Western Water & Land, Inc.

December 31, 2013

Mr. Brandon Danforth
Environmental Specialist
WPX Energy
1058 County Road 215
Parachute, Colorado 81635

RE: RMV 15-35 Drill Pad Subsequent Sampling Event No. 1 Results Report

Dear Mr. Danforth,

Western Water & Land, Inc. (WWL) has completed the first subsequent water sampling for the WPX Energy Rocky Mountain LLC (WPX) RMV 15-35 Drill Pad in accordance with COGCC Rule 609. The RMV 15-35 Drill Pad is located in SW ¼, NW ¼, Section 35, Township 6 South, Range 94 West.

An initial baseline water sampling event for Drill Pad RMV 15-35 was performed by Olsson Associates in May and June, 2012 per a Surface Use Agreement (SUA) between WPX and the property owners. These samples, Cox1, Crow1 and Stok1, were collected under the Colorado Oil and Gas Association's voluntary groundwater sampling program. A second sample of Water Well Permit No. 61751-F (sample Cox1 site at Cox Well) was taken in April of 2013. The analyses for the baseline sampling varied slightly from the Rule 609 analytic schedule. Barium, TPH, fluoride, and bacteria were not included in the baseline analysis for the Crow1 and Stok1 locations and the Cox1 location for the April 2013 sample event. The May 2012 sampling event for the Cox1 (Cox Well) included a unique set of analytes specific only to that sample event; ammonia, arsenic, barium, cadmium, fluoride, chromium, copper, hydroxide alkalinity, lead, methyl tert-butyl ether (MTBE) and pH. Although the baseline sampling was voluntary, all subsequent sampling events will be in accordance with Rule 609.

This report summarizes the field sampling activities and the quality control and water chemistry results.

FIELD SAMPLING LOCATIONS AND ACTIVITIES

A subsequent sampling event was conducted at three sites associated with drill pad RMV 15-35 in accordance with previously selected baseline locations consistent with the requirements of Rule 609: 1) Water Well Permit No. 44489-FR (sample Crowley 44489-FR); 2) Water Well Permit No. 61750-FR (sample Stokvis 61750-FR); and 3) Water Well Permit No. 61751-F (sample Cox 61751-F). Sampling of Crowley 44489-FR was conducted on September 25, 2013 and sampling of Stokvis 61750-FR and Cox 61751-F was conducted on October 3, 2013. No residents were present at the Crowley household; the sample was collected from a hose bib on the back porch of the house. At the Stokvis residence, Ms. Karen Stokvis was present and the sample was collected from a hose bib located midway up the wall on the east side of the house. No residents were present at the Cox household; the sample was collected from a hose bib to the left of the front door. All samples met the 0.5-mile radius criteria under Rule 609. Figure 1 shows the sampled locations. Photographs of the Crowley and Cox sampling sites are shown

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in Attachment A; no photographs were taken at the Stokvis residence. Field monitoring forms are shown in Attachment B.

All sampling procedures followed the Colorado Oil & Gas Conservation Commission (COGCC) Model Sampling and Analysis Plan (SAP) protocols. Sampling Method 1 for wells with pumps and effervescent samples, described in Version 1 of the COGCC Model SAP, was used to collect all samples.

Samples were carefully packed in plastic ice chests (coolers) with ice and shipped to the analytical laboratory. Samples Stokvis 61750-FR and Cox 61751-F were sent to ALS Laboratory (ALS), Fort Collins, Colorado, and sample Crowley 44489-FR was sent to Accutest Mountain States Laboratory (AMS), Wheat Ridge, Colorado, by way of overnight courier (FedEx Ground).

QUALITY CONTROL

Quality control measures consisted of a review of field sampling procedures, and the analytical laboratory quality control data. Laboratory quality control information was reviewed and checked for consistency in the assignment of data qualifiers. In addition, WWL conducted quality control evaluations of cation-anion balance (CAB) and total dissolved solids (calculated/measured ratio), and assigned additional qualifiers to analytical results as necessary.

Field Procedures

WWL conducted field sampling procedures in accordance with the COGCC Model SAP. All samples were collected by direct filling methods; dissolved gas sampling was done using Method 1 for wells with pumps. No field procedure deviations occurred that were cause for data qualification.

COC

The chain-of-custody form was reviewed for correct and complete sample IDs, requested analysis, and other information. The analytes requested on the COC matched the requirements of Rule 609. DRO (diesel range organics) and GRO (gasoline range organics) were designated on the COC in place of TPH, a required analysis for Rule 609. No other errors or pertinent information was observed, and no corrections were needed.

Sample Receipt

Samples Stokvis 61750-FR and Cox 61751-F were received by ALS in one cooler within the temperature range criteria (4°C $\pm$ 2°C). Custody seals were intact. The sample receipt form noted that bubbles smaller than pea size was present in three vials from sample Stokvis 61750-FR and one vial from sample Cox 61751-F. No other issues were reported on the sample receipt form.

Sample Crowley 44489-FR was received by AMS in one cooler within the temperature range criteria (4°C $\pm$ 2°C). Custody seals were intact. No issues were reported on the sample receipt form.

No qualifiers were assigned to results based on sample receipt conditions.

Holding Times

All analyses for sample Crowley 44489-FR were conducted within recommended holding times, with the exception of pH (AMS reports a shorter holding time for pH). AMS reported in the lab summary narrative that the analyses for was performed outside of internal lab holding time but did not designate any qualifiers to the results. WWL has designated an "H" qualifier in the final results for lab pH; these results are considered estimated.

All analyses for samples Stokvis 61750-FR and Cox 61751-F were conducted within recommended holding times.

Analytical Methods
The analytical methods used by ALS were checked for consistency with the analytical schedule in the SAP or other pertinent documents. Analytical methods were found to be consistent with the following modifications: Total phosphorous was analyzed using Method 365.2. Gasoline Range Organics (TPH volatiles) were analyzed using Method SW8260_25 Revision C. Diesel Range Organics (TPH extractables) were analyzed according to SW846 8000C and 8015D.

The analytical methods used by AMS were checked for consistency with the analytical schedule in the SAP or other pertinent documents. Analytical methods were found to be consistent with the following modifications: Gasoline Range Organics (TPH volatiles) were analyzed using Method SW8260B. Diesel Range Organics (TPH extractables) were analyzed according to Method SW846-8015B.

Detection Limits
Detection limits provided with the analytical results were compared to the original quoted detection limits from the analytical laboratory. Detection limits were as quoted with no deviations observed except as applied to increased dilution factors.

ALS (Sample Stokvis 61750-FR and Cox 61751-F): all analyzed metals had dilution factors of 10. Sulfate had an increased dilution factor of 10 to bring the samples into range of the ion chromatograph; all other analytes had a dilution factor of 1. ALS reports sample results at the reporting limit as "undetected" or "U" rather than reporting results as less than the detection reporting limit, e.g. < 0.05ug/L.

AMS (Sample Crowley 44489-FR): dilution factor of 2 for selenium, fluoride, chloride, barium, and nitrate as nitrogen, a dilution factor of 5 for nitrite as nitrogen, and a dilution factor of 20 for sulfate. Bromide and nitrite had elevated detection limits due to matrix interference. All other analytes had a dilution factor of 1. AMS reports sample results at the reporting limit as "undetected" or "U", or "not detected" or "ND" rather than reporting results as less than the detection reporting limit, e.g. < 0.05ug/L.

Completeness
Data completeness is a measure of requested analysis and received results. The analytical constituents required under Rule 609 were compared to those analyzed in the laboratory reports. Qualified data are included as analyzed data. No data were rejected for field or analytical reasons. WWL separately designated DRO (Diesel Range Organics) and GRO (Gasoline Range Organics) for the TPH analysis required in Rule 609. All requested analytical data matched the laboratory reported data results; data completeness is considered 100 percent.

Cation-Anion Balance
The cation-anion balance (CAB) calculates the total charge of positively charged ions and the total charge of the negatively charged ions. It is a measure of the quality of the analysis; if the charge is not balanced, an error may exist in the analysis. CAB calculations were performed for each sample; if the CAB exceeded 5 percent, i.e. < 95 percent or >105 percent, the analytical results data may be qualified as estimated.

In general, WWL will assign a qualifier (estimated result) for a CAB equal to or greater than 10 percent, and may assign a qualifier for CAB percentages between 5 and less than 10 percent. The CAB calculations for the samples are as follows:

- Crowley 44489-FR: 2.427 %
- Stokvis 61750-FR: 0.798 %
- Cox 61751-F: 1.053 %

The analytical results for cations and anions for the samples were not qualified on the basis of the CAB. See Attachment C, Data Quality Review Sheets.

TDS
The ratio of laboratory-measured TDS versus calculated TDS were computed and sample ratios less than 0.80 and greater than 1.20 are cause for a review of major ion reporting errors.

In general, WWL will assign a qualifier (an estimated result) when TDS ratios are 1.5 or greater and 0.5 or less; and may assign a qualifier for TDS ratios between 0.8 and 0.5 or between 1.2 and 1.5. The TDS calculations for samples are as follows:

- Crowley 44489-FR: 1.09
- Stokvis 61750-FR: 1.15
- Cox 61751-F: 1.16

No sample results were rejected on the basis of the TDS ratio. No qualifiers were assigned on the basis of the TDS acceptance criteria.

Field Duplicates
Field duplicates evaluate the precision of analytical results for field samples collected for a specific sampling event. Precision is measured using the calculation of the relative percent difference (RPD) using the analytical results from the original investigative sample and the duplicate sample. The qualification criteria were considered an RPD limit of 35 percent. No field duplicates were collected for this sampling event, therefore no field duplicate RPDs were calculated.

Laboratory Quality Control
The analytical laboratory conducts an extensive quality control program and as part of the overall quality control process, WWL verified that the lab performed and reported quality control data correctly. This included checking laboratory control samples for a laboratory acceptance criteria of $\pm$ 20 percent and reviewing percent recoveries of analytical spike and analytical spike duplicates and other control samples. Typical percent recovery acceptance limits are 80 to 120 percent for wet chemistry and 70 to 130 percent for metals.

All laboratory quality control standards were met within the established laboratory acceptance criteria with the exception of the following:

- ALS: Surrogate recovery for O-terphenyl in the Method Blank (MB), Lab Control Sample (LCS) and Lab Control Sample Duplicate (LCSD) exceeded the upper control limit by 7%, 5%, and 5%, respectively. No further action was taken, and no qualifiers were assigned.

Accuracy
Accuracy was evaluated as a percent recovery of an analyte in a reference standard or a spiked sample, e.g. matrix spike and matrix spike duplicate. In cases where percent recoveries exceeded the laboratory

acceptance criteria, data would be qualified depending on whether the analyte was detected above the method detection limit or not, if the recovery of the associated control sample was acceptable, or if the analyte concentration in the sample was disproportionate to the spike level and that the recovery of the associated control sample was acceptable.

All laboratory accuracy standards were met within the established laboratory acceptance criteria with the exception of the following:

- ALS: Surrogate recovery for O-terphenyl in the Matrix Spike (MS) and Matrix Spike Duplicate (MSD) exceeded the upper control limit by 4% and 4% respectively. No further action was taken, and no qualifiers were assigned.

- AMS: Matrix spike recovery for total xylenes exceeded the upper control limit by 14%; outside control limits due to high level in sample relative to spike amount. The matrix spike sample used was not associated with the samples submitted by WWL for this project. The matrix spike recovery for TPH-GRO exceeded the upper control limit by 8% due to possible matrix interference. No further action was taken, and no qualifiers were assigned.

Precision
Precision is the measurement of how closely replicate sample constituents agree and is not related to the true value (concentration). Precision is measured using RPD calculations for laboratory duplicate samples. The RPDs were compared to the laboratory acceptance limit of 20 percent. RPDs were not used when the sample concentration was too low (< 10X MDL) for accurate evaluation. No qualifiers were assigned by the laboratory because of RPD values exceeding the laboratory acceptance criteria. Data Quality Review Sheets are presented in Attachment C.

Summary
ALS Laboratories and AMS assigned analytical results that were undetected with a "U" qualifier. WWL assigned an "H" qualifier to results that exceeded analytical holding times to indicate the result value is estimated. See Attachment D for individual parameters that were qualified.

ANALYTICAL RESULTS

Laboratory analysis was performed by ALS Environmental (ALS), in Fort Collins, Colorado, and Accutest Mountain States Laboratory (AMS) in Wheatridge, Colorado in accordance with the analytical schedule described in Rule 609. The analytical results are summarized in Attachment D; the data are qualified as indicated. The full laboratory analytical report is presented in Attachment E. A geochemical interpretation of the analytical results will be provided upon request.

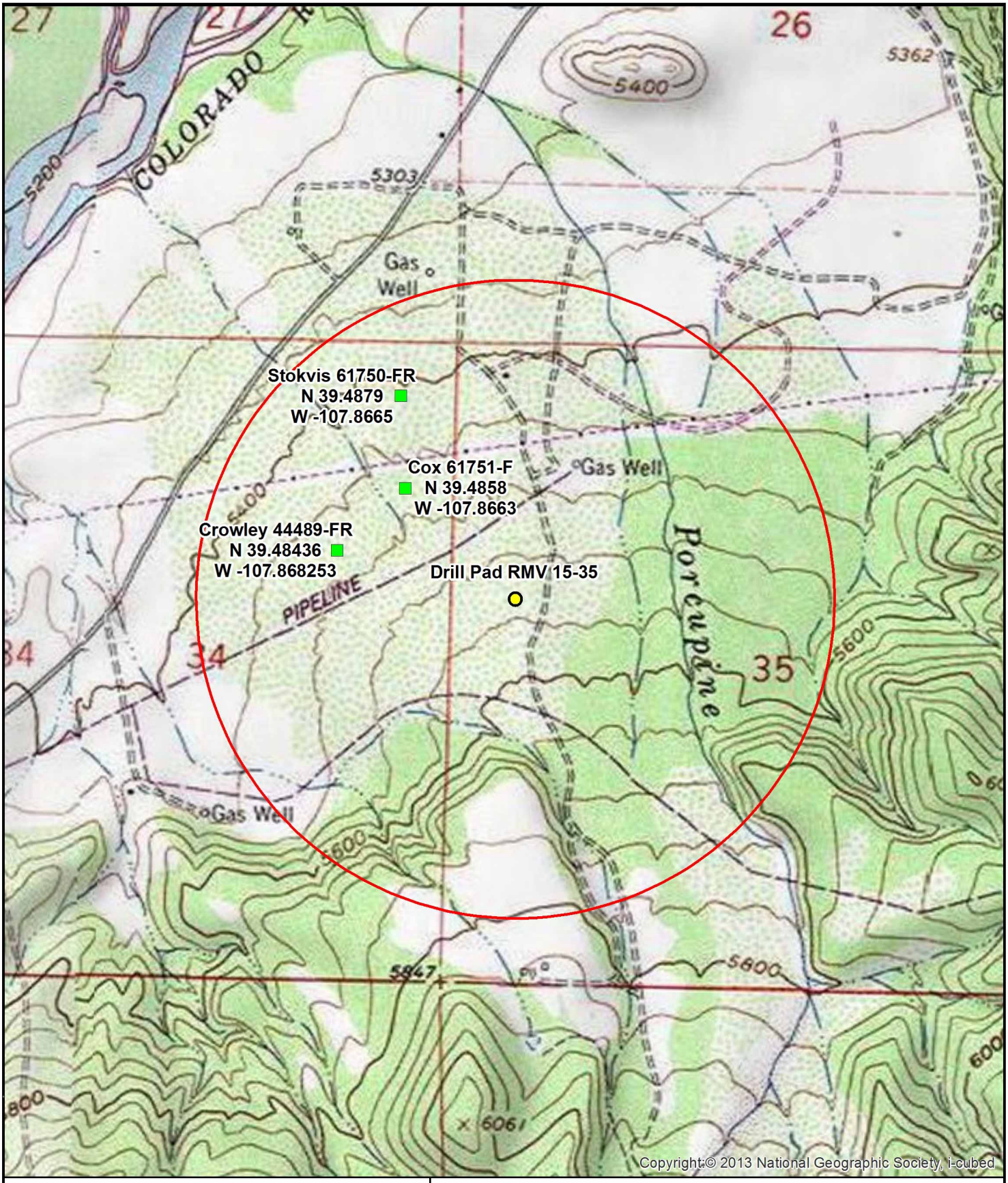
If you have any questions or concerns, please contact me at (970) 242-0170.

Sincerely,

Bruce D. Smith
Principal Hydrogeologist
WESTERN WATER & LAND, INC.

Attachments

Figure 1- Sampling Location Map
Attachment A - Photographs
Attachment B - Field Monitoring Forms
Attachment C - Data Quality Review Sheets
Attachment D - Summary of Analytical Results
Attachment E - Laboratory Analytical Summary Report



Legend

Sample Location(s)

Drill Pad RMV 15-35

0.5-Mile Radius Evaluation Area

N

Feet

1,000 500 0 1,000

1:13,000

Figure 1: RMV 15-35 Sample Location Map
SW1/4, NW1/4, S35, T6S, R94W, 6 PM

Garfield County, Colorado

WPX Energy Rocky Mountain LLC

Basemap Source: Bing Maps and Esri ArcGIS Online

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ATTACHMENT A

Photographs

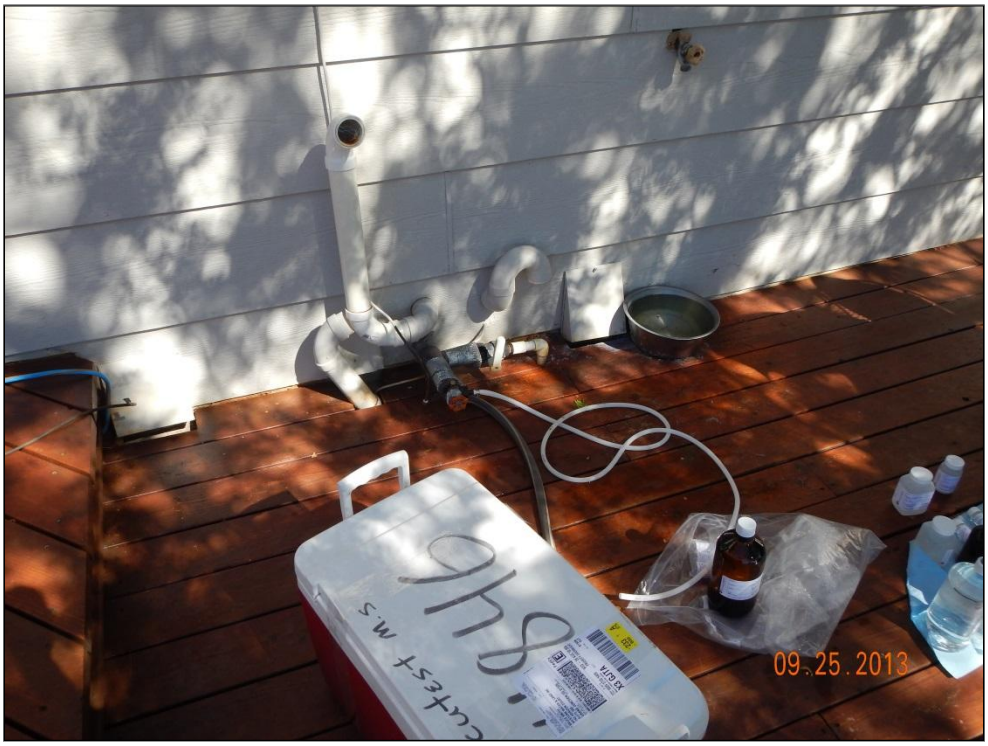

Photo 1. Crowley Well Sampling Location (RMV 15-35-Crowley 44489-FR)

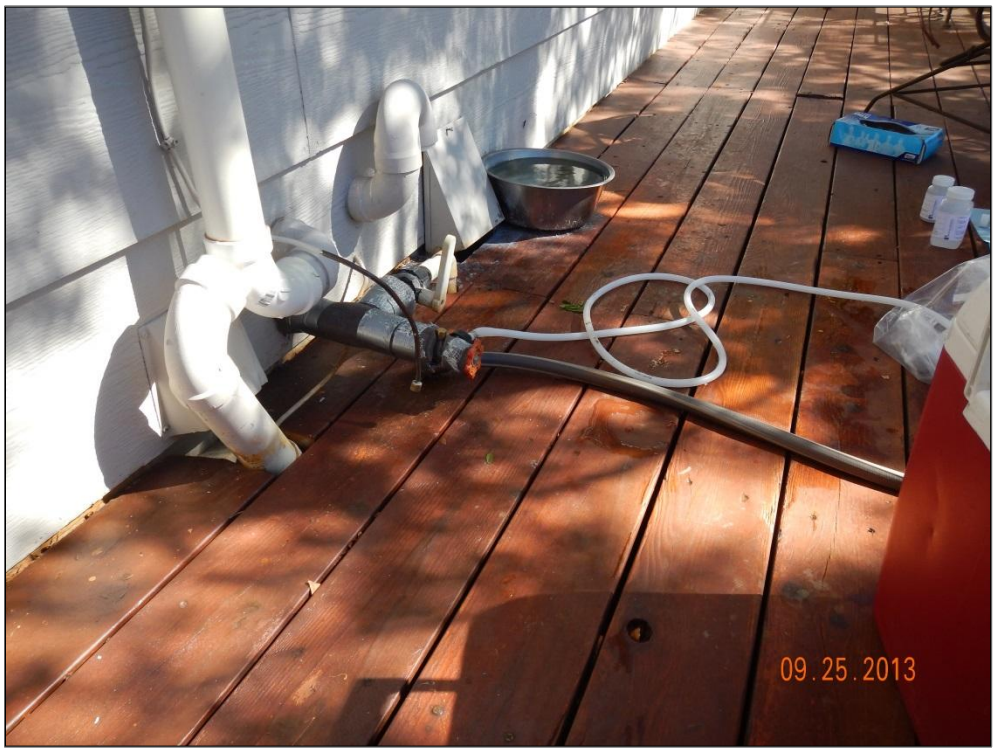

Photo 2. Crowley Well Sampling Location (RMV 15-35-Crowley 44489-FR)

Photo 3. Cox Well Sampling Location (RMV 15-35-Cox 61751-F)

ATTACHMENT B

Field Monitoring Forms

WPX BWQ Groundwater Monitoring Field Form

Project Information			
Project:	WPX	Sample Purpose:	SUA Voluntary
Site Name (Well Pad):	RMV 15-35	Site API:	05-045-20449
Station Name:	Cox 61751-F	Sample Date:	10-3-13
COGCC Facility ID:	323901	Start Time:	1040
Field Sample ID:	Cox-61751-F	End Time:	1150
Landowner Name:	Daryl + Victoria Cox	Sample Time:	1111
Landowner Address:	4820 CR 320 Rifle, CO	Sample Team:	NWS
Water Right/Well Owner:	Daryl + Victoria Cox	Observer:	NWS
Water Right/Well Permit:	61751-F	Lead Signature/Date:	10-4-13
Receipt Number:	9501949B		

Station Information					
Station Description:	Hose bib on front of house near dryer vent				
Approximate Distance to Well Pad:	1,300 ft				
Station Type:	(Well) / Spring / Seep / Other:	Water Use:	(Domestic) / Irrigation /		
Sampling Location:	Kitchen Tap / Pipe / Well House / (Hose bib) / Other:				
GPS Location:	Zone N/A	x -107.8663	y 39.4858	z NM	
Total Depth (ft):	205	Static Depth to Water (ft):	NM	Well diameter (in):	Q
Purge Volume (gal)	96				

Weather Conditions			
Sky:	(Clear) / Scattered / Cloudy / Overcast	Estimated Air Temp (deg F):	77
Precipitation:	(None) / Light / Moderate / Heavy	Precip Type:	(None) / Rain / Sleet / Hail / Snow
Wind:	Calm / Light / (Mod) / Strong	Wind Speed/Direction:	10-15 East

Field Measurements

Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	16.7	1133		YSI Pro	Container	
pH	s.u.	7.36					
Sp. Conductivity	uS/cm	975					
Conductivity	uS/cm	822					
DO Saturation	%	44.4					
DO	mg/L	4.28					
Baro Press	mmHg	618.5					
ORP	RmV	740.2					
Turbidity	NTU	8.05			Micro TPI		
Discharge	gpm	6 ~~6.6862~~	1045	J	5gal bucket		51.4sec - 5gal
H2S	mg/L						

Color:	Clear / White / Yellow / (Brown) / Green / Blue / Other	(Light) / Med / Dark	
Odor:	(None) / Mild / Mod / Strong		
Effervescence:	(None) / Mild / Mod / Strong	Bubbles:	(None) / Low / Mod / High
Sediment:	None / (Light) / Mod / Heavy	VOA Headspace:	(None) / ≤ Pea Size / ≥ Pea Size
Lab Analysis:	Rule 609 / COA 9 / COA 22 / Other SUA Voluntary		
Field Filtered:	Yes / (No)	Filter Size: N/A	No. Filters used: N/A

Flag Codes: NM (not measured), J (estimated), N/A (not applicable), I (insufficient sample), Q (uncertain value), Y (calculated value), AV (averaged value), EC (exceeds calibration range), OT (other flag to be defined later), NS (not stabilized)

WPX BWQ Groundwater Monitoring Field Form

Landowner Comments on water quality:

None

Additional information:

Calibration Information			Date:			Location:		
Instrument	Parameter	Units	Time	Calibration Standard Value	Calibration Standard Temp (°C)	Instrument Reading of Standard	Adjusted Reading	Comments
	pH	s.u.						
	pH	s.u.						
	pH	s.u.	Info on Stokvis 61750-FR					
	SpC	uS/cm						
	SpC	uS/cm						
	DO	%						
	DO	%						
	ORP	RmV						
	Turbidity	NTU						

WPX BWQ Groundwater Monitoring Field Form

Cox 61751-E

Well Purging Information

Date: 10-3-13	Purge Method: Stable Parameters	
Total Depth, ft (d_t):	Static Depth to Water, ft (d_w): NM	Sample/Set Depth (ft): 200
Casing Radius (in): Q	Casing Volume (ft^3): Q	
Total Volume (gal or ft^3): Q	Total Volume x 3 (gal or ft^3): Q	

1 ft^3 = 7.48 gal

Bore Volume = $\pi r^2(d_t-d_w)$

Purge #	Time	Temp (deg C)	pH (s.u.)	SpC (uS/cm)	Cond (uS/cm)	DO (%)	DO (mg/L)	ORP (RmV)	Water Clarity (Poor/Mod/ Good) or NTUs	Efferves-cence (None /Slight/ Mod/Heavy)	Volume Purged (gal)	Cum Vol Purged (gal)
1	1057	16.1	7.11	968	803	44.1	4.28	691.7	13.15	Slight	~~2530~~	
2	1100	16.0	7.21	974	807	42.0	4.11	706.1	18.12	None	18	48
3	1102	15.9	7.24	974	806	42.7	4.20	718.2	17.08	None	12	60
4	1104	15.9	7.26	974	804	41.1	4.03	728.2	15.67	None	12	72
5	1106	15.9	7.26	974	805	41.1	4.02	727.6	14.93	None	12	84
6	1108	16.2	7.28	972	808	41.7	4.08	736.1	13.63	None	12	96

WPX BWQ Groundwater Monitoring Field Form

Project Information			
Project:	WPX	Sample Purpose:	Voluntary
Site Name (Well Pad):	RMV 15-35	Site API:	05-045-06888
Station Name:	Crowley 44489 FR	Sample Date:	9-25-13
COGCC Facility ID:	708043	Start Time:	1030
Field Sample ID:	Crowley-44489-FR	End Time:	1130
Landowner Name:	Karen Crowley	Sample Time:	1102
Landowner Address:	4560 CR 320, Rifle, CO	Sample Team:	SLG, NWS
Water Right/Well Owner:	Jake Crowley	Observer:	SLG
Water Right/Well Permit:	44489-FR	Lead Signature/Date:	9-27-13
Receipt Number:	9502238		

Station Information					
Station Description:	Sample location off of house near back door				
Approximate Distance to Well Pad:	1,250 ft				
Station Type:	(Well) / Spring / Seep / Other:	Water Use:	Domestic / Irrigation /		
Sampling Location:	Kitchen Tap / Pipe / Well House / (Hose bib) / Other:				
GPS Location:	Zone 13S	x 0253515	y 4374457	z 5447	
Total Depth (ft):	~~203~~ 215	Static Depth to Water (ft):	NM	Well diameter (in):	Q
Purge Volume (gal)	100 gal				

Weather Conditions			
Sky:	(Clear) / Scattered / Cloudy / Overcast	Estimated Air Temp (deg F):	75
Precipitation:	(None) / Light / Moderate / Heavy	Precip Type: (~~None~~) / Rain / Sleet / Hail / Snow	
Wind:	(Calm) / Light / Mod / Strong	Wind Speed/Direction:	NM

Field Measurements

Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	16.2	1026		YSI PRO	C	
pH	s.u.	7.40					
Sp. Conductivity	uS/cm	13616					
Conductivity	uS/cm	1135					
DO Saturation	%	52.1					
DO	mg/L	5.04					
Baro Press	mmHg	617.2					
ORP	RmV	146.6					
Turbidity	NTU	1.0	1117	AV	micro TPI		1.05, 1.02, 0.92
Discharge	gpm	6.2	1030		bucket		
H2S	mg/L						

Color:	(Clear) / White / Yellow / Brown / Green / Blue / Other	(Light) / Med / Dark	
Odor:	(None) / Mild / Mod / Strong		
Effervescence:	(None) / Mild / Mod / Strong	Bubbles:	(None) / Low / Mod / High
Sediment:	(None) / Light / Mod / Heavy	VOA Headspace:	(None) / ≤ Pea Size / ≥ Pea Size
			Small bubble in 150 < Pea
Lab Analysis:	(Rule 609) / (COA 9) / COA 22 / Other		
Field Filtered:	Yes / (No)	Filter Size: N/A	No. Filters used: N/A

Flag Codes: NM (not measured), J (estimated), N/A (not applicable), I (insufficient sample), Q (uncertain value), Y (calculated value), AV (averaged value), EC (exceeds calibration range), OT (other flag to be defined later), NS (not stabilized)

WPX BWQ Groundwater Monitoring Field Form

Landowner Comments on water quality:

N/A — landowner not present

Additional information:

Discharge: 5 gal/48.3 sec. = 6.2 gpm

Didn't look for well — have pictures from Olsson & Gary thought it was "hidden" in the field

Gary Reed (WPX) present for sample

Calibration info on Brady 174242

Calibration Information			Date: 9-25-13			Location:		
Instrument	Parameter	Units	Time	Calibration Standard Value	Calibration Standard Temp (°C)	Instrument Reading of Standard	Adjusted Reading	Comments
	pH	s.u.						
	pH	s.u.						
	pH	s.u.						
	SpC	uS/cm						
	SpC	uS/cm						
	DO	%						
	DO	%						
	ORP	RmV						
	Turbidity	NTU						

WPX BWQ Groundwater Monitoring Field Form

44489-FR

Well Purging Information			
Date: 9-25-13	Purge Method: Stabilization of parameters		
Total Depth, ft (d_t): 203	Static Depth to Water, ft (d_w): NM	Sample/Set Depth (ft): Q	
Casing Radius (in): Q	Casing Volume (ft^3): Q		
Total Volume (gal or ft^3): Q	Total Volume x 3 (gal or ft^3): Q		

1 ft^3 = 7.48 gal

Bore Volume = $\pi r^2(d_t-d_w)$

Purge #	Time	Temp (deg C)	pH (s.u.)	SpC (uS/cm)	Cond (uS/cm)	DO (%)	DO (mg/L)	ORP (RmV)	Water Clarity (Poor/Mod/ Good) or NTUs	Efferves-cence (None /Slight/ Mod/Heavy)	Volume Purged (gal)	Cum Vol Purged (gal)
1	1040	15.5	7.36	1355	1010	53.0	5.26	146.4	Good	none	5	5
2	1045	15.2	7.31	1354	1102	51.7	5.15	154.9	Good	none	30	35
3	1050	15.2	7.26	1354	1102	45.9	4.56	159.2	Good	none	30	65
4	1056	15.3	7.27	1354	1103	50.6	5.04	163.3	Good	none	35	100

Turbidity
#2: 0.91, 0.90
#3: 1.66, 1.46
#4: 1.17

Discharge = 6.2 gpm

WPX BWQ Groundwater Monitoring Field Form

Project Information			
Project:	WPX	Sample Purpose:	SUA Voluntary
Site Name (Well Pad):	RMV 15-35	Site API:	05-045-20449
Station Name:	StoKvis-61750-FR	Sample Date:	10-3-13
COGCC Facility ID:	323901	Start Time:	0935
Field Sample ID:	StoKvis-61750-FR	End Time:	1036
Landowner Name:	Robt Karin StoKvis	Sample Time:	1005
Landowner Address:	4850 CR 320 Rifle, CO	Sample Team:	NWS
Water Right/Well Owner:	Robt Karin StoKvis	Observer:	NWS
Water Right/Well Permit:	61750-FR	Lead Signature/Date:	10-4-13
Receipt Number:	9502062		

Station Information					
Station Description:	Hose bib on east side of house				
Approximate Distance to Well Pad:	1,950 ft				
Station Type:	(Well) / Spring / Seep / Other:		Water Use:	(Domestic) / Irrigation /	
Sampling Location:	Kitchen Tap / Pipe / Well House / (Hose bib) / Other:				
GPS Location:	Zone N/A	x -107.8665	y 39.4879	z NM	
Total Depth (ft):	210	Static Depth to Water (ft):	NM	Well diameter (in):	5.5
Purge Volume (gal)	77				

Weather Conditions			
Sky:	(Clear) / Scattered / Cloudy / Overcast	Estimated Air Temp (deg F):	67
Precipitation:	(None) / Light / Moderate / Heavy	Precip Type:	(None) / Rain / Sleet / Hail / Snow
Wind:	(Calm) / Light / Mod / Strong	Wind Speed/Direction:	N/A

Field Measurements

Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	16.1	1024		YSI Pro	Container	
pH	s.u.	6.99					
Sp. Conductivity	uS/cm	1051					
Conductivity	uS/cm	873					
DO Saturation	%	56.0					
DO	mg/L	5.45					
Baro Press	mmHg	620.8					
ORP	RmV	282.7					
Turbidity	NTU	1.47			Micro TPI		
Discharge	gpm	7	940	J	5gal bucket		46.9sec - 5gal
H2S	mg/L	NM					

Color:	(Clear) / White / Yellow / Brown / Green / Blue / Other	(Light) / Med / Dark	
Odor:	(None) / Mild / Mod / Strong		
Effervescence:	None / (Mild) / Mod / Strong	Bubbles:	None / (Low) / Mod / High
Sediment:	(None) / Light / Mod / Heavy	VOA Headspace:	None / (≤ Pea Size) / ≥ Pea Size
Lab Analysis:	Rule 609 / COA 9 / COA 22 / Other SUA Voluntary		
Field Filtered:	Yes / (No)	Filter Size: N/A	No. Filters used: N/A

Flag Codes: NM (not measured), J (estimated), N/A (not applicable), I (insufficient sample), Q (uncertain value), Y (calculated value), AV (averaged value), EC (exceeds calibration range), OT (other flag to be defined later), NS (not stabilized)

WPX BWQ Groundwater Monitoring Field Form

Landowner Comments on water quality:

None

Additional information:

Sample taken after running through a whole house filter.

Effervescence not evident during purging but obvious when sampling.

All parameters stabilized within SAP criteria except for pH

Calibration Information			Date: 10-3-13			Location: Field		
Instrument	Parameter	Units	Time	Calibration Standard Value	Calibration Standard Temp (°C)	Instrument Reading of Standard	Adjusted Reading	Comments
YSI Pro	pH	s.u.	803	7.00	20.5	7.18		
	pH	s.u.	806	10.01	20.5	10.08		
	pH	s.u.	811	4.01	19.9	4.15	3.96	
	SpC	uS/cm	800	8974	15.3	9294	8976	
	SpC	uS/cm						
	DO	%	817	628.1 mmHg	16.4	85.8	82.5	
	DO	%						
	ORP	RmV						
Micro TPI	Turbidity	NTU	812					

WPX BWQ Groundwater Monitoring Field Form

Stokvis

Well Purging Information

Date: 10-3	Purge Method: Stabilize Parameters	
Total Depth, ft (d_t): 210	Static Depth to Water, ft (d_w): NM	Sample/Set Depth (ft): 200
Casing Radius (in): 2.75	Casing Volume (ft^3): Q	
Total Volume (gal or ft^3): Q	Total Volume x 3 (gal or ft^3): Q	

1 ft^3 = 7.48 gal

Bore Volume = $\pi r^2(d_t-d_w)$

Purge #	Time	Temp (deg C)	pH (s.u.)	SpC (uS/cm)	Cond (uS/cm)	DO (%)	DO (mg/L)	ORP (RmV)	Water Clarity (Poor/Mod/ Good) or NTUs	Efferves-cence (None /Slight/ Mod/Heavy)	Volume Purged (gal)	Cum Vol Purged (gal)
1	950	15.5	6.17	1047	857	57.5	5.67	329.2	1.02	None	~~15~~ 14	14
2	953	15.2	6.60	1051	854	58.4	5.82	323.4	0.72	None	21	35
3	956	15.1	6.75	1053	855	55.4	5.50	311.9	0.59	None	21	56
4	959	15.2	6.81	1048	853	54.0	5.35	309.1	0.71	None	21	77

ATTACHMENT C

Data Quality Review Sheets

DATA QUALITY REVIEW SHEET

Facility ID:	708042	Project:	WPX BWQ
Station Name:	Daryl & Victoria Cox Well	Lab Work Order:	1310080-1
Sample Date:	10/3/2013	QA/QC Review Date:	11/6/2013
Field Sample ID:	Cox 61751-F	Reviewer:	S. Goodwin

Field Sampling Data Review	**Yes**	**No**	**N/A**
1. Well properly purged?	☒	☐	☐
2. Flow rate reduced prior to sampling?	☒	☐	☐
3. Water quality parameters stable prior to sampling?	☒	☐	☐
4. Field instruments calibrated properly?	☒	☐	☐
5. Sampling methods performed according to SAP procedures?	☒	☐	☐
6. Procedures consistent with obtaining a representative sample?	☒	☐	☐
Lab Data Report Review			
7. Proper sample custody maintained until laboratory receipt?	☒	☐	☐
8. Any discrepancies noted on the lab receipt form? *If yes, list in the comments section.*	☐	☒	☐
9. All samples analyzed for the requested analyses?	☒	☐	☐
10. Proper laboratory methods used?	☒	☐	☐
11. All sample holding times met?	☒	☐	☐
12. Lab QA samples (e.g., matrix spikes and matrix spike duplicates) collected and analyzed according to lab method and results within method acceptance limits?	☐	☒	☐
13. Lab qualifiers for data (other than non-detect)? *List in comments*.	☐	☒	☐
14. Are corrective actions required? *If yes, please list actions and dates to be completed by:*	☐	☒	☐

Corrective Action	*Date to be completed*
None	

Calculated Parameters	**Calculated Value**	**Lab Value**	**Ratio/Percent Difference**	**Acceptable Limit**	**Meets QC Criteria?**
Cation/Anion Balance, % (CAB)	NA	NA	1.053	±5%	☒
Total Dissolved Solids, mg/L (TDS)	728	630	1.16	0.8 – 1.2	☒
Specific Conductance, µS/cm (SpC)	940	962	0.98	0.8 – 1.2	☒

Comments:

One VOA bottle received with bubbles less than green pea size. MB, LCS, LCSD, MS, and MSD exceeded upper control limits by 7%, 5%, 5%, 4%, and 4%, respectively, for O-terphenyl.

DATA QUALITY REVIEW SHEET

Facility ID:	708043	Project:	WPX BWQ
Station Name:	Crowley 44489-F-R	Lab Work Order:	D50936-1
Sample Date:	9/25/2013	QA/QC Review Date:	11/6/2013
Field Sample ID:	Crowley 44489FR	Reviewer:	S. Goodwin

Field Sampling Data Review	**Yes**	**No**	**N/A**
1. Well properly purged?	☒	☐	☐
2. Flow rate reduced prior to sampling?	☒	☐	☐
3. Water quality parameters stable prior to sampling?	☒	☐	☐
4. Field instruments calibrated properly?	☒	☐	☐
5. Sampling methods performed according to SAP procedures?	☒	☐	☐
6. Procedures consistent with obtaining a representative sample?	☒	☐	☐
Lab Data Report Review			
7. Proper sample custody maintained until laboratory receipt?	☒	☐	☐
8. Any discrepancies noted on the lab receipt form? *If yes, list in the comments section.*	☒	☐	☐
9. All samples analyzed for the requested analyses?	☒	☐	☐
10. Proper laboratory methods used?	☒	☐	☐
11. All sample holding times met?	☐	☒	☐
12. Lab QA samples (e.g., matrix spikes and matrix spike duplicates) collected and analyzed according to lab method and results within method acceptance limits?	☐	☒	☐
13. Lab qualifiers for data (other than non-detect)? *List in comments*.	☒	☐	☐
14. Are corrective actions required? *If yes, please list actions and dates to be completed by:*	☐	☒	☐

Corrective Action	*Date to be completed*
None	

Calculated Parameters	**Calculated Value**	**Lab Value**	**Ratio/Percent Difference**	**Acceptable Limit**	**Meets QC Criteria?**
Cation/Anion Balance, % (CAB)	NA	NA	2.427	±5%	☒
Total Dissolved Solids, mg/L (TDS)	1006	920	1.09	0.8 – 1.2	☒
Specific Conductance, µS/cm (SpC)	1373	1090	1.26	0.8 – 1.2	☐

Comments:

Lab received dissolved gas vials not preserved to pH < 2. pH analyzed outside of hold time; WWL qualified with “H” to indicate results estimated. MS exceeded upper control limit by 14% for total xylenes due to high levels in sample relative to spike amount and 8% for TPH-GRO due to matrix interference. Elevated detection limit for nitrite and bromide due to matrix interference.

DATA QUALITY REVIEW SHEET

Facility ID:	752940	Project:	WPX BWQ
Station Name:	Stokvis 61750-FR	Lab Work Order:	1310080-2
Sample Date:	10/3/2013	QA/QC Review Date:	11/6/2013
Field Sample ID:	Stokvis 61750FR	Reviewer:	S. Goodwin

Field Sampling Data Review	**Yes**	**No**	**N/A**
1. Well properly purged?	☒	☐	☐
2. Flow rate reduced prior to sampling?	☒	☐	☐
3. Water quality parameters stable prior to sampling?	☒	☐	☐
4. Field instruments calibrated properly?	☒	☐	☐
5. Sampling methods performed according to SAP procedures?	☒	☐	☐
6. Procedures consistent with obtaining a representative sample?	☒	☐	☐
Lab Data Report Review			
7. Proper sample custody maintained until laboratory receipt?	☒	☐	☐
8. Any discrepancies noted on the lab receipt form? *If yes, list in the comments section.*	☒	☐	☐
9. All samples analyzed for the requested analyses?	☒	☐	☐
10. Proper laboratory methods used?	☒	☐	☐
11. All sample holding times met?	☒	☐	☐
12. Lab QA samples (e.g., matrix spikes and matrix spike duplicates) collected and analyzed according to lab method and results within method acceptance limits?	☐	☒	☐
13. Lab qualifiers for data (other than non-detect)? *List in comments*.	☐	☒	☐
14. Are corrective actions required? *If yes, please list actions and dates to be completed by:*	☐	☒	☐

Corrective Action	*Date to be completed*
None	

Calculated Parameters	**Calculated Value**	**Lab Value**	**Ratio/Percent Difference**	**Acceptable Limit**	**Meets QC Criteria?**
Cation/Anion Balance, % (CAB)	NA	NA	0.798	±5%	☒
Total Dissolved Solids, mg/L (TDS)	792	690	1.15	0.8 – 1.2	☒
Specific Conductance, µS/cm (SpC)	1030	1027	1.0	0.8 – 1.2	☒

Comments:

pH and ORP not stabilized prior to sampling; pH was + or - 0.2 s.u., ORP was + or - 14 millivolts. Lab received vials with headspace smaller than pea size. Dissolved gas vials were not preserved to pH < 2. 3 VOA bottles received with bubbles less than pea-size. MB, LCS, LCSD, MS, and MSD exceeded upper control limits by 7%, 5%, 5%, 4%, and 4%, respectively, for O-terphenyl.

ATTACHMENT D

Summary of Analytical Results

WPX BWQ RMV 15-35: Stokvis 61750-F Baseline and Subsequent Samples																					
Station Name				**Stokvis 61750-F**						**Stokvis 61750-F**						**Trip Blank**					
Facility ID				**752940**						**752940**						**752940**					
Sample Date				**6/27/2012 10:10**						**10/3/2013 10:05**						**10/3/2013 0:00**					
Field Sample ID				**STOK1**						**Stokvis 61750-FR**						**Trip Blank**					
Lab Sample ID				**D35948-1**						**1310080-1**						**1310080-3**					
Sampling Agency				**Olsson Associates**						**Western Water & Land, Inc.**						**Western Water & Land, Inc.**					
	Reporting Units	**AMS Analytic Method**	**ALS Analytic Method**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**
Inorganics																					
Alkalinity AS CaCO3, Total	mg/l	SM20 2320B	SM2320B	361			5		1	390			20		1						
Alkalinity, Bicarbonate as CaCO3	mg/l	SM20 2320B	SM2320B	361			5		1	390			20		1						
Alkalinity, Carbonate as CaCO3	mg/l	SM20 2320B	SM2320B	5	U		5		1	20	U		20		1						
Bromide	mg/l	EPA 300.0/SW846 9056	EPA300.0	0.2	U		0.2		1	0.2	U		0.2	0.06	1						
Chloride	mg/l	EPA 300.0/SW846 9056	EPA300.0	5.8			0.5		1	7.1			0.2	0.06	1						
Fluoride	mg/l		EPA300.0	NM						0.34			0.1	0.03	1						
HARDNESS (AS CACO3)	mg/l	SM20 2340B		392			1.8		1	NM											
Nitrate/Nitrite as N	mg/l		EPA300.0	NM						3.3			0.1		1						
Nitrate as N	mg/l	EPA 300.0/SW846 9056	EPA300.0	1.6			0.45		10	3.3			0.2	0.06	1						
Nitrite as N	mg/l	EPA 300.0/SW846 9056	EPA300.0	0.01	U		0.01		1	0.1	U		0.1	0.03	1						
pH	s.u.		SM4500-H	NM						7.42			0.1		1						
Specific Conductivity	umhos/cm	SM20 2510B	SM2510B	732			1		1	1027			1		1						
Sulfate	mg/l	EPA 300.0/SW846 9056	EPA300.0	139			5		10	180			10	3	10						
Total Dissolved Solids	mg/l	SM20 2540C	SM2540C	568			10		1	690			20		1						
Total Phosphorous	mg/l	HACH8190/SM4500P-B/E	EPA365.2	0.12			0.05		5	0.05	U		0.05	0.015	1						
Dissolved Metals																					
Barium	ug/l		EPA200.8	NM						24			1	0.3	10						
Boron	ug/l	EPA 200.7	EPA200.8	50	U		50		1	96			50	15	10						
Calcium	ug/l	EPA 200.7	EPA200.8	75000			400		1	88000			1000	65	10						
Iron	ug/l	EPA 200.7	EPA200.8	13.2			10		1	100	U		100	30	10						
Magnesium	ug/l	EPA 200.7	EPA200.8	49800			200		1	52000			100	30	10						
Manganese	ug/l	EPA 200.7	EPA200.8	18.8			5		1	2	U		2	0.6	10						
Potassium	ug/l	EPA 200.7	EPA200.8	5300			1000		1	7600			1000	300	10						
Selenium	ug/l	EPA 200.8	EPA200.8	3.1			0.8		2	5.5			1	0.5	10						
Sodium	ug/l	EPA 200.7	EPA200.8	48400			400		1	63000			1000	300	10						
Strontium	ug/l	EPA 200.7	EPA200.8	846			5		1	1100			1	0.3	10						
Organics																					
Diesel Range Organics	mg/l		SW8015M	NM						0.5	U		0.5	0.15	1						
Gasoline Range Organics	ug/l		SW8260_25	NM						100	U		100	30	1	100	U		100	30	1
Dissolved Gases [2]																					
Ethane	ug/l	RSK175 MOD	RSK175	1.6	U		1.6	0.8	1	2	U		2	2	1						
Methane	ug/l	RSK175 MOD	RSK175	1.71			0.8	0.4	1	1	U		1	1	1						
Propane	ug/l	RSK175 MOD	RSK175	13	U		13	6	1	1	U		1	1	1						

WPX BWQ RMV 15-35: Stokvis 61750-F Baseline and Subsequent Samples																					
Station Name				**Stokvis 61750-F**						**Stokvis 61750-F**						**Trip Blank**					
Facility ID				**752940**						**752940**						**752940**					
Sample Date				**6/27/2012 10:10**						**10/3/2013 10:05**						**10/3/2013 0:00**					
Field Sample ID				**STOK1**						**Stokvis 61750-FR**						**Trip Blank**					
Lab Sample ID				**D35948-1**						**1310080-1**						**1310080-3**					
Sampling Agency				**Olsson Associates**						**Western Water & Land, Inc.**						**Western Water & Land, Inc.**					
	Reporting Units	**AMS Analytic Method**	**ALS Analytic Method**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**
VOAs																					
Benzene	ug/l	SW846 8260B	SW8260_25	1	U		1	0.27	1	1	U		1	0.3	1	1	U		1	0.3	1
Ethylbenzene	ug/l	SW846 8260B	SW8260_25	2	U		2	0.33	1	1	U		1	0.3	1	1	U		1	0.3	1
M+P-Xylene	ug/l		SW8260_25	NM						1	U		1	0.3	1	1	U		1	0.3	1
o-Xylene	ug/l		SW8260_25	NM						1	U		1	0.3	1	1	U		1	0.3	1
Toluene	ug/l	SW846 8260B	SW8260_25	2	U		2	1	1	1	U		1	0.3	1	1	U		1	0.3	1
Xylenes (Total)	ug/l	SW846 8260B	SW8260_25	3	U		3	2	1	1	U		1		1	1	U		1		1
Bacteria[1]																					
Iron Related Bacteria	none		BART	NM						1			1		1						
Slime forming bacteria	none		BART	NM						0	U		1		1						
Sulfate Reducing Bacteria	none		BART	NM						0	U		1		1						
Field Parameters																					
Bubbles	none			NA						Low					1						
Color	none			NA						Clear					1						
Conductivity, Field	uS/cm			NA						873					1						
Discharge, measured	gpm			NA						7		J			1						
Dissolved Oxygen, Field	mg/l			NA						5.45					1						
Dissolved Oxygen, Field,%	%			NA						56					1						
Effervescence	none			NA						Mild					1						
Odor	none			NA						None					1						
ORP, field	mv			NA						282.7					1						
pH, Field	s.u.			NA						6.99					1						
Sediment	none			NA						None					1						
Specific Conductivity, Field	uS/cm			NA						1051					1						
Temperature, Water	Deg C			NA						16.1					1						
Turbidity, field	NTUs			NA						1.47					1						

Notes:

[1] A result of 1 indicates the presence of bacteria

[2] AMS units converted from mg/L to ug/L

U = not detected at the reporting limit

NM = not measured

J = result approximated

NA = not available

WPX BWQ RMV 15-35: Crowley 44489FR Baseline and Subsequent Samples														
Station Name			**Crowley 44489FR**						**Crowley 44489FR**					
Facility ID			**708043**						**708043**					
Sample Date			**6/27/2012 9:20**						**9/25/2013 11:02**					
Field Sample ID			**CROW1**						**Crowley 44489-FR**					
Lab Sample ID			**D35947-1**						**D50936-1**					
Sampling Agency			**Olsson Associates**						**Western Water & Land, Inc**					
	Reporting Units	**Analytic Method**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**
Inorganics														
Alkalinity AS CaCO3, Total	mg/l	SM20 2320B	395			5		1	395			5	2	1
Alkalinity, Bicarbonate as CaCO3	mg/l	SM20 2320B	395			5		1	395			5	2	1
Alkalinity, Carbonate as CaCO3	mg/l	SM20 2320B	5	U		5		1	5	U		5	2	1
Bromide	mg/l	EPA 300/SW846 9056	0.2	U		0.2		1	0.1	U		0.1	0.05	2
Chloride	mg/l	EPA 300/SW846 9056	6.2			0.5		1	6.8			1	0.4	2
Fluoride	mg/l	EPA 300/SW846 9057	NM						0.44			0.2	0.1	2
HARDNESS (AS CACO3)	mg/l	SM20 2340B	589			1.8		1	NM					
Nitrate as N	mg/l	EPA 300/SW846 9056	2.1			0.23		5	2.1			0.05	0.03	5
Nitrite as N	mg/l	EPA 300/SW846 9056	0.01	U		0.01		1	0.008	U		0.008	0.006	2
pH	s.u.	SM4500HB+-2011/9040C	NM						7.58		H			1
Specific Conductivity	umhos/cm	SM20 2510B	1020			1		1	1090			1		1
Sulfate	mg/l	EPA 300/SW846 9056	322			10		20	344			10	4	20
Total Dissolved Solids	mg/l	SM20 2540C	886			10		1	920			10	5	1
Total Phosphorous	mg/l	HACH8190/SM4500P-B/E	0.058			0.01		1	0.01	U		0.01	0.008	1
Dissolved Metals														
Barium	ug/l	EPA 200.7	NM						27.4			10	1.4	1
Boron	ug/l	EPA 200.7	50	U		50		1	53.9			50	6.6	1
Calcium	ug/l	EPA 200.7	119000			400		1	121000			400	66	1
Iron	ug/l	EPA 200.7	30.8			10		1	10	U		10	3.2	1
Magnesium	ug/l	EPA 200.7	70900			200		1	71000			200	29	1
Manganese	ug/l	EPA 200.7	10.2			5		1	23.9			5	0.29	1
Potassium	ug/l	EPA 200.7	6090			1000		1	6250			1000	230	1
Selenium	ug/l	EPA 200.8	3.8			0.8		2	3.8			0.8	0.42	2
Sodium	ug/l	EPA 200.7	57600			400		1	57700			400	36	1
Strontium	ug/l	EPA 200.7	1240			5		1	1250			5	0.12	1
Organics														
Diesel Range Organics	mg/l	SW846-8015B	NM						0.19	U		0.19	0.17	1
Gasoline Range Organics	ug/l	SW846 8260B	NM						200	U		200	200	1
Dissolved Gases[2]														
Ethane	ug/l	RSK175 MOD	1.6	U		1.6	0.8	1	1.6	U		1.6	0.8	1
Methane	ug/l	RSK175 MOD	2.29			0.8	0.4	1	75.1			0.8	0.4	1
Propane	ug/l	RSK175 MOD	13	U		13	6	1	22	U		22	11	1
VOAs														
Benzene	ug/l	SW846 8260B	1	U		1	0.27	1	1	U		1	0.25	1
Ethylbenzene	ug/l	SW846 8260B	2	U		2	0.33	1	2	U		2	0.25	1
Toluene	ug/l	SW846 8260B	2	U		2	1	1	2	U		2	1	1
Xylenes (Total)	ug/l	SW846 8260B	3	U		3	2	1	3	U		3	2	1
Bacteria[1]														
Iron Related Bacteria	none	HACH IRB-BART	NM						1					1
Slime forming bacteria	none	HACH SLYM-BART	NM						1					1
Sulfate Reducing Bacteria	none	HACH SRB-BART	NM						1					1

WPX BWQ RMV 15-35: Crowley 44489FR Baseline and Subsequent Samples														
Station Name			**Crowley 44489FR**						**Crowley 44489FR**					
Facility ID			**708043**						**708043**					
Sample Date			**6/27/2012 9:20**						**9/25/2013 11:02**					
Field Sample ID			**CROW1**						**Crowley 44489-FR**					
Lab Sample ID			**D35947-1**						**D50936-1**					
Sampling Agency			**Olsson Associates**						**Western Water & Land, Inc**					
	Reporting Units	**Analytic Method**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**	**Result**	**Lab Qual**	**WWL Qual**	**RL**	**MDL**	**DF**
Field_Parameters														
Bubbles	none	Field	None						None					1
Color	none	Field	Clear						Clear					1
Conductivity, Field	uS/cm	Field	NM						1135					1
Discharge, measured	gpm	Field	16						6.2					1
Dissolved Oxygen, Field	mg/l	Field	3.92						5.04					1
Dissolved Oxygen, Field,%	%	Field	48.3						52.1					1
Effervescence	none	Field	None						None					1
Odor	none	Field	None						None					1
ORP, field	mv	Field	NM						146.6					1
pH, Field	s.u.	Field	7.65						7.4					1
Sediment	none	Field	None						None					1
Specific Conductivity, Field	uS/cm	Field	1234						1366					1
Temperature, Water	Deg C	Field	16						16.2					1
Turbidity, field	NTUs	Field	44.8						1					1

Notes:

Notes:

[1] A result of 1 indicates the presence of bacteria; AMS units for bacteria converted from cfu/ml to no units (detect or non-detect)

[2] AMS units converted from mg/L to ug/L

U = not detected at the reporting limit

NM = not measured

H = hold time exceeded

WPX BWQ RMV 15-35: Daryl & Viktoria Cox Well Baseline and Subsequent Samples

Station Name				Daryl & Viktoria Cox Well						Daryl & Viktoria Cox Well						Daryl & Viktoria Cox Well						Trip Blank					
Facility ID				708042						708042						708042						752940					
Sample Date				5/15/2012 9:30						4/24/2013 11:00						10/3/2013 11:11						10/3/2013 0:00					
Field Sample ID				COX1						COX1						Cox 61751-F											
Lab Sample ID				D34530-1						D45579-1						1310080-2						1310080-3					
Sampling Agency				Olsson Associates						Olsson Associates						Western Water & Land, Inc.						Western Water & Land, Inc.					
	Reporting Units	AMS Analytic Method	ALS Analytic Method	Result	Lab Qual	WWL Qual	RL	MDL	DF	Result	Lab Qual	WWL Qual	RL	MDL	DF	Result	Lab Qual	WWL Qual	RL	MDL	DF	Result	Lab Qual	WWL Qual	RL	MDL	DF
Inorganics																											
Alkalinity AS CaCO3, Total	mg/l	SM 2320B-2011	SM2320B	368			5		1	370			5		1	380			20		1						
Alkalinity, Bicarbonate as CaCO3	mg/l	SM 2320B-2011	SM2320B	NM						370			5		1	380			20		1						
Alkalinity, Carbonate as CaCO3	mg/l	SM 2320B-2011	SM2320B	NM						5	U		5		1	20	U		20		1						
Ammonia	mg/l	SM20 4500NH3 D		0.1	U		0.1		1	NM						NM											
Bromide	mg/l	EPA 300.0/SW846 9056	EPA300.0	0.2	U		0.2		1	0.05	U		0.05		1	0.2	U		0.2	0.06	1						
Chloride	mg/l	EPA 300.0/SW846 9056	EPA300.0	6			0.5		1	6			0.5		1	8.9			0.2	0.06	1						
Fluoride	mg/l	EPA 300.0/SW846 9056	EPA300.0	0.45			0.1		1	NM						0.33			0.1	0.03	1						
Hydroxide Alkalinity	mg/l	SM20 2320B-2011		5	U		5		1	NM						NM											
Nitrate/Nitrite as N	mg/l		EPA300.0	NM						NM						2			0.1		1						
Nitrate as N	mg/l	EPA 300.0/SW846 9056	EPA300.0	1.8			0.045		1	2.2			0.1		10	2			0.2	0.06	1						
Nitrite as N	mg/l	EPA 300.0/SW846 9056	EPA300.0	0.01	U		0.01		1	0.0041			0.004		1	0.1	U		0.1	0.03	1						
pH	s.u.	SM20 4500H	SM4500-H	7.55					1	NM						7.67			0.1		1						
Specific Conductivity	umhos/cm	SM 2510B-2011	SM2510B	725			1		1	839			1		1	962			1		1						
Sulfate	mg/l	EPA 300.0/SW846 9056	EPA300.0	147			2.5		5	159			5		10	140			10	3	10						
Total Dissolved Solids	mg/l	SM 2540C-2011	SM2540C	654			10		1	608			10		1	630			20		1						
Total Phosphorous	mg/l	HACH8190/SM4500P-B/E	EPA365.2	NM						0.01	U		0.01		1	0.086			0.05	0.015	1						
Dissolved Metals																											
Arsenic	ug/l	EPA 200.7		25	U		25		1	NM						NM											
Barium	ug/l	EPA 200.7	EPA200.8	95.8			10		1	NM						91			1	0.3	10						
Boron	ug/l	EPA 200.7	EPA200.8	63.9			50		1	50	U		50		1	66			50	15	10						
Cadmium	ug/l	EPA 200.7		10	U		10		1	NM						NM											
Calcium	ug/l	EPA 200.7	EPA200.8	77000			400		1	80900			400		1	80000			1000	65	10						
Chromium	ug/l	EPA 200.7		10	U		10		1	NM						NM											
Copper	ug/l	EPA 200.7		10	U		10		1	NM						NM											
Iron	ug/l	EPA 200.7	EPA200.8	10	U		10		1	10			10		1	100	U		100	30	10						
Lead	ug/l	EPA 200.7		50	U		50		1	NM						NM											
Magnesium	ug/l	EPA 200.7	EPA200.8	54000			200		1	54300			200		1	54000			100	30	10						
Manganese	ug/l	EPA 200.7	EPA200.8	17.8			5		1	10.2			5		1	2	U		2	0.6	10						
Potassium	ug/l	EPA 200.7	EPA200.8	5620			1000		1	5770			1000		1	5900			1000	300	10						
Selenium	ug/l	EPA 200.8	EPA200.8	4			0.8		2	4.8			0.8		2	4.1			1	0.5	10						
Sodium	ug/l	EPA 200.7	EPA200.8	49500			400		1	50000			400		1	56000			1000	300	10						
Strontium	ug/l	EPA 200.7	EPA200.8	915			5		1	927			5		1	910			1	0.3	10						
Organics																											
Diesel Range Organics	mg/l		SW8015M	NM						NM						0.5	U		0.5	0.15	1						
Gasoline Range Organics	ug/L		SW8260_25	NM						NM						100	U		100	30	1	100	U		100	30	1
Dissolved Gases [2]																											
Ethane	ug/l	RSK175 MOD	RSK175	1.6	U		1.6	0.8	1	1.6	U		1.6	0.8	1	2	U		2	2	1						
Methane	ug/l	RSK175 MOD	RSK175	1.5			0.8	0.4	1	0.8			0.8	0.4	1	4.1			1	1	1						
Propane	ug/l	RSK175 MOD	RSK175	13	U		13	6	1	18	U		18	9	1	1	U		1	1	1						
VOAs																											
Benzene	ug/l	SW846 8260B	SW8260_25	1	U		1	0.27	1	1	U		1	0.27	1	1	U		1	0.3	1	1	U		1	0.3	1
Ethylbenzene	ug/l	SW846 8260B	SW8260_25	2	U		2	0.33	1	2	U		2	0.33	1	1	U		1	0.3	1	1	U		1	0.3	1
Methyl tert-butyl ether	ug/l	SW846 8260B		2	U		2	0.5	1	NM						NM						NM					
M+P-Xylene	ug/l		SW8260_25	NM						NM						1	U		1	0.3	1	1	U		1	0.3	1
o-Xylene	ug/l		SW8260_25	NM						NM						1	U		1	0.3	1	1	U		1	0.3	1
Toluene	ug/l	SW846 8260B	SW8260_25	2	U		2	1	1	2	U		2	1	1	1	U		1	0.3	1	1	U		1	0.3	1
Xylenes (Total)	ug/l	SW846 8260B	SW8260_25	4	U		4	2	1	3	U		3	2	1	1	U		1		1	1	U		1		1

WPX BWQ RMV 15-35: Daryl & Viktoria Cox Well Baseline and Subsequent Samples

Station Name				Daryl & Viktoria Cox Well						Daryl & Viktoria Cox Well						Daryl & Viktoria Cox Well						Trip Blank					
Facility ID				708042						708042						708042						752940					
Sample Date				5/15/2012 9:30						4/24/2013 11:00						10/3/2013 11:11						10/3/2013 0:00					
Field Sample ID				COX1						COX1						Cox 61751-F											
Lab Sample ID				D34530-1						D45579-1						1310080-2						1310080-3					
Sampling Agency				Olsson Associates						Olsson Associates						Western Water & Land, Inc.						Western Water & Land, Inc.					
	Reporting Units	AMS Analytic Method	ALS Analytic Method	Result	Lab Qual	WWL Qual	RL	MDL	DF	Result	Lab Qual	WWL Qual	RL	MDL	DF	Result	Lab Qual	WWL Qual	RL	MDL	DF	Result	Lab Qual	WWL Qual	RL	MDL	DF
Bacteria[1]																											
Iron Related Bacteria	none		BART	NM						NM						0	U		1		1						
Slime forming bacteria	none		BART	NM						NM						0	U		1		1						
Sulfate Reducing Bacteria	none		BART	NM						NM						0	U		1		1						
Field Parameters																											
Bubbles	none			NM						None						None					1						
Color	none			Clear						Clear						L. Brown					1						
Conductivity, Field	uS/cm			NM						NM						822					1						
Discharge, measured	gpm			6						4						6		J			1						
Dissolved Oxygen, Field	mg/l			6.11						2.38						4.28					1						
Dissolved Oxygen, Field,%	%			69.2						26.2						44.4					1						
Effervescence	none			None						None						None					1						
Odor	none			None						None						None					1						
ORP, field	mv			NM						NM						740.2					1						
pH, Field	s.u.			7.58						8.54						7.36					1						
Sediment	none			None						None						Light					1						
Specific Conductivity, Field	uS/cm			0						1017						975					1						
Temperature, Water	Deg C			15.72						11.07						16.7					1						
Turbidity, field	NTUs			10.7						31.1						8.05					1						

Notes:

[1] A result of 1 indicates the presence of bacteria

[2] AMS units converted from mg/L to ug/L

U = not detected at the reporting limit

NM = not measured

J = result approximated