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Tax I.D. 62-0814289

Est. 1970

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

Report Summary

Monday August 10, 2015

Report Number: L780105
Samples Received: 07/31/15
Client Project: PARACHUTE C E&P WMF

Description: Parachute C E&P WMF

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Alan Harvill

T. Alan Harvill , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

August 10, 2015

ESC Sample # : L780105-01

Site ID : PARACHUTE C E&P WMF

Project # : PARACHUTE C E&P WMF

Date Received : July 31, 2015
Description : Parachute C E&P WMF

Sample ID : PARACHUTE C E&P WMF

Collected By : Ryan Smith
Collection Date : 07/30/15 14:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Bromide	78.	1.0	mg/l	300.0	08/01/15	1
Chloride	11000	200	mg/l	300.0	08/01/15	200
Nitrate	0.29	0.10	mg/l	300.0	08/01/15	1
Nitrite	0.90	0.10	mg/l	300.0	08/01/15	1
Sulfate	9.9	5.0	mg/l	300.0	08/01/15	1
Alkalinity	730	100	mg/l	2320 B-2011	08/10/15	5
Hardness, Total (mg/L as CaCO3)	690	300	mg/l	130.1	08/06/15	10
pH	8.1		su	4500H+ B-2011	08/03/15	1
Specific Conductance	32000		umhos/cm	120.1	08/07/15	1
Dissolved Solids	19000	10.	mg/l	2540 C-2011	08/06/15	1
Mercury,Dissolved	BDL	0.00020	mg/l	245.1	08/06/15	1
Arsenic,Dissolved	BDL	0.050	mg/l	200.7	08/04/15	5
Barium,Dissolved	56.	0.025	mg/l	200.7	08/04/15	5
Cadmium,Dissolved	BDL	0.010	mg/l	200.7	08/04/15	5
Chromium,Dissolved	BDL	0.050	mg/l	200.7	08/04/15	5
Lead,Dissolved	0.043	0.025	mg/l	200.7	08/04/15	5
Selenium,Dissolved	BDL	0.050	mg/l	200.7	08/04/15	5
Silver,Dissolved	BDL	0.025	mg/l	200.7	08/04/15	5
Volatile Organics						
Benzene	0.030	0.0010	mg/l	624	08/05/15	1
Bromodichloromethane	BDL	0.0010	mg/l	624	08/05/15	1
Bromoform	BDL	0.0010	mg/l	624	08/05/15	1
Bromomethane	BDL	0.0050	mg/l	624	08/05/15	1
Carbon tetrachloride	BDL	0.0010	mg/l	624	08/05/15	1
Chlorobenzene	BDL	0.0010	mg/l	624	08/05/15	1
Chlorodibromomethane	BDL	0.0010	mg/l	624	08/05/15	1
Chloroethane	BDL	0.0050	mg/l	624	08/05/15	1
2-Chloroethyl vinyl ether	BDL	0.050	mg/l	624	08/05/15	1
Chloroform	0.0086	0.0050	mg/l	624	08/05/15	1
Chloromethane	BDL	0.0025	mg/l	624	08/05/15	1
1,2-Dichlorobenzene	BDL	0.0010	mg/l	624	08/05/15	1
1,3-Dichlorobenzene	BDL	0.0010	mg/l	624	08/05/15	1
1,4-Dichlorobenzene	BDL	0.0010	mg/l	624	08/05/15	1
Dichlorodifluoromethane	BDL	0.0050	mg/l	624	08/05/15	1
1,1-Dichloroethane	BDL	0.0010	mg/l	624	08/05/15	1
1,2-Dichloroethane	BDL	0.0010	mg/l	624	08/05/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L780105-01 (PH) - 8.08 at 20.0c
L780105-01 (625BNA) - Cannot run at lower dilution due to viscosity of extract

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REPORT OF ANALYSIS

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

August 10, 2015

ESC Sample # : L780105-01

Site ID : PARACHUTE C E&P WMF

Project # : PARACHUTE C E&P WMF

Date Received : July 31, 2015
Description : Parachute C E&P WMF

Sample ID : PARACHUTE C E&P WMF

Collected By : Ryan Smith
Collection Date : 07/30/15 14:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
1,1-Dichloroethene	BDL	0.0010	mg/l	624	08/05/15	1
trans-1,2-Dichloroethene	BDL	0.0010	mg/l	624	08/05/15	1
1,2-Dichloropropane	BDL	0.0010	mg/l	624	08/05/15	1
cis-1,3-Dichloropropene	BDL	0.0010	mg/l	624	08/05/15	1
trans-1,3-Dichloropropene	BDL	0.0010	mg/l	624	08/05/15	1
Ethylbenzene	0.0038	0.0010	mg/l	624	08/05/15	1
Methylene Chloride	BDL	0.0050	mg/l	624	08/05/15	1
Methyl tert-butyl ether	BDL	0.0050	mg/l	624	08/05/15	1
Naphthalene	BDL	0.0050	mg/l	624	08/05/15	1
1,1,2,2-Tetrachloroethane	BDL	0.0010	mg/l	624	08/05/15	1
Tetrachloroethene	BDL	0.0010	mg/l	624	08/05/15	1
Toluene	0.14	0.0050	mg/l	624	08/05/15	1
1,1,1-Trichloroethane	BDL	0.0010	mg/l	624	08/05/15	1
1,1,2-Trichloroethane	BDL	0.0010	mg/l	624	08/05/15	1
Trichloroethene	BDL	0.0010	mg/l	624	08/05/15	1
Trichlorofluoromethane	BDL	0.0050	mg/l	624	08/05/15	1
Vinyl chloride	BDL	0.0010	mg/l	624	08/05/15	1
Xylenes, Total	0.079	0.0030	mg/l	624	08/05/15	1
Surrogate Recovery						
Toluene-d8	107.		% Rec.	624	08/05/15	1
Dibromofluoromethane	104.		% Rec.	624	08/05/15	1
a,a,a-Trifluorotoluene	99.0		% Rec.	624	08/05/15	1
4-Bromofluorobenzene	101.		% Rec.	624	08/05/15	1
Base/Neutral Extractables						
Acenaphthene	BDL	0.0050	mg/l	625	08/06/15	5
Acenaphthylene	BDL	0.0050	mg/l	625	08/06/15	5
Anthracene	BDL	0.0050	mg/l	625	08/06/15	5
Benzidine	BDL	0.050	mg/l	625	08/06/15	5
Benzo(a)anthracene	BDL	0.0050	mg/l	625	08/06/15	5
Benzo(b)fluoranthene	BDL	0.0050	mg/l	625	08/06/15	5
Benzo(k)fluoranthene	BDL	0.0050	mg/l	625	08/06/15	5
Benzo(g,h,i)perylene	BDL	0.0050	mg/l	625	08/06/15	5
Benzo(a)pyrene	BDL	0.0050	mg/l	625	08/06/15	5
Bis(2-chlorethoxy)methane	BDL	0.050	mg/l	625	08/06/15	5
Bis(2-chloroethyl)ether	BDL	0.050	mg/l	625	08/06/15	5
Bis(2-chloroisopropyl)ether	BDL	0.050	mg/l	625	08/06/15	5
4-Bromophenyl-phenylether	BDL	0.050	mg/l	625	08/06/15	5
2-Chloronaphthalene	BDL	0.0050	mg/l	625	08/06/15	5
4-Chlorophenyl-phenylether	BDL	0.050	mg/l	625	08/06/15	5
Chrysene	BDL	0.0050	mg/l	625	08/06/15	5
Dibenz(a,h)anthracene	BDL	0.0050	mg/l	625	08/06/15	5
3,3-Dichlorobenzidine	BDL	0.050	mg/l	625	08/06/15	5
2,4-Dinitrotoluene	BDL	0.050	mg/l	625	08/06/15	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
L780105-01 (PH) - 8.08 at 20.0c
L780105-01 (625BNA) - Cannot run at lower dilution due to viscosity of extract

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REPORT OF ANALYSIS

Ms. Karolina Blaney
WPX Energy
1058 County Road 215
Parachute, CO 81635

August 10, 2015

ESC Sample # : L780105-01

Site ID : PARACHUTE C E&P WMF

Project # : PARACHUTE C E&P WMF

Date Received : July 31, 2015
Description : Parachute C E&P WMF

Sample ID : PARACHUTE C E&P WMF

Collected By : Ryan Smith
Collection Date : 07/30/15 14:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,6-Dinitrotoluene	BDL	0.050	mg/l	625	08/06/15	5
1,2-Diphenylhydrazine	BDL	0.050	mg/l	625	08/06/15	5
Fluoranthene	BDL	0.0050	mg/l	625	08/06/15	5
Fluorene	BDL	0.0050	mg/l	625	08/06/15	5
Hexachlorobenzene	BDL	0.0050	mg/l	625	08/06/15	5
Hexachloro-1,3-butadiene	BDL	0.050	mg/l	625	08/06/15	5
Hexachlorocyclopentadiene	BDL	0.050	mg/l	625	08/06/15	5
Hexachloroethane	BDL	0.050	mg/l	625	08/06/15	5
Indeno(1,2,3-cd)pyrene	BDL	0.0050	mg/l	625	08/06/15	5
Isophorone	BDL	0.050	mg/l	625	08/06/15	5
Naphthalene	BDL	0.0050	mg/l	625	08/06/15	5
Nitrobenzene	BDL	0.050	mg/l	625	08/06/15	5
n-Nitrosodimethylamine	BDL	0.050	mg/l	625	08/06/15	5
n-Nitrosodiphenylamine	BDL	0.050	mg/l	625	08/06/15	5
n-Nitrosodi-n-propylamine	BDL	0.050	mg/l	625	08/06/15	5
Phenanthrene	BDL	0.0050	mg/l	625	08/06/15	5
Benzylbutyl phthalate	BDL	0.015	mg/l	625	08/06/15	5
Bis(2-ethylhexyl)phthalate	BDL	0.015	mg/l	625	08/06/15	5
Di-n-butyl phthalate	BDL	0.015	mg/l	625	08/06/15	5
Diethyl phthalate	BDL	0.015	mg/l	625	08/06/15	5
Dimethyl phthalate	BDL	0.015	mg/l	625	08/06/15	5
Di-n-octyl phthalate	BDL	0.015	mg/l	625	08/06/15	5
Pyrene	BDL	0.0050	mg/l	625	08/06/15	5
1,2,4-Trichlorobenzene	BDL	0.050	mg/l	625	08/06/15	5
Acid Extractables						
4-Chloro-3-methylphenol	BDL	0.050	mg/l	625	08/06/15	5
2-Chlorophenol	BDL	0.050	mg/l	625	08/06/15	5
2,4-Dichlorophenol	BDL	0.050	mg/l	625	08/06/15	5
2,4-Dimethylphenol	BDL	0.050	mg/l	625	08/06/15	5
4,6-Dinitro-2-methylphenol	BDL	0.050	mg/l	625	08/06/15	5
2,4-Dinitrophenol	BDL	0.050	mg/l	625	08/06/15	5
2-Nitrophenol	BDL	0.050	mg/l	625	08/06/15	5
4-Nitrophenol	BDL	0.050	mg/l	625	08/06/15	5
Pentachlorophenol	BDL	0.050	mg/l	625	08/06/15	5
Phenol	BDL	0.050	mg/l	625	08/06/15	5
2,4,6-Trichlorophenol	BDL	0.050	mg/l	625	08/06/15	5
Surrogate Recovery						
Nitrobenzene-d5	50.9		% Rec.	625	08/06/15	5
2-Fluorobiphenyl	51.0		% Rec.	625	08/06/15	5
p-Terphenyl-d14	42.3		% Rec.	625	08/06/15	5
Phenol-d5	30.2		% Rec.	625	08/06/15	5
2-Fluorophenol	33.3		% Rec.	625	08/06/15	5
2,4,6-Tribromophenol	45.4		% Rec.	625	08/06/15	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 08/10/15 17:18 Printed: 08/10/15 17:19
L780105-01 (PH) - 8.08 at 20.0c
L780105-01 (625BNA) - Cannot run at lower dilution due to viscosity of extract

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L780105-01	WG806902	SAMP	1,1-Dichloroethene	R3056883	J4
	WG806441	SAMP	pH	R3055992	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L780105

August 10, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Bromide	< 1	mg/l			WG806382	08/01/15 09:12
Chloride	< 1	mg/l			WG806382	08/01/15 09:12
Nitrate	< .1	mg/l			WG806382	08/01/15 09:12
Nitrite	< .1	mg/l			WG806382	08/01/15 09:12
Sulfate	< 5	mg/l			WG806382	08/01/15 09:12
Arsenic,Dissolved	< .01	mg/l			WG806774	08/04/15 13:35
Barium,Dissolved	< .005	mg/l			WG806774	08/04/15 13:35
Cadmium,Dissolved	< .002	mg/l			WG806774	08/04/15 13:35
Chromium,Dissolved	< .01	mg/l			WG806774	08/04/15 13:35
Lead,Dissolved	< .005	mg/l			WG806774	08/04/15 13:35
Selenium,Dissolved	< .01	mg/l			WG806774	08/04/15 13:35
Silver,Dissolved	< .005	mg/l			WG806774	08/04/15 13:35
1,2,4-Trichlorobenzene	< .01	mg/l			WG806546	08/05/15 05:08
2,4,6-Trichlorophenol	< .01	mg/l			WG806546	08/05/15 05:08
2,4-Dichlorophenol	< .01	mg/l			WG806546	08/05/15 05:08
2,4-Dimethylphenol	< .01	mg/l			WG806546	08/05/15 05:08
2,4-Dinitrophenol	< .01	mg/l			WG806546	08/05/15 05:08
2,4-Dinitrotoluene	< .01	mg/l			WG806546	08/05/15 05:08
2,6-Dinitrotoluene	< .01	mg/l			WG806546	08/05/15 05:08
2-Chloronaphthalene	< .001	mg/l			WG806546	08/05/15 05:08
2-Chlorophenol	< .01	mg/l			WG806546	08/05/15 05:08
2-Nitrophenol	< .01	mg/l			WG806546	08/05/15 05:08
3,3-Dichlorobenzidine	< .01	mg/l			WG806546	08/05/15 05:08
4,6-Dinitro-2-methylphenol	< .01	mg/l			WG806546	08/05/15 05:08
4-Bromophenyl-phenylether	< .01	mg/l			WG806546	08/05/15 05:08
4-Chloro-3-methylphenol	< .01	mg/l			WG806546	08/05/15 05:08
4-Chlorophenyl-phenylether	< .01	mg/l			WG806546	08/05/15 05:08
4-Nitrophenol	< .01	mg/l			WG806546	08/05/15 05:08
Acenaphthene	< .001	mg/l			WG806546	08/05/15 05:08
Acenaphthylene	< .001	mg/l			WG806546	08/05/15 05:08
Anthracene	< .001	mg/l			WG806546	08/05/15 05:08
1,2-Diphenylhydrazine	< .01	mg/l			WG806546	08/05/15 05:08
Benzidine	< .01	mg/l			WG806546	08/05/15 05:08
Benzo(a)anthracene	< .001	mg/l			WG806546	08/05/15 05:08
Benzo(a)pyrene	< .001	mg/l			WG806546	08/05/15 05:08
Benzo(b)fluoranthene	< .001	mg/l			WG806546	08/05/15 05:08
Benzo(g,h,i)perylene	< .001	mg/l			WG806546	08/05/15 05:08
Benzo(k)fluoranthene	< .001	mg/l			WG806546	08/05/15 05:08
Benzylbutyl phthalate	< .003	mg/l			WG806546	08/05/15 05:08
Bis(2-chlorethoxy)methane	< .01	mg/l			WG806546	08/05/15 05:08
Bis(2-chloroethyl)ether	< .01	mg/l			WG806546	08/05/15 05:08
Bis(2-chloroisopropyl)ether	< .01	mg/l			WG806546	08/05/15 05:08
Bis(2-ethylhexyl)phthalate	< .003	mg/l			WG806546	08/05/15 05:08
Chrysene	< .001	mg/l			WG806546	08/05/15 05:08
Di-n-butyl phthalate	< .003	mg/l			WG806546	08/05/15 05:08
Di-n-octyl phthalate	< .003	mg/l			WG806546	08/05/15 05:08
Dibenz(a,h)anthracene	< .001	mg/l			WG806546	08/05/15 05:08
Diethyl phthalate	< .003	mg/l			WG806546	08/05/15 05:08
Dimethyl phthalate	< .003	mg/l			WG806546	08/05/15 05:08
Fluoranthene	< .001	mg/l			WG806546	08/05/15 05:08
Fluorene	< .001	mg/l			WG806546	08/05/15 05:08
Hexachloro-1,3-butadiene	< .01	mg/l			WG806546	08/05/15 05:08
Hexachlorobenzene	< .001	mg/l			WG806546	08/05/15 05:08
Hexachlorocyclopentadiene	< .01	mg/l			WG806546	08/05/15 05:08
Hexachloroethane	< .01	mg/l			WG806546	08/05/15 05:08

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L780105

August 10, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Indeno(1,2,3-cd)pyrene	< .001	mg/l			WG806546	08/05/15 05:08
Isophorone	< .01	mg/l			WG806546	08/05/15 05:08
n-Nitrosodi-n-propylamine	< .01	mg/l			WG806546	08/05/15 05:08
n-Nitrosodimethylamine	< .01	mg/l			WG806546	08/05/15 05:08
n-Nitrosodiphenylamine	< .01	mg/l			WG806546	08/05/15 05:08
Naphthalene	< .001	mg/l			WG806546	08/05/15 05:08
Nitrobenzene	< .01	mg/l			WG806546	08/05/15 05:08
Pentachlorophenol	< .01	mg/l			WG806546	08/05/15 05:08
Phenanthrene	< .001	mg/l			WG806546	08/05/15 05:08
Phenol	< .01	mg/l			WG806546	08/05/15 05:08
Pyrene	< .001	mg/l			WG806546	08/05/15 05:08
2,4,6-Tribromophenol		% Rec.	88.40	11.2-130	WG806546	08/05/15 05:08
2-Fluorobiphenyl		% Rec.	78.50	29.5-131	WG806546	08/05/15 05:08
2-Fluorophenol		% Rec.	56.70	10-77.9	WG806546	08/05/15 05:08
Nitrobenzene-d5		% Rec.	78.30	21.8-123	WG806546	08/05/15 05:08
Phenol-d5		% Rec.	41.60	5-70.1	WG806546	08/05/15 05:08
p-Terphenyl-d14		% Rec.	77.80	29.3-137	WG806546	08/05/15 05:08
1,1,1-Trichloroethane	< .001	mg/l			WG806902	08/05/15 01:45
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG806902	08/05/15 01:45
1,1,2-Trichloroethane	< .001	mg/l			WG806902	08/05/15 01:45
1,1-Dichloroethane	< .001	mg/l			WG806902	08/05/15 01:45
1,1-Dichloroethene	< .001	mg/l			WG806902	08/05/15 01:45
1,2-Dichlorobenzene	< .001	mg/l			WG806902	08/05/15 01:45
1,2-Dichloroethane	< .001	mg/l			WG806902	08/05/15 01:45
1,2-Dichloropropane	< .001	mg/l			WG806902	08/05/15 01:45
1,3-Dichlorobenzene	< .001	mg/l			WG806902	08/05/15 01:45
1,4-Dichlorobenzene	< .001	mg/l			WG806902	08/05/15 01:45
2-Chloroethyl vinyl ether	< .05	mg/l			WG806902	08/05/15 01:45
Benzene	< .001	mg/l			WG806902	08/05/15 01:45
Bromodichloromethane	< .001	mg/l			WG806902	08/05/15 01:45
Bromoform	< .001	mg/l			WG806902	08/05/15 01:45
Bromomethane	< .005	mg/l			WG806902	08/05/15 01:45
Carbon tetrachloride	< .001	mg/l			WG806902	08/05/15 01:45
Chlorobenzene	< .001	mg/l			WG806902	08/05/15 01:45
Chlorodibromomethane	< .001	mg/l			WG806902	08/05/15 01:45
Chloroethane	< .005	mg/l			WG806902	08/05/15 01:45
Chloroform	< .005	mg/l			WG806902	08/05/15 01:45
Chloromethane	< .0025	mg/l			WG806902	08/05/15 01:45
cis-1,3-Dichloropropene	< .001	mg/l			WG806902	08/05/15 01:45
Dichlorodifluoromethane	< .005	mg/l			WG806902	08/05/15 01:45
Ethylbenzene	< .001	mg/l			WG806902	08/05/15 01:45
Methyl tert-butyl ether	< .001	mg/l			WG806902	08/05/15 01:45
Methylene Chloride	< .005	mg/l			WG806902	08/05/15 01:45
Naphthalene	< .005	mg/l			WG806902	08/05/15 01:45
Tetrachloroethene	< .001	mg/l			WG806902	08/05/15 01:45
Toluene	< .005	mg/l			WG806902	08/05/15 01:45
trans-1,2-Dichloroethene	< .001	mg/l			WG806902	08/05/15 01:45
trans-1,3-Dichloropropene	< .001	mg/l			WG806902	08/05/15 01:45
Trichloroethene	< .001	mg/l			WG806902	08/05/15 01:45
Trichlorofluoromethane	< .005	mg/l			WG806902	08/05/15 01:45
Vinyl chloride	< .001	mg/l			WG806902	08/05/15 01:45
Xylenes, Total	< .003	mg/l			WG806902	08/05/15 01:45
4-Bromofluorobenzene		% Rec.	103.0	71-126	WG806902	08/05/15 01:45
Dibromofluoromethane		% Rec.	99.00	78.3-121	WG806902	08/05/15 01:45
Toluene-d8		% Rec.	104.0	88.5-111	WG806902	08/05/15 01:45
a,a,a-Trifluorotoluene		% Rec.	99.90	85-114	WG806902	08/05/15 01:45

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Est. 1970

WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L780105

August 10, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Mercury,Dissolved	< .0002	mg/l			WG807035	08/06/15 09:21
Dissolved Solids	< 10	mg/l			WG806423	08/06/15 14:17
Hardness, Total (mg/L as CaCO3)	< 30	mg/l			WG807365	08/06/15 18:10
Specific Conductance	0.750	umhos/cm			WG807460	08/07/15 14:30
Alkalinity	< 20	mg/l			WG807528	08/10/15 08:51

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
pH	su	7.10	7.10	0.282	1	L779191-02	WG806441
pH	su	7.85	7.84	0.127	1	L780208-01	WG806441
Bromide	mg/l	0.0	0.0	0.0	20	L780123-01	WG806382
Chloride	mg/l	75.0	79.1	5.00	20	L780123-01	WG806382
Nitrate	mg/l	0.0	0.0716	0.0	20	L780123-01	WG806382
Nitrite	mg/l	0.0	0.0	0.0	20	L780123-01	WG806382
Sulfate	mg/l	16.0	16.4	0.0	20	L780123-01	WG806382
Bromide	mg/l	0.0	0.0	0.0	20	L780210-01	WG806382
Chloride	mg/l	58.0	58.2	0.0	20	L780210-01	WG806382
Nitrate	mg/l	120.	122.	0.0	20	L780210-01	WG806382
Nitrite	mg/l	2.20	2.16	0.0	20	L780210-01	WG806382
Sulfate	mg/l	0.0	53.2	2.00	20	L780210-01	WG806382
Dissolved Solids	mg/l	15100	15100	0.265	5	L779939-01	WG806423
Hardness, Total (mg/L as CaCO3)	mg/l	64.0	63.2	1.26	20	L780316-02	WG807365
Hardness, Total (mg/L as CaCO3)	mg/l	220.	226.	2.69	20	L775589-05	WG807365
Specific Conductance	umhos/cm	1700	1700	1.78	20	L779680-01	WG807460
Specific Conductance	umhos/cm	300.	300.	1.01	20	L780938-01	WG807460
Alkalinity	mg/l	620.	630.	2.41	20	L780108-01	WG807528

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
pH	su	5.63	5.60	99.5	98.2-101.8	WG806441
Bromide	mg/l	40	41.0	102.	90-110	WG806382
Chloride	mg/l	40	39.8	99.0	90-110	WG806382
Nitrate	mg/l	8	8.22	103.	90-110	WG806382
Nitrite	mg/l	8	7.92	99.0	90-110	WG806382
Sulfate	mg/l	40	39.5	99.0	90-110	WG806382

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Level II

L780105

August 10, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Arsenic,Dissolved	mg/l	1	1.06	106.	85-115	WG806774
Barium,Dissolved	mg/l	1	1.04	104.	85-115	WG806774
Cadmium,Dissolved	mg/l	1	1.07	107.	85-115	WG806774
Chromium,Dissolved	mg/l	1	1.06	106.	85-115	WG806774
Lead,Dissolved	mg/l	1	1.05	105.	85-115	WG806774
Selenium,Dissolved	mg/l	1	1.11	111.	85-115	WG806774
Silver,Dissolved	mg/l	1	1.07	107.	85-115	WG806774
1,2,4-Trichlorobenzene	mg/l	.05	0.0323	64.6	22.9-96.1	WG806546
2,4,6-Trichlorophenol	mg/l	.05	0.0424	84.7	29.8-107	WG806546
2,4-Dichlorophenol	mg/l	.05	0.0411	82.1	31.4-103	WG806546
2,4-Dimethylphenol	mg/l	.05	0.0423	84.6	31.9-107	WG806546
2,4-Dinitrophenol	mg/l	.05	0.0338	67.5	24.2-128	WG806546
2,4-Dinitrotoluene	mg/l	.05	0.0459	91.8	31.2-105	WG806546
2,6-Dinitrotoluene	mg/l	.05	0.0468	93.5	30.6-106	WG806546
2-Chloronaphthalene	mg/l	.05	0.0386	77.2	33.6-105	WG806546
2-Chlorophenol	mg/l	.05	0.0357	71.5	26.2-91.5	WG806546
2-Nitrophenol	mg/l	.05	0.0419	83.7	25.9-106	WG806546
3,3-Dichlorobenzidine	mg/l	.05	0.0447	89.4	27.2-142	WG806546
4,6-Dinitro-2-methylphenol	mg/l	.05	0.0456	91.2	18.4-148	WG806546
4-Bromophenyl-phenylether	mg/l	.05	0.0435	87.0	40.7-116	WG806546
4-Chloro-3-methylphenol	mg/l	.05	0.0428	85.6	35.7-100	WG806546
4-Chlorophenyl-phenylether	mg/l	.05	0.0413	82.6	39-113	WG806546
4-Nitrophenol	mg/l	.05	0.0220	44.0	10-52.7	WG806546
Acenaphthene	mg/l	.05	0.0396	79.2	38.7-109	WG806546
Acenaphthylene	mg/l	.05	0.0410	82.1	36-106	WG806546
Anthracene	mg/l	.05	0.0433	86.5	43.6-113	WG806546
1,2-Diphenylhydrazine	mg/l	.05	0.0415	83.0	37.6-111	WG806546
Benzidine	mg/l	.05	0.0313	62.7	10-165.2	WG806546
Benzo(a)anthracene	mg/l	.05	0.0399	79.8	51.2-112	WG806546
Benzo(a)pyrene	mg/l	.05	0.0405	80.9	45.6-106	WG806546
Benzo(b)fluoranthene	mg/l	.05	0.0445	89.1	47.6-111	WG806546
Benzo(g,h,i)perylene	mg/l	.05	0.0432	86.5	45.2-117	WG806546
Benzo(k)fluoranthene	mg/l	.05	0.0418	83.6	49.4-114	WG806546
Benzylbutyl phthalate	mg/l	.05	0.0436	87.3	31.8-123	WG806546
Bis(2-chlorethoxy)methane	mg/l	.05	0.0370	74.0	37.2-111	WG806546
Bis(2-chloroethyl)ether	mg/l	.05	0.0362	72.3	22.6-108	WG806546
Bis(2-chloroisopropyl)ether	mg/l	.05	0.0377	75.4	32.9-100	WG806546
Bis(2-ethylhexyl)phthalate	mg/l	.05	0.0449	89.8	36.9-134	WG806546
Chrysene	mg/l	.05	0.0411	82.2	54.6-120	WG806546
Di-n-butyl phthalate	mg/l	.05	0.0439	87.8	41.8-120	WG806546
Di-n-octyl phthalate	mg/l	.05	0.0443	88.5	39.7-112	WG806546
Dibenz(a,h)anthracene	mg/l	.05	0.0409	81.8	42.8-118	WG806546
Diethyl phthalate	mg/l	.05	0.0429	85.8	36.5-129	WG806546
Dimethyl phthalate	mg/l	.05	0.0426	85.1	35.3-128	WG806546
Fluoranthene	mg/l	.05	0.0425	85.0	45.9-115	WG806546
Fluorene	mg/l	.05	0.0414	82.8	41-112	WG806546
Hexachloro-1,3-butadiene	mg/l	.05	0.0326	65.3	16.1-104	WG806546
Hexachlorobenzene	mg/l	.05	0.0432	86.4	38.5-116	WG806546
Hexachlorocyclopentadiene	mg/l	.05	0.0229	45.8	10-121	WG806546
Hexachloroethane	mg/l	.05	0.0329	65.9	16.5-89.8	WG806546
Indeno(1,2,3-cd)pyrene	mg/l	.05	0.0435	87.0	45-116	WG806546
Isophorone	mg/l	.05	0.0406	81.3	35.4-112	WG806546
n-Nitrosodi-n-propylamine	mg/l	.05	0.0407	81.3	33.2-106	WG806546
n-Nitrosodimethylamine	mg/l	.05	0.0228	45.6	10-80.1	WG806546
n-Nitrosodiphenylamine	mg/l	.05	0.0424	84.8	44.4-113	WG806546
Naphthalene	mg/l	.05	0.0355	71.0	32.2-101	WG806546

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Est. 1970

WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L780105

August 10, 2015

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Nitrobenzene	mg/l	.05	0.0391	78.3	31.4-106	WG806546
Pentachlorophenol	mg/l	.05	0.0430	86.1	10.9-97.4	WG806546
Phenanthrene	mg/l	.05	0.0409	81.8	46.4-113	WG806546
Phenol	mg/l	.05	0.0193	38.5	10-57.9	WG806546
Pyrene	mg/l	.05	0.0423	84.7	46.3-117	WG806546
2,4,6-Tribromophenol				106.0	11.2-130	WG806546
2-Fluorobiphenyl				80.30	29.5-131	WG806546
2-Fluorophenol				50.90	10-77.9	WG806546
Nitrobenzene-d5				78.40	21.8-123	WG806546
Phenol-d5				37.80	5-70.1	WG806546
p-Terphenyl-d14				78.20	29.3-137	WG806546
1,1,1-Trichloroethane	mg/l	.025	0.0265	106.	73.2-123	WG806902
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0267	107.	70.7-122	WG806902
1,1,2-Trichloroethane	mg/l	.025	0.0251	100.	77.7-118	WG806902
1,1-Dichloroethane	mg/l	.025	0.0271	108.	70.7-126	WG806902
1,1-Dichloroethene	mg/l	.025	0.0330	132.*	67.8-129	WG806902
1,2-Dichlorobenzene	mg/l	.025	0.0263	105.	78.4-117	WG806902
1,2-Dichloroethane	mg/l	.025	0.0284	114.	68.8-124	WG806902
1,2-Dichloropropane	mg/l	.025	0.0274	110.	76.5-119	WG806902
1,3-Dichlorobenzene	mg/l	.025	0.0271	108.	70.8-128	WG806902
1,4-Dichlorobenzene	mg/l	.025	0.0263	105.	78.8-115	WG806902
2-Chloroethyl vinyl ether	mg/l	.125	0.133	107.	43.8-150	WG806902
Benzene	mg/l	.025	0.0256	102.	74.8-121	WG806902
Bromodichloromethane	mg/l	.025	0.0267	107.	75.1-116	WG806902
Bromoform	mg/l	.025	0.0262	105.	67.5-130	WG806902
Bromomethane	mg/l	.025	0.0293	117.	49.9-162	WG806902
Carbon tetrachloride	mg/l	.025	0.0271	108.	70.2-123	WG806902
Chlorobenzene	mg/l	.025	0.0269	108.	78.1-119	WG806902
Chlorodibromomethane	mg/l	.025	0.0257	103.	74-121	WG806902
Chloroethane	mg/l	.025	0.0303	121.	61.7-135	WG806902
Chloroform	mg/l	.025	0.0261	104.	76-121	WG806902
Chloromethane	mg/l	.025	0.0232	92.6	61.5-129	WG806902
cis-1,3-Dichloropropene	mg/l	.025	0.0266	106.	78.2-120	WG806902
Dichlorodifluoromethane	mg/l	.025	0.0231	92.5	54.8-135	WG806902
Ethylbenzene	mg/l	.025	0.0263	105.	78.8-122	WG806902
Methyl tert-butyl ether	mg/l	.025	0.0252	101.	71.2-126	WG806902
Methylene Chloride	mg/l	.025	0.0251	100.	70.3-120	WG806902
Naphthalene	mg/l	.025	0.0262	105.	68.4-128	WG806902
Tetrachloroethene	mg/l	.025	0.0263	105.	72.6-126	WG806902
Toluene	mg/l	.025	0.0262	105.	79.7-116	WG806902
trans-1,2-Dichloroethene	mg/l	.025	0.0255	102.	72.6-121	WG806902
trans-1,3-Dichloropropene	mg/l	.025	0.0279	112.	74.3-123	WG806902
Trichloroethene	mg/l	.025	0.0260	104.	77.7-118	WG806902
Trichlorofluoromethane	mg/l	.025	0.0322	129.	63.5-135	WG806902
Vinyl chloride	mg/l	.025	0.0287	115.	65.9-128	WG806902
Xylenes, Total	mg/l	.075	0.0784	105.	78.7-121	WG806902
4-Bromofluorobenzene				101.0	71-126	WG806902
Dibromofluoromethane				98.60	78.3-121	WG806902
Toluene-d8				103.0	88.5-111	WG806902
a,a,a-Trifluorotoluene				100.0	85-114	WG806902
Mercury,Dissolved	mg/l	.003	0.00306	102.	85-115	WG807035
Dissolved Solids	mg/l	8800	8450	96.0	85-115	WG806423

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Quality Assurance Report
Level II

L780105

August 10, 2015

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Hardness, Total (mg/L as CaCO3)	mg/l	200	206.	103.	85-115	WG807365
Specific Conductance	umhos/cm	873	887.	102.	90-110	WG807460
Alkalinity	mg/l	100	100.	100.	85-115	WG807528

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
pH	su	5.60	5.60	99.0	98.2-101.8	0.00	20	WG806441
Bromide	mg/l	41.0	41.0	102.	90-110	0.0	20	WG806382
Chloride	mg/l	39.8	39.8	99.0	90-110	0.0	20	WG806382
Nitrate	mg/l	8.19	8.22	102.	90-110	0.0	20	WG806382
Nitrite	mg/l	7.94	7.92	99.0	90-110	0.0	20	WG806382
Sulfate	mg/l	39.5	39.5	99.0	90-110	0.0	20	WG806382
Arsenic,Dissolved	mg/l	1.05	1.06	105.	85-115	1.00	20	WG806774
Barium,Dissolved	mg/l	1.04	1.04	104.	85-115	1.00	20	WG806774
Cadmium,Dissolved	mg/l	1.07	1.07	106.	85-115	1.00	20	WG806774
Chromium,Dissolved	mg/l	1.05	1.06	105.	85-115	1.00	20	WG806774
Lead,Dissolved	mg/l	1.04	1.05	104.	85-115	1.00	20	WG806774
Selenium,Dissolved	mg/l	1.10	1.11	110.	85-115	0.0	20	WG806774
Silver,Dissolved	mg/l	1.07	1.07	107.	85-115	1.00	20	WG806774
1,2,4-Trichlorobenzene	mg/l	0.0330	0.0323	66.0	22.9-96.1	1.98	27.5	WG806546
2,4,6-Trichlorophenol	mg/l	0.0422	0.0424	84.0	29.8-107	0.340	24.1	WG806546
2,4-Dichlorophenol	mg/l	0.0399	0.0411	80.0	31.4-103	2.96	24.9	WG806546
2,4-Dimethylphenol	mg/l	0.0420	0.0423	84.0	31.9-107	0.710	25.7	WG806546
2,4-Dinitrophenol	mg/l	0.0385	0.0338	77.0	24.2-128	13.0	20.5	WG806546
2,4-Dinitrotoluene	mg/l	0.0471	0.0459	94.0	31.2-105	2.59	22	WG806546
2,6-Dinitrotoluene	mg/l	0.0481	0.0468	96.0	30.6-106	2.85	23.1	WG806546
2-Chloronaphthalene	mg/l	0.0391	0.0386	78.0	33.6-105	1.34	23	WG806546
2-Chlorophenol	mg/l	0.0343	0.0357	69.0	26.2-91.5	4.04	26.5	WG806546
2-Nitrophenol	mg/l	0.0424	0.0419	85.0	25.9-106	1.27	26.9	WG806546
3,3-Dichlorobenzidine	mg/l	0.0441	0.0447	88.0	27.2-142	1.44	22.3	WG806546
4,6-Dinitro-2-methylphenol	mg/l	0.0450	0.0456	90.0	18.4-148	1.28	24.4	WG806546
4-Bromophenyl-phenylether	mg/l	0.0432	0.0435	86.0	40.7-116	0.790	21	WG806546
4-Chloro-3-methylphenol	mg/l	0.0430	0.0428	86.0	35.7-100	0.540	22.9	WG806546
4-Chlorophenyl-phenylether	mg/l	0.0416	0.0413	83.0	39-113	0.630	20.9	WG806546
4-Nitrophenol	mg/l	0.0248	0.0220	50.0	10-52.7	12.0	40	WG806546
Acenaphthene	mg/l	0.0393	0.0396	78.0	38.7-109	0.760	21.5	WG806546
Acenaphthylene	mg/l	0.0402	0.0410	80.0	36-106	1.97	21	WG806546
Anthracene	mg/l	0.0431	0.0433	86.0	43.6-113	0.280	18.8	WG806546
1,2-Diphenylhydrazine	mg/l	0.0430	0.0415	86.0	37.6-111	3.61	21.1	WG806546
Benzidine	mg/l	0.0285	0.0313	57.0	10-165.2	9.40	40	WG806546
Benzo(a)anthracene	mg/l	0.0405	0.0399	81.0	51.2-112	1.60	20	WG806546
Benzo(a)pyrene	mg/l	0.0411	0.0405	82.0	45.6-106	1.43	20	WG806546
Benzo(b)fluoranthene	mg/l	0.0446	0.0445	89.0	47.6-111	0.0800	20	WG806546
Benzo(g,h,i)perylene	mg/l	0.0437	0.0432	87.0	45.2-117	1.03	20	WG806546
Benzo(k)fluoranthene	mg/l	0.0419	0.0418	84.0	49.4-114	0.260	20	WG806546
Benzylbutyl phthalate	mg/l	0.0438	0.0436	88.0	31.8-123	0.320	20.7	WG806546
Bis(2-chlorethoxy)methane	mg/l	0.0378	0.0370	76.0	37.2-111	2.17	24.1	WG806546

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Quality Assurance Report
Level II

L780105

August 10, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
Bis(2-chloroethyl)ether	mg/l	0.0359	0.0362	72.0	22.6-108	0.880	27.9	WG806546
Bis(2-chloroisopropyl)ether	mg/l	0.0374	0.0377	75.0	32.9-100	0.670	25.1	WG806546
Bis(2-ethylhexyl)phthalate	mg/l	0.0439	0.0449	88.0	36.9-134	2.25	23.6	WG806546
Chrysene	mg/l	0.0402	0.0411	80.0	54.6-120	2.24	20	WG806546
Di-n-butyl phthalate	mg/l	0.0453	0.0439	90.0	41.8-120	3.15	20.2	WG806546
Di-n-octyl phthalate	mg/l	0.0457	0.0443	91.0	39.7-112	3.26	21.1	WG806546
Dibenz(a,h)anthracene	mg/l	0.0415	0.0409	83.0	42.8-118	1.43	20	WG806546
Diethyl phthalate	mg/l	0.0435	0.0429	87.0	36.5-129	1.36	20	WG806546
Dimethyl phthalate	mg/l	0.0430	0.0426	86.0	35.3-128	0.970	20.8	WG806546
Fluoranthene	mg/l	0.0433	0.0425	86.0	45.9-115	1.89	20	WG806546
Fluorene	mg/l	0.0421	0.0414	84.0	41-112	1.78	20.2	WG806546
Hexachloro-1,3-butadiene	mg/l	0.0321	0.0326	64.0	16.1-104	1.70	31.2	WG806546
Hexachlorobenzene	mg/l	0.0419	0.0432	84.0	38.5-116	3.06	20.1	WG806546
Hexachlorocyclopentadiene	mg/l	0.0219	0.0229	44.0	10-121	4.47	27.9	WG806546
Hexachloroethane	mg/l	0.0306	0.0329	61.0	16.5-89.8	7.35	30.7	WG806546
Indeno(1,2,3-cd)pyrene	mg/l	0.0432	0.0435	86.0	45-116	0.590	20	WG806546
Isophorone	mg/l	0.0425	0.0406	85.0	35.4-112	4.49	21.5	WG806546
n-Nitrosodi-n-propylamine	mg/l	0.0414	0.0407	83.0	33.2-106	1.87	23.7	WG806546
n-Nitrosodimethylamine	mg/l	0.0231	0.0228	46.0	10-80.1	1.18	37.5	WG806546
n-Nitrosodiphenylamine	mg/l	0.0438	0.0424	88.0	44.4-113	3.30	20	WG806546
Naphthalene	mg/l	0.0359	0.0355	72.0	32.2-101	1.21	23.8	WG806546
Nitrobenzene	mg/l	0.0388	0.0391	78.0	31.4-106	0.790	25.7	WG806546
Pentachlorophenol	mg/l	0.0442	0.0430	88.0	10.9-97.4	2.63	35.1	WG806546
Phenanthrene	mg/l	0.0411	0.0409	82.0	46.4-113	0.540	20	WG806546
Phenol	mg/l	0.0203	0.0193	41.0	10-57.9	5.34	35	WG806546
Pyrene	mg/l	0.0422	0.0423	84.0	46.3-117	0.350	20	WG806546
2,4,6-Tribromophenol				98.50	11.2-130			WG806546
2-Fluorobiphenyl				77.90	29.5-131			WG806546
2-Fluorophenol				54.40	10-77.9			WG806546
Nitrobenzene-d5				79.40	21.8-123			WG806546
Phenol-d5				40.00	5-70.1			WG806546
p-Terphenyl-d14				72.80	29.3-137			WG806546
1,1,1-Trichloroethane	mg/l	0.0274	0.0265	110.	73.2-123	3.42	20	WG806902
1,1,2,2-Tetrachloroethane	mg/l	0.0279	0.0267	112.	70.7-122	4.48	20	WG806902
1,1,2-Trichloroethane	mg/l	0.0261	0.0251	104.	77.7-118	3.94	20	WG806902
1,1-Dichloroethane	mg/l	0.0277	0.0271	111.	70.7-126	2.09	20	WG806902
1,1-Dichloroethene	mg/l	0.0355	0.0330	142*	67.8-129	7.35	20	WG806902
1,2-Dichlorobenzene	mg/l	0.0272	0.0263	109.	78.4-117	3.28	20	WG806902
1,2-Dichloroethane	mg/l	0.0299	0.0284	119.	68.8-124	5.11	20	WG806902
1,2-Dichloropropane	mg/l	0.0277	0.0274	111.	76.5-119	1.08	20	WG806902
1,3-Dichlorobenzene	mg/l	0.0284	0.0271	114.	70.8-128	4.95	20	WG806902
1,4-Dichlorobenzene	mg/l	0.0276	0.0263	110.	78.8-115	4.74	20	WG806902
2-Chloroethyl vinyl ether	mg/l	0.134	0.133	107.	43.8-150	0.470	20	WG806902
Benzene	mg/l	0.0262	0.0256	105.	74.8-121	2.49	20	WG806902
Bromodichloromethane	mg/l	0.0271	0.0267	108.	75.1-116	1.62	20	WG806902
Bromoform	mg/l	0.0266	0.0262	106.	67.5-130	1.63	20	WG806902
Bromomethane	mg/l	0.0323	0.0293	129.	49.9-162	9.94	20	WG806902
Carbon tetrachloride	mg/l	0.0279	0.0271	112.	70.2-123	3.06	20	WG806902
Chlorobenzene	mg/l	0.0274	0.0269	110.	78.1-119	1.73	20	WG806902
Chlorodibromomethane	mg/l	0.0264	0.0257	106.	74-121	2.73	20	WG806902
Chloroethane	mg/l	0.0325	0.0303	130.	61.7-135	6.90	20	WG806902
Chloroform	mg/l	0.0270	0.0261	108.	76-121	3.34	20	WG806902
Chloromethane	mg/l	0.0242	0.0232	97.0	61.5-129	4.52	20	WG806902
cis-1,3-Dichloropropene	mg/l	0.0270	0.0266	108.	78.2-120	1.43	20	WG806902
Dichlorodifluoromethane	mg/l	0.0258	0.0231	103.	54.8-135	11.0	20	WG806902
Ethylbenzene	mg/l	0.0273	0.0263	109.	78.8-122	3.63	20	WG806902
Methyl tert-butyl ether	mg/l	0.0253	0.0252	101.	71.2-126	0.780	20	WG806902

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Quality Assurance Report
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August 10, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
Methylene Chloride	mg/l	0.0261	0.0251	104.	70.3-120	4.10	20	WG806902
Naphthalene	mg/l	0.0263	0.0262	105.	68.4-128	0.490	20	WG806902
Tetrachloroethene	mg/l	0.0273	0.0263	109.	72.6-126	3.76	20	WG806902
Toluene	mg/l	0.0267	0.0262	107.	79.7-116	1.90	20	WG806902
trans-1,2-Dichloroethene	mg/l	0.0264	0.0255	106.	72.6-121	3.49	20	WG806902
trans-1,3-Dichloropropene	mg/l	0.0287	0.0279	115.	74.3-123	2.80	20	WG806902
Trichloroethene	mg/l	0.0260	0.0260	104.	77.7-118	0.120	20	WG806902
Trichlorofluoromethane	mg/l	0.0342	0.0322	137*	63.5-135	6.01	20	WG806902
Vinyl chloride	mg/l	0.0302	0.0287	121.	65.9-128	5.38	20	WG806902
Xylenes, Total	mg/l	0.0811	0.0784	108.	78.7-121	3.36	20	WG806902
4-Bromofluorobenzene				101.0	71-126			WG806902
Dibromofluoromethane				100.0	78.3-121			WG806902
Toluene-d8				103.0	88.5-111			WG806902
a,a,a-Trifluorotoluene				98.90	85-114			WG806902
Mercury,Dissolved	mg/l	0.00274	0.00306	91.0	85-115	11.0	20	WG807035
Dissolved Solids	mg/l	8620	8450	98.0	85-115	1.99	5	WG806423
Hardness, Total (mg/L as CaCO3)	mg/l	201.	206.	100.	85-115	2.46	20	WG807365
Specific Conductance	umhos/	888.	887.	102.	90-110	0.113	20	WG807460
Alkalinity	mg/l	100.	100.	100.	85-115	0.0	20	WG807528

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Bromide	mg/l	46.3	0.0	50	93.0	80-120	L780123-05	WG806382
Nitrate	mg/l	4.52	0.0	5	90.0	80-120	L780123-05	WG806382
Nitrite	mg/l	4.82	0.0	5	96.0	80-120	L780123-05	WG806382
Sulfate	mg/l	119.	76.9	50	84.0	80-120	L780123-05	WG806382
Arsenic,Dissolved	mg/l	1.25	0.0147	1	120.	75-125	L779380-01	WG806774
Barium,Dissolved	mg/l	1.05	0.0515	1	100.	75-125	L779380-01	WG806774
Cadmium,Dissolved	mg/l	1.22	-0.00115	1	120.	75-125	L779380-01	WG806774
Chromium,Dissolved	mg/l	1.03	0.0160	1	100.	75-125	L779380-01	WG806774
Lead,Dissolved	mg/l	1.12	0.0390	1	110.	75-125	L779380-01	WG806774
Selenium,Dissolved	mg/l	1.38	0.0298	1	140.*	75-125	L779380-01	WG806774
Silver,Dissolved	mg/l	1.32	0.00535	1	130.*	75-125	L779380-01	WG806774
1,1,1-Trichloroethane	mg/l	0.0263	0.0	.025	100.	58.7-134	L779541-01	WG806902
1,1,2,2-Tetrachloroethane	mg/l	0.0289	0.0	.025	120.	56-132	L779541-01	WG806902
1,1,2-Trichloroethane	mg/l	0.0251	0.0	.025	100.	66.3-125	L779541-01	WG806902
1,1-Dichloroethane	mg/l	0.0268	0.0	.025	110.	58.5-132	L779541-01	WG806902
1,1-Dichloroethene	mg/l	0.0329	0.0	.025	130.	51.1-140	L779541-01	WG806902
1,2-Dichlorobenzene	mg/l	0.0260	0.0	.025	100.	68.2-123	L779541-01	WG806902
1,2-Dichloroethane	mg/l	0.0294	0.0	.025	120.	60-126	L779541-01	WG806902
1,2-Dichloropropane	mg/l	0.0268	0.0	.025	110.	64.2-123	L779541-01	WG806902
1,3-Dichlorobenzene	mg/l	0.0260	0.0	.025	100.	63.1-131	L779541-01	WG806902
1,4-Dichlorobenzene	mg/l	0.0257	0.0	.025	100.	68.6-123	L779541-01	WG806902
2-Chloroethyl vinyl ether	mg/l	0.000366	0.0	.125	0.290*	10-155	L779541-01	WG806902

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L780105

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Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Benzene	mg/l	0.0250	0.0	.025	100.	54.3-133	L779541-01	WG806902
Bromodichloromethane	mg/l	0.0262	0.0	.025	100.	63.9-121	L779541-01	WG806902
Bromoform	mg/l	0.0260	0.0	.025	100.	59.5-134	L779541-01	WG806902
Bromomethane	mg/l	0.0293	0.0	.025	120.	41.7-155	L779541-01	WG806902
Carbon tetrachloride	mg/l	0.0265	0.0	.025	110.	55.7-134	L779541-01	WG806902
Chlorobenzene	mg/l	0.0257	0.0	.025	100.	67-125	L779541-01	WG806902
Chlorodibromomethane	mg/l	0.0255	0.0	.025	100.	64.3-125	L779541-01	WG806902
Chloroethane	mg/l	0.0294	0.0	.025	120.	51.5-136	L779541-01	WG806902
Chloroform	mg/l	0.0265	0.0	.025	110.	63-129	L779541-01	WG806902
Chloromethane	mg/l	0.0224	0.0	.025	90.0	42.4-135	L779541-01	WG806902
cis-1,3-Dichloropropene	mg/l	0.0261	0.0	.025	100.	66.4-125	L779541-01	WG806902
Dichlorodifluoromethane	mg/l	0.0235	0.0	.025	94.0	40.6-144	L779541-01	WG806902
Ethylbenzene	mg/l	0.0248	0.0	.025	99.0	61.4-133	L779541-01	WG806902
Methyl tert-butyl ether	mg/l	0.0261	0.0	.025	100.	57.7-134	L779541-01	WG806902
Methylene Chloride	mg/l	0.0257	0.0	.025	100.	58.1-122	L779541-01	WG806902
Naphthalene	mg/l	0.0264	0.0	.025	100.	58-135	L779541-01	WG806902
Tetrachloroethene	mg/l	0.0354	0.0141	.025	86.0	53-139	L779541-01	WG806902
Toluene	mg/l	0.0254	0.0	.025	100.	61.4-130	L779541-01	WG806902
trans-1,2-Dichloroethene	mg/l	0.0253	0.0	.025	100.	56.5-129	L779541-01	WG806902
trans-1,3-Dichloropropene	mg/l	0.0281	0.0	.025	110.	64.1-128	L779541-01	WG806902
Trichloroethene	mg/l	0.0259	0.00108	.025	100.	44.1-149	L779541-01	WG806902
Trichlorofluoromethane	mg/l	0.0324	0.0	.025	130.	49.6-145	L779541-01	WG806902
Vinyl chloride	mg/l	0.0275	0.0	.025	110.	47.8-137	L779541-01	WG806902
Xylenes, Total	mg/l	0.0750	0.0	.075	100.	63.3-131	L779541-01	WG806902
4-Bromofluorobenzene					99.80	71-126		WG806902
Dibromofluoromethane					102.0	78.3-121		WG806902
Toluene-d8					105.0	88.5-111		WG806902
a,a,a-Trifluorotoluene					99.00	85-114		WG806902
Mercury,Dissolved	mg/l	0.00112	-0.000013	.003	37.0*	70-130	L780108-01	WG807035
Hardness, Total (mg/L as CaCO3)	mg/l	191.	60.9	150	87.0	80-120	L780232-01	WG807365
Alkalinity	mg/l	1200	730.	100	94.0	80-120	L780105-01	WG807528

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Bromide	mg/l	46.9	46.3	93.9	80-120	1.00	20	L780123-05	WG806382
Nitrate	mg/l	4.59	4.52	91.7	80-120	1.00	20	L780123-05	WG806382
Nitrite	mg/l	4.85	4.82	97.0	80-120	1.00	20	L780123-05	WG806382
Sulfate	mg/l	119.	119.	84.3	80-120	0.0	20	L780123-05	WG806382
Arsenic,Dissolved	mg/l	1.24	1.25	123.	75-125	1.00	20	L779380-01	WG806774
Barium,Dissolved	mg/l	1.05	1.05	99.8	75-125	1.00	20	L779380-01	WG806774
Cadmium,Dissolved	mg/l	1.21	1.22	121.	75-125	1.00	20	L779380-01	WG806774
Chromium,Dissolved	mg/l	1.03	1.03	101.	75-125	0.0	20	L779380-01	WG806774
Lead,Dissolved	mg/l	1.10	1.12	106.	75-125	1.00	20	L779380-01	WG806774
Selenium,Dissolved	mg/l	1.37	1.38	134.*	75-125	1.00	20	L779380-01	WG806774
Silver,Dissolved	mg/l	1.31	1.32	131.*	75-125	0.0	20	L779380-01	WG806774
1,1,1-Trichloroethane	mg/l	0.0264	0.0263	106.	58.7-134	0.190	20	L779541-01	WG806902
1,1,2,2-Tetrachloroethane	mg/l	0.0299	0.0289	120.	56-132	3.19	22.2	L779541-01	WG806902
1,1,2-Trichloroethane	mg/l	0.0262	0.0251	105.	66.3-125	4.24	20	L779541-01	WG806902

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Quality Assurance Report
Level II

L780105

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Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,1-Dichloroethane	mg/l	0.0274	0.0268	110.	58.5-132	2.22	20	L779541-01	WG806902
1,1-Dichloroethene	mg/l	0.0334	0.0329	133.	51.1-140	1.34	20.2	L779541-01	WG806902
1,2-Dichlorobenzene	mg/l	0.0268	0.0260	107.	68.2-123	2.68	20	L779541-01	WG806902
1,2-Dichloroethane	mg/l	0.0297	0.0294	119.	60-126	0.790	20	L779541-01	WG806902
1,2-Dichloropropane	mg/l	0.0275	0.0268	110.	64.2-123	2.70	20	L779541-01	WG806902
1,3-Dichlorobenzene	mg/l	0.0274	0.0260	109.	63.1-131	5.15	20	L779541-01	WG806902
1,4-Dichlorobenzene	mg/l	0.0268	0.0257	107.	68.6-123	4.53	20	L779541-01	WG806902
2-Chloroethyl vinyl ether	mg/l	0.000374	0.000366	0.299*	10-155	2.14	20	L779541-01	WG806902
Benzene	mg/l	0.0256	0.0250	102.	54.3-133	2.30	20	L779541-01	WG806902
Bromodichloromethane	mg/l	0.0270	0.0262	108.	63.9-121	2.96	20	L779541-01	WG806902
Bromoform	mg/l	0.0275	0.0260	110.	59.5-134	5.50	20.5	L779541-01	WG806902
Bromomethane	mg/l	0.0290	0.0293	116.	41.7-155	0.870	21.9	L779541-01	WG806902
Carbon tetrachloride	mg/l	0.0270	0.0265	108.	55.7-134	1.71	20	L779541-01	WG806902
Chlorobenzene	mg/l	0.0269	0.0257	107.	67-125	4.32	20	L779541-01	WG806902
Chlorodibromomethane	mg/l	0.0269	0.0255	108.	64.3-125	5.16	20.8	L779541-01	WG806902
Chloroethane	mg/l	0.0299	0.0294	120.	51.5-136	1.63	40	L779541-01	WG806902
Chloroform	mg/l	0.0272	0.0265	109.	63-129	2.44	20	L779541-01	WG806902
Chloromethane	mg/l	0.0228	0.0224	91.1	42.4-135	1.52	20	L779541-01	WG806902
cis-1,3-Dichloropropene	mg/l	0.0263	0.0261	105.	66.4-125	0.600	20	L779541-01	WG806902
Dichlorodifluoromethane	mg/l	0.0233	0.0235	93.4	40.6-144	0.710	20.2	L779541-01	WG806902
Ethylbenzene	mg/l	0.0257	0.0248	103.	61.4-133	3.72	20	L779541-01	WG806902
Methyl tert-butyl ether	mg/l	0.0270	0.0261	108.	57.7-134	3.59	20	L779541-01	WG806902
Methylene Chloride	mg/l	0.0264	0.0257	106.	58.1-122	2.86	20	L779541-01	WG806902
Naphthalene	mg/l	0.0280	0.0264	112.	58-135	5.98	25.5	L779541-01	WG806902
Tetrachloroethene	mg/l	0.0369	0.0354	91.3	53-139	4.02	20	L779541-01	WG806902
Toluene	mg/l	0.0258	0.0254	103.	61.4-130	1.45	20	L779541-01	WG806902
trans-1,2-Dichloroethene	mg/l	0.0256	0.0253	102.	56.5-129	1.29	20	L779541-01	WG806902
trans-1,3-Dichloropropene	mg/l	0.0285	0.0281	114.	64.1-128	1.56	20	L779541-01	WG806902
Trichloroethene	mg/l	0.0265	0.0259	102.	44.1-149	2.17	20	L779541-01	WG806902
Trichlorofluoromethane	mg/l	0.0323	0.0324	129.	49.6-145	0.350	21.2	L779541-01	WG806902
Vinyl chloride	mg/l	0.0287	0.0275	115.	47.8-137	4.44	20	L779541-01	WG806902
Xylenes, Total	mg/l	0.0785	0.0750	105.	63.3-131	4.49	20	L779541-01	WG806902
4-Bromofluorobenzene				102.0	71-126				WG806902
Dibromofluoromethane				103.0	78.3-121				WG806902
Toluene-d8				104.0	88.5-111				WG806902
a,a,a-Trifluorotoluene				97.90	85-114				WG806902
Mercury,Dissolved	mg/l	0.000957	0.00112	32.4*	70-130	15.0	20	L780108-01	WG807035
Hardness, Total (mg/L as CaCO3)	mg/l	180.	191.	79.4*	80-120	5.93	20	L780232-01	WG807365
Alkalinity	mg/l	1200	1200	94.0	80-120	0.0	20	L780105-01	WG807528

Post Spike

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L780105

August 10, 2015

Serial Dilution

Batch number /Run number / Sample number cross reference

WG806441: R3055992: L780105-
WG806382: R3056144: L780105-
WG806774: R3056449: L780105-
WG806902: R3056883: L780105-
WG806546: R3057185 R3057604: L780105- 01
WG807035: R3057563: L780105-
WG806423: R3057723: L780105-
WG807365: R3057926: L780105-
WG807460: R3058460: L780105-
WG807528: R3059403: L780105-

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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WPX Energy
Ms. Karolina Blaney
1058 County Road 215

Parachute, CO 81635

Quality Assurance Report
Level II

L780105

August 10, 2015

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

ANALYTICAL REPORT

August 31, 2015

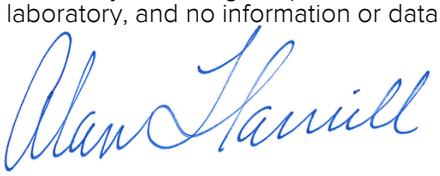
WPX Energy

Sample Delivery Group:	L780106
Samples Received:	07/31/2015
Project Number:	PARACHUTE C E&P WMF
Description:	Parachute C E&P WMF
Site:	PARACHUTE C E&P WMF
Report To:	Ms. Karolina Blaney 1058 County Road 215 Parachute, CO 81635

Entire Report Reviewed By:

T. Alan Harvill
Technical Service Representative

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the



T. Alan Harvill
Technical Service Representative

Project Narrative

L780106 -01 contains subout data that is included after the chain of custody.

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
ND,U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.
SDL	Sample Detection Limit.
MQL	Method Quantitation Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.

Qualifier	Description

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

ACCREDITATIONS & LOCATIONS

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

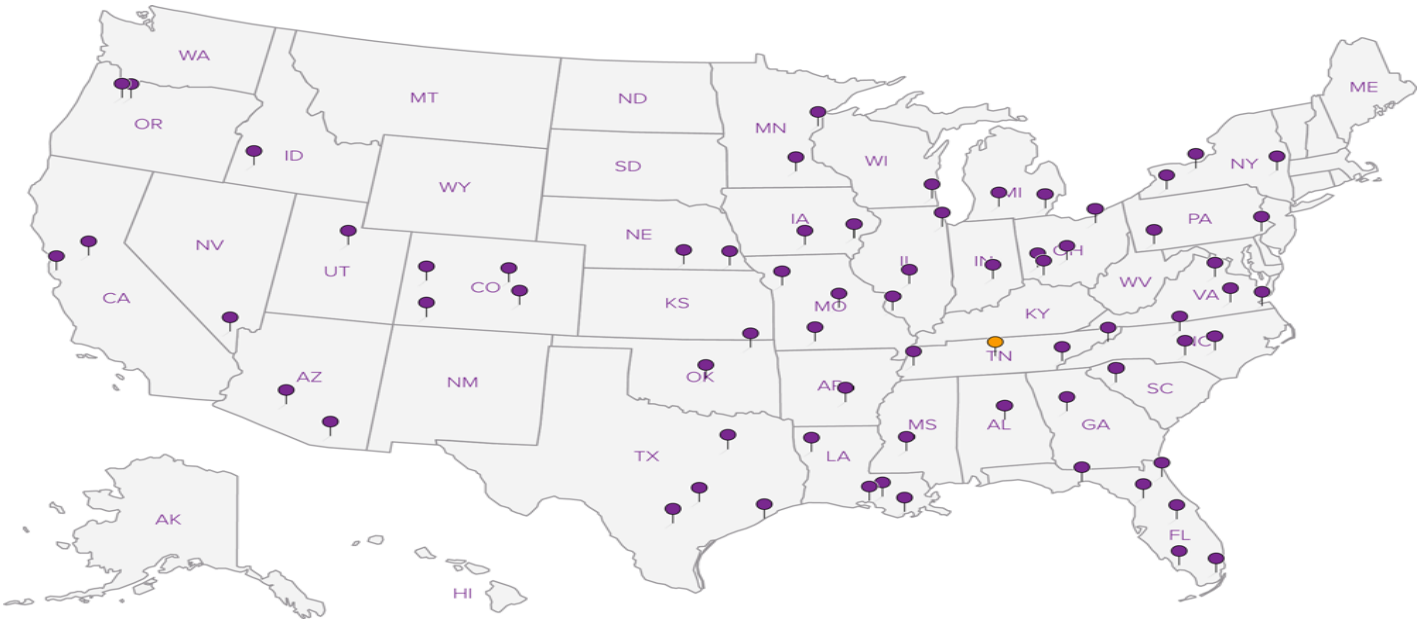
[1.] Drinking Water [2.] Underground Storage Tanks [3.] Aquatic Toxicity [4.] Chemical/Microbiological [5.] Mold [n/a] Accreditation not applicable

Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
Canada	1461.01	DOD	1461.01
EPA–Crypto	TN00003	USDA	S-67674

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Company Name/Address:

WPX Energy
1058 County Road 215
Parachute, CO 81635

Billing Information:

WPX Energy
1058 County Road 215
Parachute, CO 81635
Quote # WILPCO012315S2

Report to: **Karolina Blaney**

Email To: **karolina.blaney@wpxenergy.com**

Project Description: **Rulison C E&P WMF**

City/State Collected:

Phone: **970-683-2295**
Fax:

Client Project # **Parachute C E&P WMF**

Lab Project #

Collected by (print): Ryan Smith

Site/Facility ID # **Parachute C E&P WMF**

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ____

Rush? (Lab MUST Be Notified)
____ Same Day 200%
____ Next Day 100%
____ Two Day 50%
____ Three Day 25%

Date Results Needed

Email? ___No __Yes
FAX? ___No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	see attached										Rem./Contaminant	Sample # (lab only)
Parachute C E&P WMF	Grab	WW		7/30/2015	14:15	12	X											-01

Chain of Custody Page ___ of ___

ESC LAB SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # L780106

G007

Acctnum:
Template:
Prelogin:
TSR:
Cooler:
Shipped Via:

* Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks: Quote # **WILPCO042015S,**

6309 3740/3192

pH _____ Temp _____
Flow _____ Other _____

Hold #

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Karolina Blaney	7/30/2015	4:00 pm	
	7/30/15	1730	
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 3.2 °C Bottles Received: 12

Date: 7/31/15 Time: 0900

Condition: (lab use only) OK GDR

COC Seal Intact: ____Y ____N ✓NA

pH Checked: L2 NCF:

L780/06

Blaney, Karolina

Subject: FW: please help
Attachments: Pond water transfer sample.xls

*	VOLATILE ORGANIC COMPOUNDS	EPA METHOD 624 (GC/MS)
*	SEMI-VOLATILE ORGANIC COMPOUNDS (GC/MS)	EPA METHOD 625
*	DISSOLVED METALS (ICP)	EPA METHOD 200.7
*	DISSOLVED INORGANICS (NON-METALS) (IC)	EPA METHOD 300.0
o	Br,Cl,F,Nitrate/Nitrite, Sulfate	
*	GENERAL WATER QUALITY PARAMETERS	
o	SPECIFIC CONDUCTANCE	EPA METHOD 300.0 (IC)
o	HARDNESS	EPA METHOD 130.1
o	TOTAL DISSOLVED SOLIDS	EPA METHOD 160.1
o	pH	EPA METHOD 150.2
o	ALKALINITY	EPA METHOD 310.1
*	GROSS ALPHA AND BETA RADIOACTIVITY	EPA METHOD 900.1

L780/06

Organics in Water
Benzene
Bromodichloromethane
Bromoform
Bromomethane
Carbon Tetrachloride
Chlorobenzene
Chlorodibromomethane
Chloroethane
2-Chloroethly vinyl ether
Chloroform
Chloromethane
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethene
trans-1,2-Dichloroethene
1,2-Dichloropropane
cis-1,3-Dichloropropene
trans-1,3-Dichloropropene
Ethylbenzene
Methylene Chloride
Methyl tert-butyl ether
Napthalene
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Toluene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichlorofluoromethane
Total Xylenes
Vinyl chloride

Additional Organics in Water
Acenaphthene
Acenaphthylene
Anthracene
Benzidine
Benzo (a) anthracene
Benzo (b) fluoranthene
Benzo (k) fluoranthene
Benzo (g,h,i) perylene
Benzo (a) pyrene
Bis (2-chlorethoxy) methane
Bis (2-chloroethyl) ethyl
Bis (2--chloroisopropyl) ether
4-Bromophenyl-phenylether
2-Chloronaphthalene
4-Chlorophenyl-phenylether
Chrysene
Dibenz (a,h) anthracene
3,3-Dichlorobenzidine
2,4-Dinitrotoluene
2,6-Dinitrotoluene
1,2-Diphenylhydrazine
Fluoranthene
Fluorene

Hexachlorobenzene
Hexachloro-1,3-butadiene
Hexachlorocyclopentadiene
Hexachloroethane
Indeno (1,2,3-cd) pyrene
Isophorone
Napthalene
Nitrobenzene
n-Nitrosodimethylamine
n-Nitrosodiphenylamine
n-Nitrosodi-n-propylamine
Phenanthrene
Benzylbutyl phthalate
Bis (2-ethylhexyl) phthalate
Di-n-butyl phthalate
Diethyl phthalate
Dimethyl phthalate
Di-n-octyl phthalate
Pyrene
1,2,4-Trichlorobenzene
4-Chloro-3-methylphenol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
4,6-Dinitro-2-methylphenol
2,4-Dinitrophenol
2-Nitrophenol
4-Nitrophenol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol
Inorganics in Water
Alkalinity
Bromide
Chloride
Conductivity
Fluoride
Nitrate
Nitrite
pH
Sulfate
Total Dissolved Solids
Total Hardness
Dissolved Metals in Water
Arsenic
Barium (LDNR True Total)
Cadmium
Chromium
Lead
Mercury
Selenium
Silver
Radionuclides
Gross Alpha
Gross Beta

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

August 31, 2015

Ms. Janice Cozby
Environmental Science Corporation
12065 Lebanon Road
Mount Juliet, Tennessee 37122

Re: Radiochemistry Analysis
Work Order: 378530

Dear Ms. Cozby:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on August 04, 2015. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4289.

Sincerely,

Julie Robinson

Julie Robinson
Project Manager

Purchase Order: S22346
Chain of Custody: WG806656
Enclosures

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 − (843) 556−8171 − www.gel.com

Certificate of Analysis Report
for

ENVL001 Environmental Science Corporation

Client SDG: 378530 GEL Work Order: 378530

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a Tracer compound

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Julie Robinson.

Reviewed by Julie Robinson

GEL LABORATORIES LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: August 31, 2015

Company : Environmental Science Corporation
Address : 12065 Lebanon Road

Mount Juliet, Tennessee 37122
Contact: Ms. Janice Cozby
Project: Radiochemistry Analysis

Client Sample ID: L780106-01
Project: ENVL00307
Sample ID: 378530001
Client ID: ENVL001
Matrix: Drinking Water (Potable)
Collect Date: 30-JUL-15 14:15
Receive Date: 04-AUG-15
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
Gross Alpha/Beta in Drinking Water EPA 900.0 "As Received"												
Alpha	U	-77.2	+/-67.4	131	3.00	pCi/L		KXB2	08/20/15	1954	1500117	1
Beta	U	71.8	+/-50.3	83.0	4.00	pCi/L						

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 900.0	

Notes:
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

GEL LABORATORIES LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: August 31, 2015

Environmental Science Corporation
12065 Lebanon Road
Mount Juliet, Tennessee

Contact: **Ms. Janice Cozby**

Workorder: **378530**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 1500117										
QC1203373485 378887003 DUP										
Alpha		3.28		3.23	pCi/L	1.77		(0% - 100%)	KXB2	08/20/15 08:44
	Uncertainty	+/-2.17		+/-2.14						
Beta		3.28		4.56	pCi/L	32.5		(0% - 100%)		
	Uncertainty	+/-1.45		+/-1.53						
QC1203373488 LCS										
Alpha	79.9			82.7	pCi/L		104	(80%-120%)		08/20/15 08:45
	Uncertainty			+/-8.45						
Beta	290			314	pCi/L		108	(80%-120%)		
	Uncertainty			+/-11.9						
QC1203373484 MB										
Alpha			U	-0.0951	pCi/L					08/20/15 08:41
	Uncertainty			+/-1.03						
Beta			U	0.895	pCi/L					
	Uncertainty			+/-1.47						
QC1203373486 378887003 MS										
Alpha	240	3.28		239	pCi/L		98.3	(70%-130%)		08/21/15 06:58
	Uncertainty	+/-2.17		+/-31.5						
Beta	871	3.28		1050	pCi/L		120	(70%-130%)		
	Uncertainty	+/-1.45		+/-40.5						
QC1203373487 378887003 MSD										
Alpha	240	3.28		297	pCi/L	21.8*	123	(0%-20%)		08/20/15 08:44
	Uncertainty	+/-2.17		+/-34.8						
Beta	871	3.28		1050	pCi/L	0.403	120	(0%-20%)		
	Uncertainty	+/-1.45		+/-40.0						

Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD

QC Summary

Workorder: **378530**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

There are no "Data Exception Reports" associated with this analytical report.

Sub-Contract Chain of Custody

Environmental Science Corp
12065 Lebanon Road
Mt. Juliet, TN 37122
(615) 773-9756 (615) 758-5859 fax

Sub-Contract Lab : __GEL____
City / State : _____Charleston, SC_____
Results Needed by : ___9/3/15_____
ESC Purchase Order # : __S22346_____

37 8530

WORKGROUP	WG806656
Date Created :	080315

Send Reports To : ____Janice Cozby jcozby@esclabsciences.com____

SAMPLENO / Container #	MATRIX	Date / Time Collected	PARAMETER	Code	METHOD	Comments
L780106-01	DW	073015 1415	Gross Alpha	GA	7110 B-1996	
18918805 18918806						
L780106-01	DW		Gross Beta	GB	900.0	
18918805 18918806						

Relinquished by YGDS Date: 080315
Received by : B. Luthman Date: 8/4/15 855
Relinquished by _____ Date: _____
Received by : _____ Date: _____

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: ENVL	SDG/AR/COC/Work Order: 3790530
Received By: Brielle Luthman	Date Received: 8/4/15 855

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		✓	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 10 CPM
Classified Radioactive II or III by RSO?		✓	If yes, Were swipes taken of sample containers < action levels?
COC/Samples marked containing PCBs?		✓	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		✓	If yes, samples are to be segregated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		✓	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		✓	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		✓		Preservation Method: Ice bags Blue ice Dry ice None Other (describe) 22° *all temperatures are recorded in Celsius
2a	Daily check performed and passed on IR temperature gun?	✓			Temperature Device Serial #: Secondary Temperature Device Serial # (If Applicable): F5032015835
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?	✓			Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	Do Low Level Perchlorate samples (EPA 6850) have headspace as required?			✓	Sample ID's and containers affected:
7	VOA vials free of headspace (defined as < 6mm bubble)?			✓	Sample ID's and containers affected:
8	Are Encore containers present?			✓	(If yes, immediately deliver to Volatiles laboratory)
9	Samples received within holding time?	✓			ID's and tests affected:
10	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
11	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
12	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
13	Are sample containers identifiable as GEL provided?			✓	
14	COC form is properly signed in relinquished/received sections?	✓			
15	Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other 6443 1361 7278

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials AVD Date 9/5/15 Page 1 of 1

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List of current GEL Certifications as of 31 August 2015

State	Certification
Alaska	UST−110
Arkansas	88−0651
CLIA	42D0904046
California	2940 Interim
Colorado	SC00012
Connecticut	PH−0169
Delaware	SC000122013−10
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330−12−00283, P330−12−00284
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC000122013−10
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C−SC−01
Kansas NELAP	E−10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA150001
Maryland	270
Massachusetts	M−SC012
Michigan	9976
Mississippi	SC000122013−10
Nebraska	NE−OS−26−13
Nevada	SC000122016−1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
Oklahoma	9904
Pennsylvania NELAP	68−00485
Plant Material Permit	PDEP−12−00260
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235−15−10
Utah NELAP	SC000122015−18
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404