

2R - 56

WORKPLANS

Date:

9 - 24 - 12

Hansen, Edward J., EMNRD

From: Hansen, Edward J., EMNRD
Sent: Tuesday, September 25, 2012 8:51 AM
To: 'wayne price'
Subject: RE: Devon Fed Com 3 #2R-056

Dear Mr. Price:

Please submit to the OCD the monitoring results for PAHs at the above-referenced site. The OCD will evaluate the amendment to the sampling plan after review of the data.

Please contact me if you have any questions regarding this matter,

Edward J. Hansen
Hydrologist
Environmental Bureau

-----Original Message-----

From: wayne price [<mailto:wayneprice77@earthlink.net>]
Sent: Monday, September 24, 2012 6:09 PM
To: Hansen, Edward J., EMNRD
Subject: Devon Fed Com 3 #2R-056

Dear Mr. Hansen:

The last time we sampled the Fed Com #3 MW we could not obtain enough sample to properly purge. So we collected as much as we could get out of the bailer, then we diluted it 50% with DI water to increase the quantity. The BTEX is still quite high even with the dilution, but the PAH's were "ND" this time. I can not say for sure if it was the dilution or if the PAH's are remediating. I can tell you the Micro-Vapor Extraction system is working and I suspect we are evaporating the water in the well, which will overtime also remove the vapors from the vadose zone. This is probably a good indication that the well is located within the down-hole blow-out area where the high pressure gas created a small void where gas condensate and produced water were discharged.

As you know, this MW-1 was placed in very close proximity to the Devon Well Bore. The downhole "Blow-Out" occurred about at the same depth of this monitor well. The drilling logs showed the monitor well caved in and the driller noted we were in a small cavern, probably created by the blow-out. If you remember, we had previously determined this well was isolated and not connected to the local water tables.

On our next sampling trip, we will try to obtain enough water to sample for BTEX and chlorides. Since we have a good baseline on the PAH's I would like to eliminate that from the sampling. We would also like to use Tedlar air bags to collect the air samples, instead of using PID's for the Total Volatiles and Benzene, and have these analyzed at the lab.

Please advise if you agree.

Hansen, Edward J., EMNRD

From: wayne price <wayneprice77@earthlink.net>
Sent: Tuesday, September 25, 2012 10:25 AM
To: Hansen, Edward J., EMNRD
Cc: Chris Biagi; Mike Griffin
Subject: Re: Devon Fed Com 3 #2R-056
Attachments: March 2012 Devon_2R0056_Summary.pdf; Aug 2012 H201817 PRICE.pdf

Good Morning Mr. Hansen,

Please find attached the original baseline MW-1 water sample results collected in late Feb 2012 and the latest results collected in early August. We installed the Micro-Vapor system in late April and then collected our first quarterly sampling in Early Aug 2012 in which we noted the water level drop. We are recommending that we collect Tedlar bag air samples in the future since the water level is dropping due to the evaporation. As stated in my previous E-mail we are confident we are looking at a very small cavity that was created by the down-hole blow-out. We are now dealing with a vadose soil issue and over time the vapor system will take care of this.

So, if we can collect enough water sample we are proposing to run BTEX and chlorides. If we cannot properly purge and collect water samples, then we would like to collect vapor samples using a tedlar bag and submit to the Lab and run BTEX and TPH.

Please advise!

On Sep 25, 2012, at 8:51 AM, Hansen, Edward J., EMNRD wrote:

> Dear Mr. Price:
>
> Please submit to the OCD the monitoring results for PAHs at the
> above-referenced site. The OCD will evaluate the amendment to the
> sampling plan after review of the data.
>
> Please contact me if you have any questions regarding this matter,
>
> Edward J. Hansen
> Hydrologist
> Environmental Bureau
>
>
> -----Original Message-----
> From: wayne price [mailto:wayneprice77@earthlink.net]
> Sent: Monday, September 24, 2012 6:09 PM
> To: Hansen, Edward J., EMNRD
> Subject: Devon Fed Com 3 #2R-056
>
> Dear Mr. Hansen:



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

August 22, 2012

LESTER WAYNE PRICE, JR

PRICE LLC

312 ENCANTADO RIDGE COURT, NE

RIO RANCHO, NM 87124

RE: 2RO056

Enclosed are the results of analyses for samples received by the laboratory on 08/03/12 16:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Coley D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager

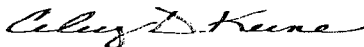
Analytical Results For:PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124Project: 2R0056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWNReported:
22-Aug-12 16:51

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	H201817-01	Water	03-Aug-12 14:30	03-Aug-12 16:50

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124

Project: 2R0056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWN

Reported:
22-Aug-12 16:51

MW-1
H201817-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Inorganic Compounds

Alkalinity, Bicarbonate	53.7	5.00	mg/L	1	2080803	HM	08-Aug-12	310.1M	
Calcium	142	1.00	mg/L	1	2082211	CK	15-Aug-12	200.7	GAL
Alkalinity, Carbonate	ND	0.00	mg/L	1	2080803	HM	08-Aug-12	310.1M	
Chloride*	1800	4.00	mg/L	1	2080706	AP	07-Aug-12	4500-Cl-B	
Conductivity*	5540	1.00	uS/cm	1	2081408	HM	08-Aug-12	120.1	
Magnesium	73.4	1.00	mg/L	1	2082211	CK	15-Aug-12	200.7	GAL
pH*	5.99	0.100	pH Units	1	2081408	HM	08-Aug-12	150.1	
Potassium	8.22	1.00	mg/L	1	2082211	CK	15-Aug-12	200.7	GAL
Sodium	746	1.00	mg/L	1	2082211	CK	15-Aug-12	200.7	GAL
Sulfate*	67.6	10.0	mg/L	1	2080617	AP	06-Aug-12	375.4	
TDS*	3040	5.00	mg/L	1	2080102	HM	06-Aug-12	160.1	
Alkalinity, Total*	44.0	4.00	mg/L	1	2080803	HM	08-Aug-12	310.1M	

Volatile Organic Compounds by EPA Method 8021

Benzene*	1.69	0.100	mg/L	100	2080801	AP	08-Aug-12	8021B	
Toluene*	2.21	0.100	mg/L	100	2080801	AP	08-Aug-12	8021B	
Ethylbenzene*	0.142	0.100	mg/L	100	2080801	AP	08-Aug-12	8021B	
Total Xylenes*	3.11	0.300	mg/L	100	2080801	AP	08-Aug-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		107 %	89.5-126		2080801	AP	08-Aug-12	8021B	

Semivolatile Organic Compounds by GCMS

Naphthalene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
2-Methylnaphthalene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
1-Methylnaphthalene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Acenaphthylene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Acenaphthene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Fluorene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Phenanthrene	ND	0.002	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Anthracene	ND	0.002	mg/L	1.15	2081410	CK	13-Aug-12	8270C	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 PRICE LLC
 312 ENCANTADO RIDGE COURT, NE
 RIO RANCHO NM, 87124

 Project: 2R0056
 Project Number: 2R0056
 Project Manager: LESTER WAYNE PRICE, JR
 Fax To: UNK-NOWN

 Reported:
 22-Aug-12 16:51

MW-1
H201817-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Semivolatile Organic Compounds by GCMS

Carbazole	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Fluoranthene	ND	0.002	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Pyrene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Benzo[a]anthracene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Chrysene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Benzo[b]fluoranthene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Benzo[k]fluoranthene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Benzo[a]pyrene	ND	0.0002	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Indeno[1,2,3-cd]pyrene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Dibenz[a,h]anthracene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Benzo[g,h,i]perylene	ND	0.001	mg/L	1.15	2081410	CK	13-Aug-12	8270C	
Surrogate: Nitrobenzene-d5	13.0 %		35-114		2081410	CK	13-Aug-12	8270C	S-04
Surrogate: 2-Fluorobiphenyl	12.0 %		43-116		2081410	CK	13-Aug-12	8270C	S-04
Surrogate: Terphenyl-d14	10.6 %		33-141		2081410	CK	13-Aug-12	8270C	S-04

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 PRICE LLC
 312 ENCANTADO RIDGE COURT, NE
 RIO RANCHO NM, 87124

 Project: 2R0056
 Project Number: 2R0056
 Project Manager: LESTER WAYNE PRICE, JR
 Fax To: UNK-NOWN

 Reported:
 22-Aug-12 16:51


Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2080102 - Filtration										
Blank (2080102-BLK1)				Prepared & Analyzed: 01-Aug-12						
TDS	ND	5.00	mg/L							
LCS (2080102-BS1)				Prepared & Analyzed: 01-Aug-12						
TDS	235		mg/L	240		97.9	80-120			
Duplicate (2080102-DUP1)				Source: H201767-03		Prepared & Analyzed: 01-Aug-12				
TDS	3500	5.00	mg/L		3420			2.17	20	
Batch 2080617 - General Prep - Wet Chem										
Blank (2080617-BLK1)				Prepared & Analyzed: 06-Aug-12						
Sulfate	ND	10.0	mg/L							
LCS (2080617-BS1)				Prepared & Analyzed: 06-Aug-12						
Sulfate	23.6	10.0	mg/L	20.0		118	80-120			
LCS Dup (2080617-BSD1)				Prepared & Analyzed: 06-Aug-12						
Sulfate	22.7	10.0	mg/L	20.0		114	80-120	3.84	20	
Batch 2080706 - General Prep - Wet Chem										
Blank (2080706-BLK1)				Prepared & Analyzed: 07-Aug-12						
Chloride	ND	4.00	mg/L							
LCS (2080706-BS1)				Prepared & Analyzed: 07-Aug-12						
Chloride	104	4.00	mg/L	100		104	80-120			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124

Project: 2R0056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWN

Reported:
22-Aug-12 16:51

Inorganic Compounds - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2080706 - General Prep - Wet Chem
LCS Dup (2080706-BSD1)

Prepared & Analyzed: 07-Aug-12

Chloride	100	4.00	mg/L	100		100	80-120	3.92	20	
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Batch 2080803 - General Prep - Wet Chem
Blank (2080803-BLK1)

Prepared & Analyzed: 08-Aug-12

Alkalinity, Carbonate	ND	0.00	mg/L							
Alkalinity, Bicarbonate	ND	5.00	mg/L							
Alkalinity, Total	ND	4.00	mg/L							

LCS (2080803-BS1)

Prepared & Analyzed: 08-Aug-12

Alkalinity, Carbonate	ND	0.00	mg/L				80-120			
Alkalinity, Bicarbonate	132	5.00	mg/L				80-120			
Alkalinity, Total	108	4.00	mg/L	100		108	80-120			

LCS Dup (2080803-BSD1)

Prepared & Analyzed: 08-Aug-12

Alkalinity, Carbonate	ND	0.00	mg/L				80-120		20	
Alkalinity, Bicarbonate	137	5.00	mg/L				80-120	3.72	20	
Alkalinity, Total	112	4.00	mg/L	100		112	80-120	3.64	20	

Batch 2081408 - General Prep - Wet Chem
LCS (2081408-BS1)

Prepared & Analyzed: 08-Aug-12

pH	7.11		pH Units	7.00		102	90-110			
Conductivity	1420		uS/cm	1410		101	80-120			

Duplicate (2081408-DUP1)

Source: H201817-01

Prepared & Analyzed: 08-Aug-12

pH	5.98	0.100	pH Units		5.99		0.167		20	
Conductivity	5560	1.00	uS/cm		5540		0.360		20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124

Project: 2R0056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWN

Reported:
22-Aug-12 16:51

Dissolved Metals - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2082211 - Dissolved/Potentially Dissolved Metals
Blank (2082211-BLK1)

Prepared & Analyzed: 15-Aug-12

Potassium	ND	1.00	mg/L							
Sodium	ND	1.00	mg/L							
Magnesium	ND	1.00	mg/L							
Calcium	ND	1.00	mg/L							

LCS (2082211-BS1)

Prepared & Analyzed: 15-Aug-12

Potassium	9.78		mg/L	10.0		97.8	85-115			
Sodium	8.18		mg/L	8.10		101	85-115			
Calcium	5.18		mg/L	5.00		104	85-115			
Magnesium	26.0		mg/L	25.0		104	85-115			

LCS Dup (2082211-BSD1)

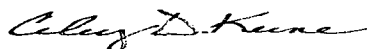
Prepared & Analyzed: 15-Aug-12

Potassium	10.4		mg/L	10.0		104	85-115	6.14	20	
Calcium	5.22		mg/L	5.00		104	85-115	0.769	20	
Sodium	8.25		mg/L	8.10		102	85-115	0.852	20	
Magnesium	26.3		mg/L	25.0		105	85-115	1.15	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124

Project: 2R0056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWN

Reported:
22-Aug-12 16:51

Volatile Organic Compounds by EPA Method 8021 - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2080801 - Volatiles										
Blank (2080801-BLK1)				Prepared & Analyzed: 08-Aug-12						
Benzene	ND	0.001	mg/L							
Toluene	ND	0.001	mg/L							
Ethylbenzene	ND	0.001	mg/L							
Total Xylenes	ND	0.003	mg/L							
Surrogate: 4-Bromofluorobenzene (PID)	0.0486		mg/L	0.0500		97.2	89.5-126			
LCS (2080801-BS1)				Prepared & Analyzed: 08-Aug-12						
Benzene	0.046	0.001	mg/L	0.0500		92.8	80.7-116			
Toluene	0.048	0.001	mg/L	0.0500		96.1	89.7-121			
Ethylbenzene	0.049	0.001	mg/L	0.0500		97.4	91.4-124			
Total Xylenes	0.145	0.003	mg/L	0.150		96.9	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	0.0497		mg/L	0.0500		99.3	89.5-126			
LCS Dup (2080801-BSD1)				Prepared & Analyzed: 08-Aug-12						
Benzene	0.045	0.001	mg/L	0.0500		91.0	80.7-116	1.95	16.4	
Toluene	0.047	0.001	mg/L	0.0500		94.6	89.7-121	1.57	16.6	
Ethylbenzene	0.048	0.001	mg/L	0.0500		96.3	91.4-124	1.14	16.1	
Total Xylenes	0.143	0.003	mg/L	0.150		95.4	93.4-130	1.60	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	0.0493		mg/L	0.0500		98.5	89.5-126			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124

Project: 2R0056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWN

Reported:
22-Aug-12 16:51

Semivolatile Organic Compounds by GCMS - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2081410 - EPA 3510
Blank (2081410-BLK1)

Prepared: 16-Jul-12 Analyzed: 13-Aug-12

Naphthalene	ND	0.001	mg/L							
2-Methylnaphthalene	ND	0.001	mg/L							
1-Methylnaphthalene	ND	0.001	mg/L							
Acenaphthylene	ND	0.001	mg/L							
Acenaphthene	ND	0.001	mg/L							
Fluorene	ND	0.001	mg/L							
Phenanthrene	ND	0.002	mg/L							
Anthracene	ND	0.002	mg/L							
Carbazole	ND	0.001	mg/L							
Fluoranthene	ND	0.002	mg/L							
Pyrene	ND	0.001	mg/L							
Benzo[a]anthracene	ND	0.001	mg/L							
Chrysene	ND	0.001	mg/L							
Benzo[b]fluoranthene	ND	0.001	mg/L							
Benzo[k]fluoranthene	ND	0.001	mg/L							
Benzo[a]pyrene	ND	0.0002	mg/L							
Indeno[1,2,3-cd]pyrene	ND	0.001	mg/L							
Dibenz[a,h]anthracene	ND	0.001	mg/L							
Benzo[g,h,i]perylene	ND	0.001	mg/L							
Surrogate: Nitrobenzene-d5	0.0350		mg/L	0.0500		69.9	35-114			
Surrogate: 2-Fluorobiphenyl	0.0345		mg/L	0.0500		69.1	43-116			
Surrogate: Terphenyl-d14	0.0319		mg/L	0.0500		63.9	33-141			

LCS (2081410-BS1)

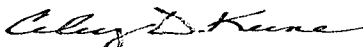
Prepared: 16-Jul-12 Analyzed: 13-Aug-12

Naphthalene	0.008	0.001	mg/L	0.0100		75.4	21-133			
2-Methylnaphthalene	0.009	0.001	mg/L	0.0100		86.0	21-133			
Acenaphthylene	0.010	0.001	mg/L	0.0100		95.1	33-145			
Acenaphthene	0.009	0.001	mg/L	0.0100		85.5	47-145			
Fluorene	0.009	0.001	mg/L	0.0100		89.9	59-121			
Phenanthrene	0.009	0.002	mg/L	0.0100		94.8	54-120			
Anthracene	0.009	0.002	mg/L	0.0100		86.8	27-133			
Carbazole	0.008	0.001	mg/L	0.0100		81.3	70-130			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

PRICE LLC
312 ENCANTADO RIDGE COURT, NE
RIO RANCHO NM, 87124

Project: 2RO056
Project Number: 2R0056
Project Manager: LESTER WAYNE PRICE, JR
Fax To: UNK-NOWN

Reported:
22-Aug-12 16:51

Semivolatile Organic Compounds by GCMS - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2081410 - EPA 3510
LCS (2081410-BS1)

Prepared: 16-Jul-12 Analyzed: 13-Aug-12

Fluoranthene	0.010	0.002	mg/L	0.0100		98.1	26-137			
Pyrene	0.007	0.001	mg/L	0.0100		74.0	52-115			
Benzo[a]anthracene	0.008	0.001	mg/L	0.0100		79.5	33-143			
Chrysene	0.008	0.001	mg/L	0.0100		78.6	17-168			
Benzo[b]fluoranthene	0.009	0.001	mg/L	0.0100		85.8	24-159			
Benzo[k]fluoranthene	0.009	0.001	mg/L	0.0100		92.7	11-162			
Benzo[a]pyrene	0.009	0.0002	mg/L	0.0100		87.6	17-163			
Indeno[1,2,3-cd]pyrene	0.009	0.001	mg/L	0.0100		93.8	0-171			
Dibenz[a,h]anthracene	0.009	0.001	mg/L	0.0100		92.2	0-227			
Benzo[g,h,i]perylene	0.009	0.001	mg/L	0.0100		90.6	0-219			
Surrogate: Nitrobenzene-d5	0.0449		mg/L	0.0500		89.9	35-114			
Surrogate: 2-Fluorobiphenyl	0.0415		mg/L	0.0500		83.0	43-116			
Surrogate: Terphenyl-d14	0.0385		mg/L	0.0500		77.0	33-141			

LCS Dup (2081410-BSD1)

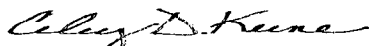
Prepared: 16-Jul-12 Analyzed: 13-Aug-12

Naphthalene	0.007	0.001	mg/L	0.0100		73.3	21-133	2.82	20	
2-Methylnaphthalene	0.009	0.001	mg/L	0.0100		85.9	21-133	0.116	20	
Acenaphthylene	0.009	0.001	mg/L	0.0100		93.1	33-145	2.13	20	
Acenaphthene	0.008	0.001	mg/L	0.0100		82.2	47-145	3.94	20	
Fluorene	0.009	0.001	mg/L	0.0100		89.5	59-121	0.446	20	
Phenanthrene	0.009	0.002	mg/L	0.0100		94.7	54-120	0.106	20	
Anthracene	0.009	0.002	mg/L	0.0100		86.9	27-133	0.115	20	
Carbazole	0.008	0.001	mg/L	0.0100		81.2	70-130	0.123	20	
Fluoranthene	0.010	0.002	mg/L	0.0100		95.6	26-137	2.58	20	
Pyrene	0.008	0.001	mg/L	0.0100		76.3	52-115	3.06	20	
Benzo[a]anthracene	0.008	0.001	mg/L	0.0100		79.1	33-143	0.504	20	
Chrysene	0.008	0.001	mg/L	0.0100		79.6	17-168	1.26	20	
Benzo[b]fluoranthene	0.009	0.001	mg/L	0.0100		90.9	24-159	5.77	20	
Benzo[k]fluoranthene	0.008	0.001	mg/L	0.0100		84.4	11-162	9.37	20	
Benzo[a]pyrene	0.009	0.0002	mg/L	0.0100		88.3	17-163	0.796	20	
Indeno[1,2,3-cd]pyrene	0.010	0.001	mg/L	0.0100		100	0-171	6.80	20	
Dibenz[a,h]anthracene	0.010	0.001	mg/L	0.0100		98.8	0-227	6.91	20	

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 PRICE LLC
 312 ENCANTADO RIDGE COURT, NE
 RIO RANCHO NM, 87124

 Project: 2R0056
 Project Number: 2R0056
 Project Manager: LESTER WAYNE PRICE, JR
 Fax To: UNK-NOWN

 Reported:
 22-Aug-12 16:51

Semivolatile Organic Compounds by GCMS - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch 2081410 - EPA 3510									
LCS Dup (2081410-BSD1)				Prepared: 16-Jul-12 Analyzed: 13-Aug-12					
Benzo[g,h,i]perylene	0.010	0.001	mg/L	0.0100		100	0-219	10.1	20
Surrogate: Nitrobenzene-d5	0.0437		mg/L	0.0500		87.3	35-114		
Surrogate: 2-Fluorobiphenyl	0.0416		mg/L	0.0500		83.1	43-116		
Surrogate: Terphenyl-dl4	0.0389		mg/L	0.0500		77.8	33-141		

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Celest D. Keene, Lab Director/Quality Manager


Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
GAL	Analysis subcontracted to Green Analytical Laboratories, a subsidiary of Cardinal Laboratories.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



Company Name: Price LLC		BILL TO		ANALYSIS REQUEST																						
Project Manager: Locher Wayne Price Jr.		P.O. #:		<div style="display: flex; flex-direction: column; align-items: center;"> <div>1002 XLS</div> <div>PAH SEE EMULSION</div> <div>GEN CHEM & PH</div> </div>																						
Address: 310 Emerald Ridge, Calmar, NE		Company: Price LLC																								
City: Price Range State: NM Zip: 87124		Attn: WAYNE PRICE																								
Phone #: 505 715 8809 Fax #: 505 890 6543		Address: 310 Emerald Ridge																								
Project #: 22055 Project Owner: Devon Energy		City: Price Range																								
Project Name: MU-1		State: NM Zip: 87124																								
Project Location: Calmar, CO, NM		Phone #: 505 715 8809																								
Sampler Name: Locher Wayne Price Jr.		Fax #: 505 890 6543																								
FOR LAB USE ONLY		MATRIX														PRESERV.		SAMPLING								
Lab I.D.	Sample I.D.	(GRAB OR C/COMP.)	(# CONTAINERS)													GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER	ACID/BASE	ICE/COOL	OTHER	DATE	TIME
HZ01817																										
1	MU-1															X						X	X		8/31/0	8:30 PM
	MU-1			X							X		8/31/0	8:30 PM												
	MU-1			X						X			8/31/0	8:30 PM												
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Relinquished By: Locher Wayne Price Jr.		Date: 8/31/0		Received By: Yodi Nenson		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Phone #:		REMARKS: All sample diluted with DI water by 50% w/v. Please email results to: wayneprice@devonenergy.com																
Time: 4:50 PM		Time: 4:50 PM		Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No		Add'l Fax #:																				
Relinquished By:		Date:		Received By:		Time:																				
Delivered By: (Circle One)		Sample Condition		CHECKED BY:																						
Sampler - UPS - Bus - Other:		Cool / Intact <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		(Initials) Yodi																						

Summary Report

Wayne Price
Price LLC
312 Encantado Ridge Ct. NE
Rio Rancho, NM 87124

Report Date: March 7, 2012

Work Order: 12022707



Project Location: Eddy Co, NM
Project Name: Devon 2R0056
Project Number: MW-1

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
289956	MW-1	water	2012-02-24	14:15	2012-02-25

Sample - Field Code	BTEX				MTBE
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)	MTBE (mg/L)
289956 - MW-1	0.439	0.588	0.260	5.15	

Sample: 289956 - MW-1

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		30.0	mg/L as CaCo3	4
Total Alkalinity		30.0	mg/L as CaCo3	4
Dissolved Calcium		125	mg/L	1
Chloride		1690	mg/L	2.5
Specific Conductance		5020	uMHOS/cm	
Fluoride		<2.50	mg/L	0.5
Dissolved Potassium		35.1	mg/L	1
Dissolved Magnesium		59.9	mg/L	1
Dissolved Sodium		1040	mg/L	1
Nitrite-N	Qs	<0.200	mg/L	0.04
Nitrate-N		<0.200	mg/L	0.04
Naphthalene		0.0131	mg/L	0.0002
2-Methylnaphthalene		0.0377	mg/L	0.0002
1-Methylnaphthalene		0.0194	mg/L	0.0002
Acenaphthylene		<0.000201	mg/L	0.0002
Acenaphthene		<0.000201	mg/L	0.0002

continued ...

sample 289956 continued ...

Param	Flag	Result	Units	RL
Dibenzofuran		<0.000201	mg/L	0.0002
Fluorene		<0.000201	mg/L	0.0002
Anthracene		<0.000201	mg/L	0.0002
Phenanthrene		0.00283	mg/L	0.0002
Fluoranthene		<0.000201	mg/L	0.0002
Pyrene		<0.000201	mg/L	0.0002
Benzo(a)anthracene		<0.000201	mg/L	0.0002
Chrysene		<0.000201	mg/L	0.0002
Benzo(b)fluoranthene		<0.000201	mg/L	0.0002
Benzo(k)fluoranthene		<0.000201	mg/L	0.0002
Benzo(a)pyrene		<0.000201	mg/L	0.0002
Indeno(1,2,3-cd)pyrene		<0.000201	mg/L	0.0002
Dibenzo(a,h)anthracene		<0.000201	mg/L	0.0002
Benzo(g,h,i)perylene		<0.000201	mg/L	0.0002
pH		7.54	s.u.	2
PQ4-P		<12.5	mg/L	2.5
Sulfate	Q _N	90.7	mg/L	2.5
Total Dissolved Solids		3166	mg/L	10