1511116

GC/MS Volatiles:
The sample was analyzed using GC/MS following the current revision of SOP 525 based on SW-846 Method 8260C. The sample was also analyzed for Gasoline Range Organics (GRO).

All acceptance criteria were met.

Dissolved Gasses:
The sample was prepared and analyzed according to method RSK-175 procedures and the current revision of SOP 449.

All acceptance criteria were met.

DRO:
The sample was analyzed following the current revision of SOP 406 generally based on SW-846 Methods 8000C and 8015D. TEPH is a multicomponent mixture and is quantitated by summing the entire carbon range, rather than individual peaks. The carbon range integrated in this test extends from C10 to C28.

All acceptance criteria were met.

BART:
The Biological Activity Reaction Test was completed with the Iron-Related Bacteria, Sulfate-Reducing Bacteria, and Slime-Forming Bacteria kit manufactured by Hach Company. The analysis was performed following the manufacturer provided instructions. If the target analyte is not detected (absent), then the sample will be reported with "ND" in the result field. If the target analyte is detected (present), then the sample will be reported with the estimated colony forming units/mL (cfu/mL) as provided by the manufacturer based on the day reaction was observed.

Metals:
The sample was analyzed following Methods for the Determination of Metals in Environmental Samples – Supplement 1 procedures. Analysis by ICPMS followed method 200.8 and the current revision of SOP 827.

The sample was to be analyzed for dissolved metals. The sample was filtered through a 0.45 micron filter and preserved with nitric acid to a pH less than 2 prior to analysis.

All acceptance criteria were met.

Inorganics:
The sample was analyzed following MCAWW and Standard Method procedures for the current revisions of the following SOPs and methods:

Analyte	Method	SOP #
Alkalinity	SM2320B	1106
Bicarbonate	SM2320B	1106
Carbonate	SM2320B	1106
pH	SM4500-H^+ B	1126
Specific conductance	SM2510B	1128
Total phosphorus	365.2	1119
TDS	SM2540C	1101

All acceptance criteria were met.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1511116
Client Name: Western Water and Land, Inc.
Client Project Name: WPX GM 323-28 BWQ
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
GM-323-28-151879	1511116-1		WATER	05-Nov-15	12:10

ALS Laboratory Group

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Form 202r8

WORKORDER # 1511116
PAGE 1 of 1
DISPOSAL By Lab or Return to Client

PROJECT NAME	WPX GM 323-28 BWQ	SAMPLER	Nick
FACILITY NAME		PROJECT NO.	
FACILITY ID (API)		EDD FORMAT	
COMPANY NAME	Western Water & Land, Inc.	PURCHASE ORDER	
SEND REPORT TO	Bruce Smith	BILL TO COMPANY	WPX Energy
ADDRESS	743 Horizon Court, Suite 330	INVOICE ATTN TO	Mike Shoemaker
CITY / STATE / ZIP	Grand Junction, CO 81506	ADDRESS	1058 CR 215
PHONE	(970) 242-0170	CITY / STATE / ZIP	Parachute, CO 81635
FAX		PHONE	(970) 250-5778
E-MAIL	bsmith@westernwaterandland.com	FAX	
		E-MAIL	mike.shoemaker@wpxenergy.com

DATE 11-5-15
TURNAROUND standard

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Bottles	Pres.	QC	NG1	BART	BTEX/GRO	DRO	Dissolved Metals, lab filtered	Anions, Alk, TDS, pH, SpC	Total Phosphorus	Dissolved gases - HCl preserved	Dissolved gases - unpreserved
1	GM 323-28-151879 ~~FB~~	GW	11-5-15	1210	13 +	1,3	N	1	1	3	3	1	1	1		2

Field Parameters

GM 323-28-151879	Temp (°C)	12.07	DO (%)	4.5	SpC (uS/cm)	1401	Turb (NTUs)	2.08				
	pH (s.u.)	6.83	DO (mg/L)	0.47	ORP (mv)	194.4	Disch (gpm)	1.5				
	Temp (°C)		DO (%)		SpC (uS/cm)		Turb (NTUs)					
	pH (s.u.)		DO (mg/L)		ORP (mv)		Disch (gpm)					

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

For metals or anions, please detail analytes below.

Comments:	QC PACKAGE (check below)
	LEVEL II (Standard QC)
	LEVEL III (Std QC + forms)
	X LEVEL IV (Std QC + forms + raw data)

Preservative Key: 1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaHSO4 7-Other 8-4 degrees C 9-5035

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Shelby Kipp	11-5-15	1330
RECEIVED BY			11-5-15	13:30
RELINQUISHED BY			11-5-15	1340
RECEIVED BY	C Trimble	C Trimble	11-6-15	0940
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Western Water Workorder No: 1511116

Project Manager: KW Initials: CDT Date: 11-6-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	(YES)	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	(YES)	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	N/A	(YES)	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	N/A	YES	(NO)
16. Were the samples shipped on ice?		(YES)	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	RAD ONLY	(YES)	NO

Cooler #:	1								
Temperature (°C):	2.6								
No. of custody seals on cooler:	0								
DOT Survey/ Acceptance Information — External µR/hr reading:	11								
Background µR/hr reading:	11								

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? **(YES) / NO / NA** (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: 11/6/15

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

ORIGIN ID:RILA (616) 298-1033
NICK MARTINEZ
ALS ENVIRONMENTAL
127 E. 1ST STREET

PARACHUTE, CO 81635
UNITED STATES US

SHIP DATE: 05NOV15
ACTWGT: 26.00 LB
CAD: 108058167/INET3670
DIMS: 13x18x16 IN
BILL RECIPIENT

1511 11

TO SAMPLE RECEIVING
ALS LABORATORY GROUP
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511 REF: 110515-4
INV:
PO: PARACHUTE DEPT:

11 0 seeds

539J/23F56/31D0

FedEx Express

J152015081101ur

FRI - 06 NOV 3:00P
STANDARD OVERNIGHT

TRK# 0201 7749 1488 6466

80524
CO-US DEN

72 FTCA

FedEx Ship Manager - Print Your Label(s)

11/5/2015

Client: Western Water and Land, Inc. **Date:** *30-Nov-15*
Project: WPX GM 323-28 BWQ **Work Order:** 1511116
Sample ID: GM-323-28-151879 **Lab ID:** 1511116-1
Legal Location: **Matrix:** WATER
Collection Date: 11/5/2015 12:10 **Percent Moisture:**

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
ALKALINITY AS CALCIUM CARBONATE			**SM2320B**		Prep Date: **11/10/2015**		PrepBy: **TLB**
BICARBONATE AS CaCO3	**520**		**20**	**MG/L**	1		11/10/2015
CARBONATE AS CaCO3	ND		20	MG/L	1		11/10/2015
TOTAL ALKALINITY AS CaCO3	**520**		**20**	**MG/L**	1		11/10/2015
BIOLOGICAL ACTIVITY REACTION TEST			**BART**		Prep Date: **11/10/2015**		PrepBy: **CDR**
IRON RELATED BACTERIA	**9000**		**1**	**cfu/ml**	1		11/18/2015
SLIME FORMING BACTERIA	**12500**		**1**	**cfu/ml**	1		11/18/2015
SULFATE REDUCING BACTERIA	**5000**		**1**	**cfu/ml**	1		11/18/2015
DIESEL RANGE ORGANICS			**SW8015M**		Prep Date: **11/9/2015**		PrepBy: **JFN**
Diesel Range Organics	ND		0.57	MG/L	1	0.17	11/9/2015 16:51
Surr: O-TERPHENYL	*84*		*63-126*	*%REC*	1		11/9/2015 16:51
DISSOLVED GASSES			**RSK175**		Prep Date: **11/18/2015**		PrepBy: **JFN**
METHANE	ND		1	UG/L	1	1	11/18/2015 16:44
ETHANE	ND		2	UG/L	1	2	11/18/2015 16:44
PROPANE	ND		1	UG/L	1	1	11/18/2015 16:44
GC/MS VOLATILES			**SW8260_25**		Prep Date: **11/10/2015**		PrepBy: **JXK**
BENZENE	ND		1	UG/L	1	0.3	11/10/2015 15:41
TOLUENE	ND		1	UG/L	1	0.3	11/10/2015 15:41
ETHYLBENZENE	ND		1	UG/L	1	0.3	11/10/2015 15:41
M+P-XYLENE	ND		1	UG/L	1	0.3	11/10/2015 15:41
O-XYLENE	ND		1	UG/L	1	0.3	11/10/2015 15:41
TOTAL XYLENES	ND		1	UG/L	1		11/10/2015 15:41
Surr: 4-BROMOFLUOROBENZENE	*106*		*85-115*	*%REC*	1		11/10/2015 15:41
Surr: DIBROMOFLUOROMETHANE	*101*		*84-118*	*%REC*	1		11/10/2015 15:41
Surr: TOLUENE-D8	*101*		*85-115*	*%REC*	1		11/10/2015 15:41
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	100	11/10/2015 15:41
METALS BY 200.8			**EPA200.8**		Prep Date: **11/11/2015**		PrepBy: **CDR**
BARIUM	**0.05**		**0.001**	**MG/L**	10	0.00058	11/12/2015 12:29
BORON	**0.18**		**0.05**	**MG/L**	10	0.0069	11/12/2015 12:29
CALCIUM	**110**		**1**	**MG/L**	10	0.1	11/12/2015 12:29
IRON	ND		0.1	MG/L	10	0.025	11/12/2015 12:29
MAGNESIUM	**56**		**0.1**	**MG/L**	10	0.045	11/12/2015 12:29
MANGANESE	**0.066**		**0.002**	**MG/L**	10	0.0007	11/12/2015 12:29
POTASSIUM	**6**		**1**	**MG/L**	10	0.22	11/12/2015 12:29
SELENIUM	**0.011**		**0.001**	**MG/L**	10	0.00068	11/12/2015 12:29
SODIUM	**91**		**1**	**MG/L**	10	0.24	11/12/2015 12:29
STRONTIUM	**1.7**		**0.001**	**MG/L**	10	0.00066	11/12/2015 12:29
PH			**SM4500-H**		Prep Date: **11/9/2015**		PrepBy: **TLB**
PH	**7.75**		**0.1**	**pH**	1		11/9/2015
SPECIFIC CONDUCTANCE IN WATER			**SM2510B**		Prep Date: **11/9/2015**		PrepBy: **TLB**
SPECIFIC CONDUCTIVITY	**1322**		**1**	**umhos/cm**	1		11/9/2015

Client:	Western Water and Land, Inc.	**Date:**	*30-Nov-15*
Project:	WPX GM 323-28 BWQ	**Work Order:**	1511116
Sample ID:	GM-323-28-151879	**Lab ID:**	1511116-1
Legal Location:		**Matrix:**	WATER
Collection Date:	11/5/2015 12:10	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed
TOTAL DISSOLVED SOLIDS			**SM2540C**		Prep Date: **11/9/2015**		PrepBy: **TLB**
TOTAL DISSOLVED SOLIDS	**810**		**40**	**MG/L**	1		11/10/2015
TOTAL PHOSPHORUS AS P			**EPA365.2**		Prep Date: **11/12/2015**		PrepBy: **TLB**
TOTAL PHOSPHORUS	**0.25**		**0.05**	**MG/L**	1	0.015	11/12/2015

Client:	Western Water and Land, Inc.	**Date:**	*30-Nov-15*
Project:	WPX GM 323-28 BWQ	**Work Order:**	1511116
Sample ID:	GM-323-28-151879	**Lab ID:**	1511116-1
Legal Location:		**Matrix:**	WATER
Collection Date:	11/5/2015 12:10	**Percent Moisture:**	

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	MDL	Date Analyzed

Explanation of Qualifiers

Radiochemistry:

U or ND - Result is less than the sample specific MDC.

Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.

Y2 - Chemical Yield outside default limits.

W - DER is greater than Warning Limit of 1.42

* - Aliquot Basis is 'As Received' while the Report Basis is 'Dry Weight'.
# - Aliquot Basis is 'Dry Weight' while the Report Basis is 'As Received'.
G - Sample density differs by more than 15% of LCS density.
D - DER is greater than Control Limit

M - Requested MDC not met.

LT - Result is less than requested MDC but greater than achieved MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

L - LCS Recovery below lower control limit.

H - LCS Recovery above upper control limit.

P - LCS, Matrix Spike Recovery within control limits.

N - Matrix Spike Recovery outside control limits

NC - Not Calculated for duplicate results less than 5 times MDC

B - Analyte concentration greater than MDC.

B3 - Analyte concentration greater than MDC but less than Requested MDC.

Inorganics:

B - Result is less than the requested reporting limit but greater than the instrument method detection limit (MDL).

U or ND - Indicates that the compound was analyzed for but not detected.

E - The reported value is estimated because of the presence of interference. An explanatory note may be included in the narrative.

M - Duplicate injection precision was not met.

N - Spiked sample recovery not within control limits. A post spike is analyzed for all ICP analyses when the matrix spike and or spike duplicate fail and the native sample concentration is less than four times the spike added concentration.

Z - Spiked recovery not within control limits. An explanatory note may be included in the narrative.

* - Duplicate analysis (relative percent difference) not within control limits.

S - SAR value is estimated as one or more analytes used in the calculation were not detected above the detection limit.

Organics:

U or ND - Indicates that the compound was analyzed for but not detected.

B - Analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user.

E - Analyte concentration exceeds the upper level of the calibration range.

J - Estimated value. The result is less than the reporting limit but greater than the instrument method detection limit (MDL).

A - A tentatively identified compound is a suspected aldol-condensation product.

X - The analyte was diluted below an accurate quantitation level.

* - The spike recovery is equal to or outside the control criteria used.

+ - The relative percent difference (RPD) equals or exceeds the control criteria.

G - A pattern resembling gasoline was detected in this sample.

D - A pattern resembling diesel was detected in this sample.

M - A pattern resembling motor oil was detected in this sample.

C - A pattern resembling crude oil was detected in this sample.

4 - A pattern resembling JP-4 was detected in this sample.

5 - A pattern resembling JP-5 was detected in this sample.

H - Indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.

L - Indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.

Z - This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:
- gasoline
- JP-8
- diesel
- mineral spirits
- motor oil
- Stoddard solvent
- bunker C

Batch ID: **HC151109-100-1** Instrument ID **FUELS-1** Method: **SW8015M**

LCS Sample ID: **HC151109-100** Units: **MG/L** Analysis Date: **11/9/2015 12:44**

Client ID: Run ID: **HC151109-7A** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	6.8	0.582	8.09		84	36-150				20	
Surr: O-TERPHENYL	0.663		0.809		82	63-126					

MB Sample ID: **HC151109-100** Units: **MG/L** Analysis Date: **11/9/2015 12:13**

Client ID: Run ID: **HC151109-7A** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	ND	0.57									
Surr: O-TERPHENYL	0.666		0.794		84	63-126					

The following samples were analyzed in this batch: 1511116-1

Client: Western Water and Land, Inc.
Work Order: 1511116
Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **HC151118-9-1** Instrument ID **MEE-1** Method: **RSK175**

DUP Sample ID: **1511116-1** Units: **UG/L** Analysis Date: **11/18/2015 16:47**
Client ID: **GM-323-28-151879** Run ID: **HC151118-9A** Prep Date: **11/18/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	ND	1							1	25	
ETHANE	ND	2							2	25	
PROPANE	ND	1							1	25	

LCS Sample ID: **HC151118-9** Units: **UG/L** Analysis Date: **11/18/2015 16:01**
Client ID: Run ID: **HC151118-9A** Prep Date: **11/18/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	151	1	142		106	80-120				25	
ETHANE	287	2	267		108	80-120				25	
PROPANE	412	1	391		105	80-120				25	

LCSD Sample ID: **HC151118-9** Units: **UG/L** Analysis Date: **11/18/2015 16:58**
Client ID: Run ID: **HC151118-9A** Prep Date: **11/18/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	155	1	142		109	80-120		151	3	25	
ETHANE	291	2	267		109	80-120		287	2	25	
PROPANE	415	1	391		106	80-120		412	1	25	

MB Sample ID: **HC151118-9** Units: **UG/L** Analysis Date: **11/18/2015 16:07**
Client ID: Run ID: **HC151118-9A** Prep Date: **11/18/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	ND	1									
ETHANE	ND	2									
PROPANE	ND	1									

The following samples were analyzed in this batch: 1511116-1

QC BATCH REPORT

Batch ID: **IP151111-1-2** Instrument ID **ICPMS2** Method: **EPA200.8**

LCS Sample ID: **FM151111-1** Units: **MG/L** Analysis Date: **11/12/2015 12:19**

Client ID: Run ID: **IM151112-11A3** Prep Date: **11/11/2015** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.0977	0.001	0.1		98	85-115				20	
BORON	0.953	0.05	1		95	85-115				20	
CALCIUM	10.2	1	10		102	85-115				20	
IRON	5	0.1	5		100	85-115				20	
MAGNESIUM	10.1	0.1	10		101	85-115				20	
MANGANESE	0.105	0.002	0.1		105	85-115				20	
POTASSIUM	4.42	1	5		88	85-115				20	
SELENIUM	0.11	0.001	0.1		110	85-115				20	
SODIUM	8.81	1	10		88	85-115				20	
STRONTIUM	0.105	0.001	0.1		105	85-115				20	

MB Sample ID: **FP151111-1** Units: **MG/L** Analysis Date: **11/12/2015 12:12**

Client ID: Run ID: **IM151112-11A3** Prep Date: **11/11/2015** DF: **10**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	ND	0.001									
BORON	0.015	0.05									J
CALCIUM	ND	1									
IRON	ND	0.1									
MAGNESIUM	ND	0.1									
MANGANESE	ND	0.002									
POTASSIUM	ND	1									
SELENIUM	ND	0.001									
SODIUM	ND	1									
STRONTIUM	ND	0.001									

The following samples were analyzed in this batch: 1511116-1

Batch ID: **VL151110-3-2** Instrument ID **HPV1** Method: **SW8260_25**

LCS Sample ID: **VL151110-3** Units: **%REC** Analysis Date: **11/10/2015 12:04**

Client ID: Run ID: **VL151110-3A** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.6		25		103	85-115					
Surr: DIBROMOFLUOROMETHANE	25.1		25		100	84-118					
Surr: TOLUENE-D8	26		25		104	85-115					
BENZENE	10.7	1	10		107	83-117				20	
TOLUENE	11.1	1	10		111	82-113				20	
ETHYLBENZENE	10.9	1	10		109	81-113				20	
M+P-XYLENE	21.9	1	20		109	82-115				20	
O-XYLENE	11.1	1	10		111	81-115				20	

LCSD Sample ID: **VL151110-3** Units: **%REC** Analysis Date: **11/10/2015 12:25**

Client ID: Run ID: **VL151110-3A** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.6		25		103	85-115			0		
Surr: DIBROMOFLUOROMETHANE	25.2		25		101	84-118			0		
Surr: TOLUENE-D8	25.7		25		103	85-115			1		
BENZENE	10.1	1	10		101	83-117		10.7	6	20	
TOLUENE	10.3	1	10		103	82-113		11.1	7	20	
ETHYLBENZENE	10.2	1	10		102	81-113		10.9	6	20	
M+P-XYLENE	20.3	1	20		102	82-115		21.9	7	20	
O-XYLENE	10.2	1	10		102	81-115		11.1	8	20	

MB Sample ID: **VL151110-3** Units: **%REC** Analysis Date: **11/10/2015 14:37**

Client ID: Run ID: **VL151110-3A** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	27.2		25		109	85-115					
Surr: DIBROMOFLUOROMETHANE	25.2		25		101	84-118					
Surr: TOLUENE-D8	25.5		25		102	85-115					
BENZENE	ND	1									
TOLUENE	ND	1									
ETHYLBENZENE	ND	1									
M+P-XYLENE	ND	1									
O-XYLENE	ND	1									
TOTAL XYLENES	ND	1									

Client: Western Water and Land, Inc.
Work Order: 1511116
Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **VL151110-3-3** Instrument ID **HPV1** Method: **SW8260_25**

LCS Sample ID: **VL151110-6** Units: **UG/L** Analysis Date: **11/10/2015 13:33**
Client ID: Run ID: **VL151110-3A** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	967	100	1000		97	80-120				20	

LCSD Sample ID: **VL151110-6** Units: **UG/L** Analysis Date: **11/10/2015 13:54**
Client ID: Run ID: **VL151110-3A** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	957	100	1000		96	80-120		967	1	20	

MB Sample ID: **VL151110-3** Units: **UG/L** Analysis Date: **11/10/2015 14:37**
Client ID: Run ID: **VL151110-3A** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	ND	100									

The following samples were analyzed in this batch: 1511116-1

QC BATCH REPORT

Batch ID: **AK151110-1-1** Instrument ID **Balance** Method: **SM2320B**

LCS Sample ID: **AK151110-1** Units: **MG/L** Analysis Date: **11/10/2015**
Client ID: Run ID: **AK151110-1A1** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL ALKALINITY AS CaCO3	97.9	5	100		98	85-115				15	

MB Sample ID: **AK151110-1** Units: **MG/L** Analysis Date: **11/10/2015**
Client ID: Run ID: **AK151110-1A1** Prep Date: **11/10/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BICARBONATE AS CaCO3	ND	5									
CARBONATE AS CaCO3	ND	5									
TOTAL ALKALINITY AS CaCO3	ND	5									

The following samples were analyzed in this batch: 1511116-1

QC BATCH REPORT

Batch ID: **PH151109-1-1** Instrument ID **pH-1** Method: **SM4500-H**

CCV Sample ID: **CCV1** Units: **pH** Analysis Date: **11/9/2015**
Client ID: Run ID: **PH151109-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.01	0.1	7			6.9-7.1					

DUP Sample ID: **1511116-1** Units: **pH** Analysis Date: **11/9/2015**
Client ID: **GM-323-28-151879** Run ID: **PH151109-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.63	0.1						7.75		0.2	

ICV Sample ID: **ICV** Units: **pH** Analysis Date: **11/9/2015**
Client ID: Run ID: **PH151109-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	6.99	0.1	7			6.95-7.05					

The following samples were analyzed in this batch: 1511116-1

QC BATCH REPORT

Batch ID: **SC151109-1-1** Instrument ID **pH-2** Method: **SM2510B**

CCV Sample ID: **CCV1** Units: **umhos/cm** Analysis Date: **11/9/2015**
Client ID: Run ID: **SC151109-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1380	1	1410		98	71.7-1554					

DUP Sample ID: **1511116-1** Units: **umhos/cm** Analysis Date: **11/9/2015**
Client ID: **GM-323-28-151879** Run ID: **SC151109-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1319	1						1322	0	10	

ICV Sample ID: **ICV** Units: **umhos/cm** Analysis Date: **11/9/2015**
Client ID: Run ID: **SC151109-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	701	1	718		91	46.2-789.7					

The following samples were analyzed in this batch: 1511116-1

QC BATCH REPORT

Batch ID: **TD151109-1-1** Instrument ID **Balance** Method: **SM2540C**

LCS Sample ID: **TD151109-1** Units: **MG/L** Analysis Date: **11/10/2015**
Client ID: Run ID: **TD151110-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	402	20	400		101	85-115				5	

MB Sample ID: **TD151109-1** Units: **MG/L** Analysis Date: **11/10/2015**
Client ID: Run ID: **TD151110-1A1** Prep Date: **11/9/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	ND	20									

The following samples were analyzed in this batch: 1511116-1

Client: Western Water and Land, Inc.
Work Order: 1511116
Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **TP151112-1-1** Instrument ID **Spec** Method: **EPA365.2**

LCS Sample ID: **TP151112-1** Units: **MG/L** Analysis Date: **11/12/2015**
Client ID: Run ID: **TP151112-1A2** Prep Date: **11/12/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	0.521	0.05	0.5		104	80-120				20	

MB Sample ID: **TP151112-1** Units: **MG/L** Analysis Date: **11/12/2015**
Client ID: Run ID: **TP151112-1A2** Prep Date: **11/12/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL PHOSPHORUS	ND	0.05									

The following samples were analyzed in this batch: 1511116-1