TIME	VOLUME PURGED		COND.	pН	DO	Turb	PHYSICAL APPEARANCE AND
	1.7	° <b>C</b> 19.7	<u><i>m</i> S/cm</u> 1.41	7.34	mg\L		REMARKS
	3.4	19.4	1.38	7.33			
1005	5.1	19.4	1.39	7.38			
			1.00				
	5.1	Volume: (ga	allons)				
SAMP	LE NO.:	Collected S	ample No.:	MW-4			
ANAL	YSES:	BTEX (826)	0)				
COM	MENTS:						

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CLIENT:		DCP Midstream							
S	ITE NAME:		RR-EXT	<u> </u>	_	DATE	5/19/2009		
PROJECT NO.					_ 5	SAMPLER	M. Stewart/A. Taylor		
PURGING METHOD: I Hand Bailed Pur						np, Type:			
SAMPLIN	G METHOD	):	☑ Dedicated	d Bailer [	Direct fro	om Discha	rge Hose Dother:		
DESCRIBE EQUIPMENT DECONTAMINATION METHOD BEFORE SAMPLING THE WELL:									
☑ Gloves									
DEPTH TO HEIGHT (	O WATER: DF WATER	/ELL: COLUMN: 2.0	1.8	<b>1.8</b> 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		
	1.5	19.4	1.61	7.41					
	3.0	19.3	1.60	7.43					
935	4.5	19.1	1.60	7.47					
				<u></u>					
				··					
L	4.5	Volume: (ga	allons)						
SAMP	LE NO.:	Collected S	ample No.:	MW-5					
ANALYSES:		BTEX (8260	))						
COMM	MENTS:								

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CLIENT		DC	am	_	: <u>MW-6</u>				
SITE NAME			RR-EXT		_	DATE	5/19/2009		
PROJECT NO.				_ 5	:M. Stewart/A. Taylor				
PURGING METHOD: 🛛 🖸 Hand Bailed 🗌 Pum						np, Type:			
SAMPLIN		D:	☑ Dedicated	Direct fro	om Discha	arge Hose 🛛 Other:			
DESCRIE	BE EQUIPM	ENT DECO	NTAMINATIO	DD BEFOI	RE SAMP	LING THE WELL:			
☑ Gloves □ Alconox □ Distilled Water Rinse □ Other:									
DEPTH T HEIGHT	EPTH OF W O WATER: OF WATER AMETER:	COLUMN:	39.68 31.65 8.03 Inch		1.3	_Minimum Gallons to purge 3 well volumes			
TIME	VOLUME	TEMP.	~	DO	Turb	(Water Column Height x 0.49) PHYSICAL APPEARANCE AND			
	PURGED	°C	<i>m</i> S/cm	pН	mg\L		REMARKS		
	1.5	19.4	1.54	7.44					
	3.0	19.3	1.54	7.43					
900	4.5	19.2	1.54	7.43					
	:								
				······					
					:				
		Volume: (ga	/						
		Collected S	ample No.:	MW-6					
		BTEX (826)							
COM	MENTS:	Collected N	IS/MSD sam	ple					

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CLIENT:		DCP Midstream			_	WELL ID	MW-7		
			RR-EXT			DATE	5/19/2009		
PROJECT NO.					_ 5	SAMPLER: M. Stewart/A. Ta			
						mp If Pump, Type:			
SAMPLIN		D:	☑ Dedicate	d Bailer	Direct fro	om Discha	rge Hose		
DESCRIB	E EQUIPMI	ENT DECO	NTAMINATI	ON METH	OD BEFO	RE SAMPI	LING THE WELL:		
Gloves 🗋 Alconox 🔲 Distilled Water Rinse 🗌 Other:									
DEPTH TO HEIGHT (	O WATER: DF WATER		39.86 32.37 7.49 Inch	Feet		1.2	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME PURGED	TEMP. ° <b>C</b>	COND. <i>m</i> S/cm	рН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS		
	1.3	19.5	1.82	6.95					
	2.6	19.2	1.72	<sup>;</sup> 7.16					
830	3.9	19.1	1.72	7.27					
						, , <u>, , , , , , , , , , , , , , , </u>			
	3.9	Volume: (ga	allons)		1				
SAMP	LE NO.:	Collected S	ample No.:	MW-7					
ANAL	YSES:	BTEX (826	0)						
COMMENTS:									

ł

4

CLIENT:		DC	am	_	WELL ID			
S	ITE NAME:		RR-EXT		_	DATE	5/19/2009	
PROJECT NO.					SAMPLER: M. Stewart/A. Taylor			
PURGING METHOD: 🛛 🖸 Hand Bailed 🔲 Pum						np, Type:		
SAMPLIN	IG METHO	D:	Dedicate	d Bailer [	Direct fro	om Discha	arge Hose	
DESCRIE	E EQUIPM	ENT DECO		ON METH	OD BEFOR	RE SAMP	LING THE WELL:	
☑ Gloves								
		8.99	Feet	-	1.5	_Minimum Gallons to purge 3 well volumes (Water Column Height x 0.49)		
TIME	VOLUME PURGED		COND. <i>m</i> S/cm	pН	DO mg\L	Turb	PHYSICAL APPEARANCE AND REMARKS	
	1.5	19.8	2.03	7.34				
	3.0	19.2	2.04	7.33				
1035	4.5	19.1	2.03	7.38				
			i					
4.5		Volume: (gallons)						
	LE NO.:	Collected S		MW-8				
	YSES:	BTEX (826)	0)					
COMMENTS:								

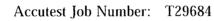


#### 08/23/09

**Technical Report for** 

DCP Midstream, LLC

AECCOLI: DCP Midstream RR Ext



Sampling Date: 05/19/09

Report to:

American Environmental Consulting

mstewart@aecdenver.com

ATTN: Mike Stewart

Total number of pages in report: 35



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 Carrevaro

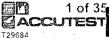
Paul Canevaro Laboratory Director



Client Service contact: Georgia Jones 713-271-4700

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

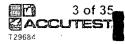
# DCP Midstream, LLC

#### Job No: T29684

l

#### AECCOLI: DCP Midstream RR Ext

Sample Number	Collected Date Time By	Ma Received Co	atrix de Type	Client Sample ID
T29684-1	05/19/09 11:00 AT	05/22/09 AC	Ground Water	MW-1
T29684-2	05/19/09 11:50 AT	05/22/09 AC	) Ground Water	MW-2
T29684-3	05/19/09 11:25 AT	05/22/09 AC	) Ground Water	MW-3
T29684-4	05/19/09 10:05 AT	05/22/09 AC	) Ground Water	MW-4
T29684-5	05/19/09 09:35 AT	05/22/09 AC	) Ground Water	MW-5
T29684-6	05/19/09 09:00 AT	05/22/09 AC	Q Ground Water	MW-6
T29684-6D	05/19/09 09:00 AT	05/22/09 AC	) Ground Water	MW-6
T29684-6S	05/19/09 09:00 AT	05/22/09 AC	2 Ground Water	MW-6
T29684-7	05/19/09 08:30 AT	05/22/09 AC	2 Ground Water	MW-7
T29684-8	05/19/09 10:35 AT	05/22/09 AC	) Ground Water	MW-8
T29684-9	05/19/09 00:00 AT	05/22/09 AC	Q Ground Water	DUP
T29684-10	05/19/09 00:00 AT	05/22/09 AC	) Trip Blank Water	TRIP BLANK







2

Sample Results

Report of Analysis



Accutest LabLink@38320 07:41 23-Aug-2009

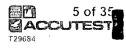
Client Sam Lab Sampl Matrix: Method: Project:	e ID: T29684-1 AQ - Ground W SW846 8260B	/ater P Midstream RR	Ext	Date Sample Date Receive Percent Solid	d: 05/22/09	
Run #1	File ID         DF           C0000930.D         1	Analyzed 05/28/09	By RR	Prep Date n/a	Prep Batch n/a	Analytical Batch VC40
Run #2	C0000931.D 10	05/28/09	RR	n/a	n/a	VC40
Run #1 Run #2	Purge Volume 5.0 ml 5.0 ml					
Purgeable .	Aromatics					
CAS No.	Compound	Result	RL	MDL Units	s Q	
71-43-2	Benzene	1.38 <sup>a</sup>	0.020	0.0046 mg/l		
108-88-3	Toluene	0.175	0.0020	0.00048 mg/l		
100-41-4	Ethylbenzene	0.0705	0.0020	0.00045 mg/l		
1330-20-7	Xylene (total)	0.0650	0.0060	0.0014 mg/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
1868-53-7	Dibromofluoromethane	97%	102%	79-122%		
17060-07-0	1,2-Dichloroethane-D4	117%	113%	75-121%		
2037-26-5	Toluene-D8	111%	112%	87-119%		
460-00-4	4-Bromofluorobenzene	101%	103%	80-133%		

Report of Analysis

(a) Result is from Run# 2

ND = Not detected MDL - Method Detection LimitRL = 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

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2 2 2

ND = Not detected \_\_\_\_MDL - Method Detect

Accutest LabLink@38320 07:41 23-Aug-2009

Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Project:	MW-1 T29684-1 AQ - Ground Wat AECCOLI: DCP		t Ext	Date l	Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a				
General Chemistry									
Analyte	Result	RL	Units	DF	Analyzed	By	Method		
Chloride	462	10	mg/l	10	05/29/09 08:0	0 kd	SM 4500 CL C		

Page 1 of 1





Client Sam Lab Sampl Matrix: Method: Project:			Ext	Date I	Sampled Received nt Solids		
Run #1 Run #2	File ID         DF           C0000932.D         100           C0000933.D         200	Analyzed 05/28/09 05/28/09	By RR RR	Prep D n/a n/a	ate	Prep Batch n/a n/a	Analytical Batch VC40 VC40
Run #1 Run #2	Purge Volume 5.0 ml 5.0 ml						
Purgeable	Aromatics						
CAS No.	Compound	Result	RL	MDL	Units	Q	
71-43-2	Benzene	32.7 a	0.40	0.092	mg/l		
108-88-3	Toluene	1.31	0.20	0.048	mg/l		
100-41-4	Ethylbenzene	0.791	0.20	0.045	mg/l		
1330-20-7	Xylene (total)	1.69	0.60	0.14	mg/l		
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its		
1868-53-7	Dibromofluoromethane	100%	100%	79-1	22%		
17060-07-0	1,2-Dichloroethane-D4	114%	117%	75-1	21%		
2037-26-5	Toluene-D8	115%	114%	87-1	19%		
460-00-4	4-Bromofluorobenzene	99%	102%	80-1	33%		

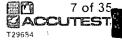
Report of Analysis

(a) Result is from Run# 2

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

B = Indicates analyte found in associated method blank

- E = Indicates value exceeds calibration range
- N = Indicates presumptive evidence of a compound



## Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Project:	MW-2 T29684-2 AQ - Ground Water AECCOLI: DCP Midstream RR Ext				Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a				
General Chemistry	1								
Analyte	R	lesult	RL	Units	DF	Analyzed	By	Method	
Chloride	9	4.4	10	mg/l	10	05/29/09 08:00	KD	SM 4500 CL C	





Client Sample ID: MW-3 Lab Sample ID: T29684-3 Date Sampled: 05/19/09 AQ - Ground Water Date Received: 05/22/09 Matrix: Percent Solids: SW846 8260B n/a Method: **AECCOLI: DCP Midstream RR Ext** Project: Prep Date Prep Batch Analytical Batch File ID DF Analyzed By C0000934.D 100 05/28/09 RR VC40 Run #1 n/a n/a Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 14.7 0.046 71-43-2 Benzene 0.20 mg/l 108-88-3 Toluene 12.6 0.20 0.048 mg/l 100-41-4 Ethylbenzene 0.808 0.20 0.045 mg/l 1330-20-7 Xylene (total) 0.14 1.64 0.60mg/l CAS No. Run# 1 Run# 2 Limits Surrogate Recoveries 1868-53-7 Dibromofluoromethane 100% 79-122% 17060-07-0 1.2-Dichloroethane-D4 112% 75-121% 2037-26-5 **Toluene-D8** 112% 87-119%

106%

**Report of Analysis** 

RL = Reporting Limit E = Indicates value exceeds calibration range

MDL - Method Detection Limit

4-Bromofluorobenzene

460-00-4

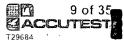
ND = Not detected

J = Indicates an estimated value

80-133%

B = Indicates analyte found in associated method blank

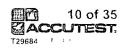
N = Indicates presumptive evidence of a compound





Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Project:	MW-3 T29684-3 AQ - Ground Water AECCOLI: DCP Mid	Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a					
General Chemistry	1						
Analyte	Result	RL	Units	DF	Analyzed	Ву	Method
Chloride	313	10	mg/l	10	05/29/09 08:00	KD	SM 4500 CL C





Client Sample ID: MW-4 Lab Sample ID: T29684-4 Date Sampled: 05/19/09 Matrix: AQ - Ground Water Date Received: 05/22/09 SW846 8260B Method: Percent Solids: n/a **AECCOLI: DCP Midstream RR Ext** Project: File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 C0000935.D 100 05/28/09 RR n/a VC40 n/a Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 71-43-2 Benzene 4.70 0.20 0.046 mg/l 108-88-3 Toluene 2.94 0.20 0.048 mg/l Ethylbenzene 100-41-4 0.428 0.20 0.045 mg/l 1330-20-7 Xylene (totał) 1.03 0.60 0.14 mg/l CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits 1868-53-7 Dibromofluoromethane 104% 79-122% 17060-07-0 1,2-Dichloroethane-D4 118% 75-121% Toluene-D8 2037-26-5 114% 87-119%

104%

Report of Analysis

Page 1 of 1

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

4-Bromofluorobenzene

E = Indicates value exceeds calibration range

460-00-4

J = Indicates an estimated value

80-133%

B = Indicates analyte found in associated method blank

11 of 35

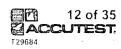
GACCUTES

T29684

N = Indicates presumptive evidence of a compound

## Report of Analysis

Client Sample ID: Lab Sample ID: Matrix:	MW-4 T29684-4 AQ - Ground Water	T29684-4			Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a				
Project:	AECCOLI: DCP M	dstream RR							
General Chemistr	у								
Analyte	Result	RL	Units	DF	Analyzed	By	Method		
Chloride	226	10	mg/l	10	05/29/09 08:00	) KD	SM 4500 CL C		





1868-53-7

2037-26-5

460-00-4

17060-07-0

			Kepo	Page 1 of 1			
Client Sam Lab Samp Matrix: Method: Project:	le ID: T29684 AQ - G SW846	round Wa 8260B	nter 9 Midstream RR	Ext	Date Sampled Date Received Percent Solids		
Run #1 Run #2	File ID C0000925.D	DF 1	Analyzed 05/28/09	By RR	Prep Date n/a	Prep Batch n/a	Analytical Batch VC40
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 Tołuene Ethylbenzene Xylene (total)		$\begin{array}{c} 0.0064 \\ 0.0089 \\ 0.0025 \\ 0.0045 \end{array}$	0.0020 0.0020 0.0020 0.0060	0.00046 mg/l 0.00048 mg/l 0.00045 mg/l 0.0014 mg/l	J	
CAS No.	Surrogate Rec	overies	Run# 1	Run# 2	Limits		

107%

117%

114%

99%

Report of Analysis

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

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

J = Indicates an estimated value

79-122%

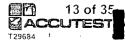
75-121%

87-119%

80-133%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



# Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Project:	MW-5 T29684-5 AQ - Ground V AECCOL1: DC	Jater P Midstream RI	R Ext	Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a				
General Chemistry	/							
Analyte	Resu	lt RL	Units	DF	Analyzed	Ву	Method	
Chloride	363	10	mg/l	10	05/29/09 08:00	KD	SM 4500 CL C	





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

Client Sample ID: MW-6 05/19/09 Lab Sample ID: T29684-6 Date Sampled: Matrix: AQ - Ground Water Date Received: 05/22/09 Method: SW846 8260B Percent Solids: n/a **AECCOLI: DCP Midstream RR Ext** Project: File ID Prep Date Analytical Batch DF Analyzed By Prep Batch Run #1 C0000919.D 05/28/09 RR VC40 1 n/a n/a Run #2 Purge Volume 5.0 ml Run #1 Run #2 Purgeable Aromatics CAS No. Compound Result RL MDL Units Q 71-43-2 0.0020 Benzene ND 0.00046 mg/l 0.00048 mg/l 108-88-3 Toluene ND 0.0020 0.00045 mg/l 100-41-4 Ethylbenzene ND 0.0020

0.0060

Run#2

ND

Run# 1

106%

113%

112%

95%

0.0014 mg/l

Limits

79-122%

75-121%

87-119%

80-133%

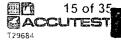
Report of Analysis

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

Client Sample ID: Lab Sample ID: Matrix: Project:	MW-6 T29684-6 AQ - Ground Water AECCOLI: DCP Midstream RR Ext				Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a				
General Chemistry	,								
Analyte	Result	RL	Units	DF	Analyzed	Ву	Method		
Chloride	308	10	mg/l	10	05/29/09 08:00	KD	SM 4500 CL C		



2.6

	Report of Analysis							
Client Sample Lab Sample Matrix: Method: Project:	e ID: T29684-7 AQ - Ground ' SW846 8260B		Percent Solid					
Run #1 Run #2	File ID         DF           C0000923.D         1	Analyzed 05/28/09	By RR	Prep Date n/a	Prep Batch n/a	Analytical Batch VC40		
Run #1 Run #2	Purge Volume 5.0 ml							
Purgeable A	Aromatics							
CAS No.	Compound	Result	RL	MDL Units	Q			
71-43-2 108-88-3 100-41-4 1330-20-7	Benzene Toluene Ethylbenzene Xylene (total)	ND ND ND ND	0.0020 0.0020 0.0020 0.0060	0.00046 mg/l 0.00048 mg/l 0.00045 mg/l 0.0014 mg/l				
CAS No.	Surrogate Recoveries	s Run# 1	Run# 2	Limits				
1868-53-7 17060-07-0 2037-26-5 460-00-4	Dibromofluoromethar 1,2-Dichloroethane-D Toluene-D8 4-Bromofluorobenzen	4 116% 114%		79-122% 75-121% 87-119% 80-133%				

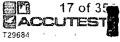
ND = Not detected MDL - Method Detection Limit RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Result

298

Analyte

Chloride

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	Page 1 of 1			
Client Sample ID:	MW-7			
Lab Sample ID:	T29684-7	Date Sampled:	05/19/09	
Matrix:	AQ - Ground Water	Date Received:	05/22/09	
		Percent Solids:	n/a	
Project:	AECCOLI: DCP Midstream RR Ext			
General Chemistry	,			/

Units

mg/l

DF

10

Analyzed

05/29/09 08:00 кр

Method

SM 4500 CL C

By

RL

10

Report of Analysis



2.7

				<b>F</b>		<b>j</b>			. 8
Client Sam Lab Sampl Matrix: Method: Project:		SW84	4-8 Ground Wat 6 8260B	er Midstream RR	Ext	Date Sa Date Re Percent	eceived	: 05/22/09	
Run #1 Run #2	File ID C0000		DF 1	Analyzed 05/28/09	By RR	Prep Dat n/a	te	Prep Batch n/a	Analytical Batch VC40
Run #1 Run #2	Purge 5.0 ml	Volume	;						
Purgeable	Aromat	ics							
CAS No.	Comp	oound		Result	RL	MDL	Units	Q	
71-43-2	Benze	ene		0.0098	0.0020	0.00046	mg/l		
108-88-3	Tolue	ne		0.0049	0.0020	0.00048			
100-41-4	Ethyll	benzene		ND	0.0020	0.00045			
1330-20-7		e (total)		ND	0.0060	0.0014			
CAS No.	Surro	gate Re	coveries	Run# 1	Run# 2	Limit	s		
1868-53-7	Dibro	mofluor	omethane	104%		79-122	2%		
17060-07-0	1,2-D	ichloroe	ethane-D4	113%		75-12	1%		
2037-26-5	Tolue	ne-D8		111%		87-119	9%		

97%

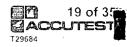
Report of Analysis

J = Indicates an estimated value B = Indicates analyte found in an

80-133%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



1. a 2.

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

4-Bromofluorobenzene

460-00-4

2.8

1. C. 1.

## Report of Analysis

Client Sample ID: Lab Sample ID: Matrix: Project:	MW-8 T29684-8 AQ - Ground Wat AECCOLI: DCP		R Ext	Date Sampled: 05/19/09 Date Received: 05/22/09 Percent Solids: n/a				
General Chemistry	/							
Analyte	Result	RL	Units	DF	Analyzed	Ву	Method	
Chloride	450	10	mg/l	10	05/29/09 08:00	) KD	SM 4500 CL C	





Surrogate Recoveries

Dibromofluoromethane

1,2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

**Report of Analysis** 

Client Sample ID: DUP Lab Sample ID: T29684-9 Date Sampled: 05/19/09 Matrix: AO - Ground Water Date Received: 05/22/09 Method: SW846 8260B Percent Solids: n/a Project: **AECCOLI: DCP Midstream RR Ext** File ID DF Analyzed By Prep Date Prep Batch Analytical Batch C0000936.D Run #1 200 05/28/09 RR n/a n/a VC40 Run #2 Purge Volume 5.0 ml Run #1 Run #2 **Purgeable Aromatics** CAS No. MDL Compound Result RL Units Q 71-43-2 Benzene 30.7 0.40 0.092 mg/l 108-88-3 mg/l Toluene 1.43 0.40 0.097 100-41-4 Ethylbenzene 0.907 0.400.091mg/l 1330-20-7 Xylene (total) 2.14 1.2 0.27 mg/l

Run# 2

Limits

79-122%

75-121%

87-119%

80-133%

Run# 1

100%

115%

116%

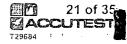
105%

ND = Not detectedMDL - 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





124

Chloride

		Ксро	rt of An	arysis			Page I
Client Sample ID: Lab Sample ID:	DUP T29684-9			Date S	Sampled: 05/19	)/09	,
Matrix:	AQ - Ground Water				Received: 05/22 nt Solids: n/a	2/09	
Project:	AECCOLI: DCP Mic	lstream RR	Ext	1 01 00			

mg/l

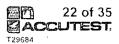
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#### Report of Analysis

RL = Reporting Limit





Page 1 of 1

05/29/09 08:00 KD SM 4500 CL C

Surrogate Recoveries

Dibromofluoromethane

1.2-Dichloroethane-D4

4-Bromofluorobenzene

Toluene-D8

CAS No.

1868-53-7

2037-26-5

460-00-4

17060-07-0

Client Sample ID: TRIP BLANK Lab Sample ID: Date Sampled: 05/19/09 T29684-10 Matrix: AQ - Trip Blank Water Date Received: 05/22/09 SW846 8260B Percent Solids: Method: n/a AECCOLI: DCP Midstream RR Ext Project: File ID Prep Date Prep Batch Analytical Batch DF Analyzed By Run #1 C0000918.D 05/28/09 RR VC40 1 n/a n/a Run #2 Purge Volume Run #1 5.0 ml Run #2 **Purgeable Aromatics** CAS No. Compound Result RL MDL Units Q 71-43-2 0.0020 Benzene ND 0.00046 mg/l 108-88-3 Toluene ND 0.0020 0.00048 mg/l 0.00045 mg/l 100-41-4 Ethylbenzene 0.0020 ND 0.0060 0.0014 mg/l 1330-20-7 Xylene (total) ND

Run#2

Limits

79-122%

75-121%

87-119%

80-133%

Run#1

107%

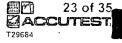
115%

113%

95%

- 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**

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



#### Section 3



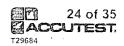
Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

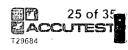
• Chain of Custody

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	Laboratories				10165 Har											-									
					TEL, 713		0 FAX: iccutest.ca		71-4776	)				ľ	Acruites	Quote #				Acc1	100	96B	4		
	Client / Reporting Information			10.584	Project	Informa	tion			瀬景		7.5	遊園			~ <b></b> _	R	equ	este	d An	alys	es			Matrix Codes
Compa	iny Name	Project N	ame:											1											1
	Midstream	DCP Mi	dstream	RR Ext													ļ								DW - Dnnking Water
	Address	Street												32.A			1								GW - Ground Water WW - Water
370 5 City	eventeenth Street, Suite 2500 State Z	ip City			State	Billing I Company	ntormatio / Name	n ( # d	lifferent	from Re	port	to)		_											SW - Surface Water SO - Soil
Белу	er CO 8	0202																							SL- Sludge
Project	Contact E-mail	Project #				Street Ac	dress																		SED-Sediment OI - Oit
	en Weathers Fax #		chase Ord			City				State			Zip		8								1		LIQ - Other Liquid AIR - Air
Phone	-	Client Po	ichase Uro	er w		City				State			20		603										SOL - Other Sold WP - Wine
	05-1718 er(s) Name(s) / /	Phone # Project M	lanager			Attention	:								(V82609TX)							1			FB Field Blank
	A. Taylor				,			ı—-							8260 (	8					Ì				
			· · · · ·	Colle	cton	Γ			18					μ̈́α	X8	Chłorides									
Accume Sample 3	Field ID / Point of Collection			Time	Sampled By	Matrix	# of bottes	<u></u>	ZAN	H2SON	DI Water	MEOH 1SP	Nation	074ER	BTEX	Š				$\perp$			ļ		LAB USE ONLY
1	MW-1	510	-	(100	AEC	GW	3	3							X	X	_								
2	MW-2	54	9	1150	AEC	GW	з	3							х	x									
3	MW-3	5[]	9	11.25	AEC	GW	3	3							х	x				1					
Y	MW-4	511	9	1005	AEC	GW	3	3							x	x							1		
Ċ	MW-5	51/	9	935	AEC	GW	3	3							x	x							1		
7	MW-6	51	19 0	100	AEC	GW	3	3						$\top$	x	x							1		
-7	MW-7	21	4.	830	AFC	GW	3	3				F T	+  -		x	x						_	1		
-5	MW-8		$\frac{1}{2}$	1035	AEC	GW	3	3	++	++-			++		x	x	_						1		
Ğ			5-1-	000	AEC			$\vdash$	┼┼	╶┼╌┼╴	+		++		x	x							+		
$\rightarrow$	Dup L	5/1			AEC	GW	3	3	++	++	+	$\vdash$	++	-+-+							_		+		
6	MW-O MS/MSD	<u> </u>		700	17-7-	GW	3	3	++	╉╋	+	$\vdash$	$\left  + \right $	-+-+	X	x		-+	-	_					
10	Trip Blank	5/19	14	ab_	Lab	WTB	3	3	++		4-		$  \cdot  $	-1	X					_ <u> </u>			<u> </u>		
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	5 Day RUSH						Commerc					<u>—</u> е		ərmərl											
	4 Day RUSH						FULTI (					<u> </u>	ther_		_										
	3 Day RUSH 2 Day RUSH						REDT1 ( Commerc																		
	1 Day EMERGENOK									al "A" =	Resul	lls Only													I
	Emergency & Austh TA data avaitable VIA Labi	ink,						с	orminero	::::::::::::::::::::::::::::::::::::::	Resul	hs + QC			Sume										
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T29684: Chain of Custody Page 1 of 3



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#### SAMPLE INSPECTION FORM

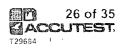
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1 8 1

Accutest Job Number: 129684 Client: DCP Ndstram Da	te/Time Received: os/mlog_0915
# of Coolers Received: Thermometer #: re-f Tempera	ature Adjustment Factor:0.4
Cooler Temps: #1: <u>2.2</u> #2: #3: #4: #5: #6	3: #7: #8:
Method of Delivery: HEDEX UPS Accutest Courter Greyhound De	livery Other
Airbill Numbers:	*3 •• · · · · · · · · · · · · · · · · · ·
COOLER INFORMATION       SAMPLE INFORMATION         Custody seal missing or not intact       Temperature criteria not met       Sample containers received broken with the state of t	
TECHNICIAN SIGNATURE/DATE: $$	
Client Representative Notified:	Date:
By Accutest Representative:	Via: Phone Email
Client Instructions:	

T29684: Chain of Custody Page 2 of 3



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#### SAMPLE RECEIPT LOG

\_ DATE/TIME RECEIVED: \_\_\_\_\_\_\_ 05/22/09 \_\_\_\_\_0915

CLIENT:	D(	P Midstream				INITIALS:	FF				
COOLER#	SAMPLE ID	FIELD ID		DATE	MATRIX	VOL.	BOTTLE #	LOCATION	PRESERV	Pł	
		MW -1	05/19	109 1100		SOOM	1	IMM	CD 2 3 4 5 6 7 8	<2	>12
				×		yont	2-4	VR	1 <b>2</b> 3 4 5 6 7 8	<2	>12
	2	MW- 2	1	UCD_		500 ml		IMM	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	<2	>12
	~	×		•		40m1	2.4	VR	1	<2	>12
	3	MW-3		1175	-	500 ml	I	IMM	C 2 3 4 5 6 7 8	<2	>12
	~	×	_			40-1	2-4	VR	1 (2) 3 4 5 6 7 8	<2	>12
	Ч	MW-4		1005		500-1		IMM	© 2 3 4 5 6 7 8	<2	>12
	~	د		J		40m1	2-4	VR_	1 (2) 3 4 5 6 7 8	<2	>12
	5	MW-5		935		40+	1	IMM	CD 2 3 4 5 6 7 8	<2	>12
		*	_	*		yomi	2-4	VR	1 3 4 5 6 7 8	<2	>12
	6	MW-6/MS/MSD		900		100ml	1-3	IMM	1 2 3 4 5 6 7 8	<2	>1?
	*	v	j.	×		4021	4-12	VR	: (2) 3 4 5 6 7 8	×2	>12
	7	MW-7		830		500-1	1	IMM	D 2 3 4 5 6 7 8	<2	>12
	~	×		· · · · · · · · · · · · · · · · · · ·		40-1	2-4	VR	1 2 3 4 5 6 7 8	<2	>12
	8	MW-8		1636		500-1	<u> </u>	IMM	D 2 3 4 5 6 7 8	<2	>12
	<u> </u>	×		*		40-1	2-3	VR	1 (2) 3 4 5 6 7 8	<2	>12
	9	Dup	$\downarrow$	000		500-1	1.1	IMM	© 2 3 4 5 6 7 8	<2	>12
	<u> </u>	~		<u> </u>		4000	2-4	VR	1 2 3 4 5 6 7 6	<2	>12
	10	Trip Blank		,	<u> </u>	40-1	1-2	VR	1 (2) 3 4 .5 6 7 8	<2	>12
					h		<u> </u>	[	5 6 4	-2/	) >12
	$1 \rightarrow $		$\downarrow$			x osta	2/09	4	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	<2 -2	>:/2
		1	1				<u> </u>		1 2 3 4 5 6 7 8	<2	V,12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

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LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

Rev 8/13/01 ewp

T29684: Chain of Custody Page 3 of 3





#### Section 4

#### GC/MS Volatiles

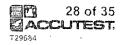
QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries

Matrix Spike and Duplicate Summaries





#### Method Blank Summary

Job Number: Account: Project:	T29684 DUKE DCP Midstr AECCOLI: DCP M					-
Sample VC40-MB	File ID DF C0000917.D 1	F Analyzed 05/28/09	By RR	Prep Date n/a	Prep Batch n/a	Analytical Batch VC40

The QC reported here applies to the following samples:

Method: SW846 8260B

T29684-1, T29684-2, T29684-3, T29684-4, T29684-5, T29684-6, T29684-7, T29684-8, T29684-9, T29684-10

CAS No.	Compound	Result	RL	MDL	Units Q	
71-43-2 100-41-4 108-88-3 1330-20-7	Benzene Ethylbenzene Toluene 7 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 55 7	7 TY1	1000/	70.13	1007		

1868-53-7	Dibromofluoromethane	106%	79-122%
17060-07-0	1,2-Dichloroethane-D4	111%	75-121%
2037-26-5	Toluene-D8	113%	87-119%
460-00-4	4-Bromofluorobenzene	97%	80-133%



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#### Blank Spike Summary

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Job Number:	T29684
Account:	DUKE DCP Midstream, LLC
Project:	AECCOLI: DCP Midstream RR Ext

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC40-BS	C0000915.D	1	05/28/09	RR	n/a	n/a	VC40
· · · · · · · · · · · · · · · · · · ·							

The QC reported here applies to the following samples:

Method: SW846 8260B

T29684-1, T29684-2, T29684-3, T29684-4, T29684-5, T29684-6, T29684-7, T29684-8, T29684-9, T29684-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	25	27.2	109	76-118
100-41-4	Ethylbenzene	25	24.7	99	75-112
108-88-3	Toluene	25	25.5	102	77-114
1330-20-7	Xylene (total)	75	71.5	95	75-111
CAS No.	Surrogate Recoveries	BSP	Lii	mits	
1868-53-7	Dibromofluoromethane	105%	79	-122%	
17060-07-0	1,2-Dichloroethane-D4	114%	75-	-121%	
2037-26-5	Toluene-D8	114%	87	-119%	
460-00-4	4-Bromofluorobenzene	95%	80-	-133%	

30 of 35 **23ACCUTEST**. T29684



## Matrix Spike/Matrix Spike Duplicate Summary

Account: Project:	DUKE DCP Mi AECCOLI: DC		,				
Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T29684-6MS	C0000920.D	1	05/28/09	RR	n/a	n/a	VC40
T29684-6MSD	C0000921.D	1	05/28/09	RR	n/a	n/a	VC40
T29684-6	C0000919.D	1	05/28/09	RR	n/a	n/a	VC40

The QC reported here applies to the following samples:

Method: SW846 8260B

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Page 1 of 1

T29684-1, T29684-2, T29684-3, T29684-4, T29684-5, T29684-6, T29684-7, T29684-8, T29684-9, T29684-10

CAS No.	Compound	T29684-6 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND	25	28.1	112	26.4	106	6	76-118/16
100-41-4	Ethylbenzene	ND	25	24.9	100	24.1	96	3	75-112/12
108-88-3	Toluene	ND	25	25.3	101	24.6	98	3	77-114/12
1330-20-7	Xylene (total)	ND	75	72.3	96	70.9	95	2	75-111/12
CAS No.	Surrogate Recoveries	MS	MSD	T29	9684-6	Limits			
1868-53-7	Dibromofluoromethane	104%	102%	106	5%	79-1229	%		
17060-07-0	1,2-Dichloroethane-D4	114%	113%	113	%	75-1219	%		
2037-26-5	Toluene-D8	113%	113%	112%		87-119%			
460-00-4	4-Bromofluorobenzene	93%	95%	95%	6	80-133	%		

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#### General Chemistry

QC Data Summaries

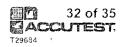
Includes the following where applicable:

- 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: T29684 Account: DUKE - DCP Midstream, LLC Project: AECCOLI: DCP Midstream RR Ext

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits	1
Chloride	GP6482/GN16945	1.0	0.0	mg/l	1000	1010	100.6	92-107%	ഗ്

Associated Samples: Batch GP6482: T29684-1, T29684-2, T29684-3, T29684-4, T29684-5, T29684-6, T29684-7, T29684-8, T29684-9 (\*) Outside of QC limits

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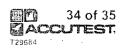
# DUPLICATE RESULTS SUMMARY GENERAL CHEMISTRY

# Login Number: T29684 Account: DUKE - DCP Midstream, LLC Project: AECCOLI: DCP Midstream RR Ext

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits	
Chloride	GP6482/GN16945	T29684-6	mg/l	308	313	1.6	0-5%	
Associated Samples: Batch GP6482: T29684-1, T296	84-2, T29684-3, T29	684-4, T29684	I-5, T29684	-6, T29684-7	, T29684-8	, T29684-9		

(\*) Outside of QC limits

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#### MATRIX SPIKE RESULTS SUMMARY GENERAL CHEMISTRY

#### Login Number: T29684 Account: DUKE - DCP Midstream, LLC Project: AECCOLI: DCP Midstream RR Ext

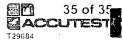
Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits	18 6. 19
Chloride	GP6482/GN16945	T29684-6	mg/l	308	100	393	84.4	81-119%	ഗ <sup>്രോ</sup>

Associated Samples:

Batch GP6482: T29684-1, T29684-2, T29684-3, T29684-4, T29684-5, T29684-6, T29684-7, T29684-8, T29684-9

(\*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



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