



1510477

This work order is being resubmitted in order to correct the sample volume for TDS.

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 Gases:

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.

- n All initial and continuing calibration blanks were below the reporting limit for the requested analytes, with the exception of CCB5 for boron. None of the samples associated with this order number were bracketed by this CCB.
- n All initial and continuing calibration verifications were within the acceptance criteria for the requested analytes, with the exception of CCV2 for selenium. None of the samples associated with this order number were bracketed by this CCV.

All remaining acceptance criteria were met.

Inorganics:

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

<u>Analyte</u>	<u>Method</u>	<u>SOP #</u>
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
Bromide	300.0 Revision 2.1	1113
Chloride	300.0 Revision 2.1	1113
Fluoride	300.0 Revision 2.1	1113
Nitrate as N	300.0 Revision 2.1	1113
Nitrite as N	300.0 Revision 2.1	1113
Total Nitrates	300.0 Revision 2.1	1113
Sulfate	300.0 Revision 2.1	1113

All acceptance criteria were met.

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1510477

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
Union No. 6-26068-F	1510477-1		WATER	28-Oct-15	11:30



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 20218

PROJECT NAME WPX gm 323-28 BMQ		SAMPLER Shaly GPP		DATE 10-28-15		WORKORDER # 1510477	
FACILITY NAME		PROJECT NO.		TURNAROUND		PAGE 1 of 1	
FACILITY ID (API)		EDD FORMAT		DISPOSAL		Return to Client	
COMPANY NAME Western Water & Land, Inc.		PURCHASE ORDER		Dissolved gases - HCl preserved			
SEND REPORT TO Bruce Smith		BILL TO COMPANY WPX Energy		Dissolved gases - unpreserved			
ADDRESS 743 Horizon Court, Suite 330		INVOICE ATTN TO Mike Shoemaker		Total Phosphorus			
CITY / STATE / ZIP Grand Junction, CO 81506		ADDRESS 1058 CR 215		Anions, Alk, TDS, pH, SpC			
PHONE (970) 242-0170		CITY / STATE / ZIP Parachute, CO 81635		Dissolved Metals, lab filtered			
FAX		PHONE (970) 250-5778		DRO			
E-MAIL bsmith@westernwaterland.com		E-MAIL mike.shoemaker@wpxenergy.com		BTEX/GRO			
Lab ID ① Union No. U-20608-F		Matrix GW		BART			
Field ID		Sample Date 10-28-15		NG1			
Field Parameters		Sample Time 1130		Pres. QC			
Temp (°C) 12.75		DO (%) 35.4		SpC (uS/cm) 2455		Turb (NTUs) 0.33	
pH (s.u.) 7.23		DO (mg/L) 3.72		ORP (mv) -51.4		Disch (gpm)	
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)	
LEVEL IV (Std QC + forms + raw data)	X

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
<i>[Signature]</i>	Shaly GPP	10-28-15	1520
<i>[Signature]</i>		10-28-15	1500
<i>[Signature]</i>	Steve Mally	10-28-15	0930



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: Western Water

Workorder No: 1510477

Project Manager: ARW

Initials: SDM Date: 10-29-15

1. Does this project require any special handling in addition to standard ALS procedures?		YES	<input checked="" type="radio"/> NO
2. Are custody seals on shipping containers intact?	<input checked="" type="radio"/> NONE	YES	NO
3. Are Custody seals on sample containers intact?	<input checked="" type="radio"/> NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		<input checked="" type="radio"/> YES	NO
5. Are the COC and bottle labels complete and legible?		<input checked="" type="radio"/> YES	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		<input checked="" type="radio"/> YES	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	<input checked="" type="radio"/> YES	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	N/A	<input checked="" type="radio"/> YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	N/A	<input checked="" type="radio"/> YES	NO
10. Is there sufficient sample for the requested analyses?		<input checked="" type="radio"/> YES	NO
11. Were all samples placed in the proper containers for the requested analyses?		<input checked="" type="radio"/> YES	NO
12. Are all samples within holding times for the requested analyses?		<input checked="" type="radio"/> YES	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		<input checked="" type="radio"/> 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	<input checked="" type="radio"/> YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ___ dusting ___ moderate ___ heavy	N/A	YES	<input checked="" type="radio"/> NO
16. Were the samples shipped on ice?		<input checked="" type="radio"/> YES	NO
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: <input checked="" type="radio"/> #2 #4	RAD ONLY	<input checked="" type="radio"/> YES	NO
Cooler #: <u>1</u>			
Temperature (°C): <u>2.2</u>			
No. of custody seals on cooler: <u>2</u>			
External µR/hr reading: <u>10</u>			
Background µR/hr reading: <u>10</u>			
Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? <input checked="" type="radio"/> 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: ARW 10/29/15

1510477

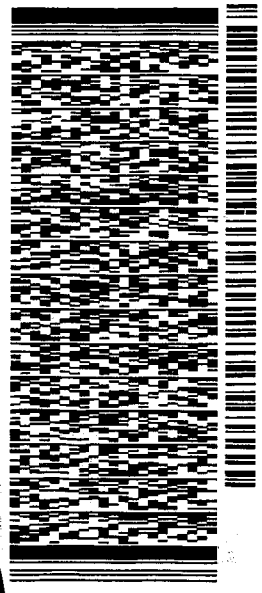
ORIGIN ID: RILA (616) 298-1033
NICK MARTINEZ
ALS ENVIRONMENTAL
127 E. 1ST STREET
PARACHUTE CO 81635
UNITED STATES US

SHIP DATE: 28OCT15
ACTWTG: 42.00 LB
CAD: 108058167/NET3570
DIMS: 14x26x15 IN
BILL RECIPIENT

TO **SAMPLE RECEIVING**
ALS LABORATORY GROUP
225 COMMERCE DRIVE

FORT COLLINS CO 80524
(970) 490-1511 REF: 102815.4

PO PARACHUTE DEPT:



J163016081001uv

TRK# 7748 5005 2380
0201

THU - 29 OCT 3:00P
STANDARD OVERNIGHT

2.20c

72 FTCA

80524
CO-US DEN



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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Client: Western Water and Land, Inc.
Project: WPX GM 323-28 BWQ
Sample ID: Union No. 6-26068-F
Legal Location:
Collection Date: 10/28/2015 11:30

Date: 14-Jan-16
Work Order: 1510477
Lab ID: 1510477-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
Alkalinity as Calcium Carbonate						
			SM2320B		Prep Date: 10/30/2015	PrepBy: TLB
BICARBONATE AS CaCO3	580		20	MG/L	1	10/30/2015
CARBONATE AS CaCO3	ND		20	MG/L	1	10/30/2015
TOTAL ALKALINITY AS CaCO3	580		20	MG/L	1	10/30/2015
Biological Activity Reaction Test						
			BART		Prep Date: 11/3/2015	PrepBy: CDR
IRON RELATED BACTERIA	500		1	cfu/ml	1	11/11/2015
SLIME FORMING BACTERIA	2500		1	cfu/ml	1	11/11/2015
SULFATE REDUCING BACTERIA	500		1	cfu/ml	1	11/11/2015
Diesel Range Organics						
			SW8015M		Prep Date: 11/2/2015	PrepBy: JFN
Diesel Range Organics	ND		0.56	MG/L	1	11/2/2015 17:16
Surr: O-TERPHENYL	84		63-126	%REC	1	11/2/2015 17:16
Dissolved Gasses						
			RSK175		Prep Date: 10/30/2015	PrepBy: JFN
METHANE	2.2		1	UG/L	1	10/30/2015 15:43
ETHANE	ND		2	UG/L	1	10/30/2015 15:43
PROPANE	ND		1	UG/L	1	10/30/2015 15:43
GC/MS Volatiles						
			SW8260_25		Prep Date: 11/3/2015	PrepBy: JXK
BENZENE	ND		1	UG/L	1	11/3/2015 15:07
TOLUENE	ND		1	UG/L	1	11/3/2015 15:07
ETHYLBENZENE	ND		1	UG/L	1	11/3/2015 15:07
M+P-XYLENE	ND		1	UG/L	1	11/3/2015 15:07
O-XYLENE	ND		1	UG/L	1	11/3/2015 15:07
TOTAL XYLENES	ND		1	UG/L	1	11/3/2015 15:07
Surr: 4-BROMOFLUOROBENZENE	105		85-115	%REC	1	11/3/2015 15:07
Surr: DIBROMOFLUOROMETHANE	101		84-118	%REC	1	11/3/2015 15:07
Surr: TOLUENE-D8	102		85-115	%REC	1	11/3/2015 15:07
GASOLINE RANGE ORGANICS	ND		100	UG/L	1	11/3/2015 15:07
Ion Chromatography						
			EPA300.0		Prep Date: 10/29/2015	PrepBy: JFN
BROMIDE	0.13	J	0.4	MG/L	2	10/29/2015 14:34
CHLORIDE	40		5	MG/L	25	10/29/2015 15:19
FLUORIDE	0.83		0.2	MG/L	2	10/29/2015 14:34
NITRATE/NITRITE AS N	0.22	J	0.1	MG/L	1	10/29/2015 14:34
NITRATE AS N	0.22	J	0.4	MG/L	2	10/29/2015 14:34
NITRITE AS N	ND		0.2	MG/L	2	10/29/2015 14:34
SULFATE	790		25	MG/L	25	10/29/2015 15:19
Dissolved Metals by 200.8						
			EPA200.8		Prep Date: 11/5/2015	PrepBy: CDR
BARIUM	0.022		0.001	MG/L	10	11/9/2015 14:54
BORON	0.17		0.05	MG/L	10	11/9/2015 14:54
CALCIUM	140		1	MG/L	10	11/9/2015 14:54
IRON	ND		0.1	MG/L	10	11/9/2015 14:54
MAGNESIUM	110		0.1	MG/L	10	11/9/2015 14:54
MANGANESE	0.096		0.002	MG/L	10	11/9/2015 14:54
POTASSIUM	3.5		1	MG/L	10	11/9/2015 14:54
SELENIUM	ND		0.001	MG/L	10	11/9/2015 14:54
SODIUM	270		1	MG/L	10	11/9/2015 14:54

Client: Western Water and Land, Inc.
Project: WPX GM 323-28 BWQ
Sample ID: Union No. 6-26068-F
Legal Location:
Collection Date: 10/28/2015 11:30

Date: 14-Jan-16
Work Order: 1510477
Lab ID: 1510477-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
STRONTIUM	2.2		0.001	MG/L	10	11/9/2015 14:54
pH		SM4500-H			Prep Date: 11/2/2015	PrepBy: TLB
PH	7.63		0.1	pH	1	11/2/2015
Specific Conductance in Water		SM2510B			Prep Date: 11/2/2015	PrepBy: TLB
SPECIFIC CONDUCTIVITY	2360		1	umhos/cm	1	11/2/2015
Total Dissolved Solids		SM2540C			Prep Date: 11/2/2015	PrepBy: TLB
TOTAL DISSOLVED SOLIDS	1700		40	MG/L	1	11/3/2015
Total Phosphorus as P		EPA365.2			Prep Date: 11/12/2015	PrepBy: TLB
TOTAL PHOSPHORUS	0.023	J	0.05	MG/L	1	11/12/2015

Client: Western Water and Land, Inc.
Project: WPX GM 323-28 BWQ
Sample ID: Union No. 6-26068-F
Legal Location:
Collection Date: 10/28/2015 11:30

Date: 14-Jan-16
Work Order: 1510477
Lab ID: 1510477-1
Matrix: WATER
Percent Moisture:

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
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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

ALS Environmental -- FC

Date: 1/14/2016 8:58:

Client: Western Water and Land, Inc.

QC BATCH REPORT

Work Order: 1510477

Project: WPX GM 323-28 BWQ

Batch ID: **HC151030-9-2**

Instrument ID: **MEE-1**

Method: **RSK175**

LCS Sample ID: **HC151030-9** Units: **UG/L** Analysis Date: **10/30/2015 15:30**

Client ID: Run ID: **HC151030-9A** Prep Date: **10/30/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	146	1	142		103	80-120				25	
ETHANE	280	2	267		105	80-120				25	
PROPANE	408	1	391		104	80-120				25	

LCSD Sample ID: **HC151030-9** Units: **UG/L** Analysis Date: **10/30/2015 16:23**

Client ID: Run ID: **HC151030-9A** Prep Date: **10/30/2015** DF: **1**

Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
METHANE	147	1	142		103	80-120		146	0	25	
ETHANE	281	2	267		105	80-120		280	0	25	
PROPANE	403	1	391		103	80-120		408	1	25	

MB Sample ID: **HC151030-9** Units: **UG/L** Analysis Date: **10/30/2015 15:33**

Client ID: Run ID: **HC151030-9A** Prep Date: **10/30/2015** 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:

1510477-1

Client: Western Water and Land, Inc.
 Work Order: 1510477
 Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **HC151102-100-1** Instrument ID: **FUELS-1** Method: **SW8015M**

LCS		Sample ID: HC151102-100			Units: MG/L		Analysis Date: 11/2/2015 18:48				
Client ID:		Run ID: HC151102-7A			Prep Date: 11/2/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Diesel Range Organics	15.5	0.581	16.1		96	36-150				20	
Surr: O-TERPHENYL	0.741		0.806		92	63-126					

MB		Sample ID: HC151102-100			Units: MG/L		Analysis Date: 11/2/2015 14:10				
Client ID:		Run ID: HC151102-7A			Prep Date: 11/2/2015		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	0.694		0.792		88	63-126					

The following samples were analyzed in this batch:

1510477-1

Client: Western Water and Land, Inc.
 Work Order: 1510477
 Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **IP151105-3-1** Instrument ID: **ICPMS2** Method: **EPA200.8**

LCS		Sample ID: FP151105-3			Units: MG/L		Analysis Date: 11/9/2015 14:47				
Client ID:		Run ID: IM151109-11A2			Prep Date: 11/5/2015		DF: 10				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BARIUM	0.0975	0.001	0.1		97	85-115				20	
BORON	0.936	0.05	1		94	85-115				20	
CALCIUM	8.82	1	10		88	85-115				20	
IRON	4.75	0.1	5		95	85-115				20	
MAGNESIUM	9.49	0.1	10		95	85-115				20	
MANGANESE	0.0956	0.002	0.1		96	85-115				20	
POTASSIUM	4.33	1	5		87	85-115				20	
SELENIUM	0.102	0.001	0.1		102	85-115				20	
SODIUM	9.35	1	10		93	85-115				20	
STRONTIUM	0.0892	0.001	0.1		89	85-115				20	

MB		Sample ID: FP151105-3			Units: MG/L		Analysis Date: 11/9/2015 14:40				
Client ID:		Run ID: IM151109-11A2			Prep Date: 11/5/2015		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	0.031	0.05									J
CALCIUM	ND	1									
IRON	0.025	0.1									J
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:

Client: Western Water and Land, Inc.
 Work Order: 1510477
 Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: VL151103-3-1 Instrument ID: HPV1 Method: SW8260_25

LCS		Sample ID: VL151103-3			Units: %REC		Analysis Date: 11/3/2015 11:30				
Client ID:		Run ID: VL151103-3A			Prep Date: 11/3/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.1		25		100	85-115					
Surr: DIBROMOFLUOROMETHANE	25.6		25		103	84-118					
Surr: TOLUENE-D8	25.6		25		102	85-115					
BENZENE	10.2	1	10		102	83-117				20	
TOLUENE	10.3	1	10		103	82-113				20	
ETHYLBENZENE	10	1	10		100	81-113				20	
M+P-XYLENE	20.2	1	20		101	82-115				20	
O-XYLENE	10.1	1	10		101	81-115				20	

LCSD		Sample ID: VL151103-3			Units: %REC		Analysis Date: 11/3/2015 11:52				
Client ID:		Run ID: VL151103-3A			Prep Date: 11/3/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	25.7		25		103	85-115			2		
Surr: DIBROMOFLUOROMETHANE	25.5		25		102	84-118			0		
Surr: TOLUENE-D8	25.4		25		102	85-115			1		
BENZENE	10.1	1	10		101	83-117		10.2	2	20	
TOLUENE	9.95	1	10		99	82-113		10.3	3	20	
ETHYLBENZENE	9.88	1	10		99	81-113		10	2	20	
M+P-XYLENE	19.7	1	20		99	82-115		20.2	2	20	
O-XYLENE	9.92	1	10		99	81-115		10.1	2	20	

MB		Sample ID: VL151103-3			Units: %REC		Analysis Date: 11/3/2015 14:24				
Client ID:		Run ID: VL151103-3A			Prep Date: 11/3/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
Surr: 4-BROMOFLUOROBENZENE	27.1		25		108	85-115					
Surr: DIBROMOFLUOROMETHANE	25.4		25		102	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: 1510477
Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **VL151103-3-2** Instrument ID: **HPV1** Method: **SW8260_25**

LCS		Sample ID: VL151103-6			Units: UG/L		Analysis Date: 11/3/2015 12:59				
Client ID:		Run ID: VL151103-3A			Prep Date: 11/3/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	984	100	1000		98	80-120				20	

LCSD		Sample ID: VL151103-6			Units: UG/L		Analysis Date: 11/3/2015 13:20				
Client ID:		Run ID: VL151103-3A			Prep Date: 11/3/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
GASOLINE RANGE ORGANICS	886	100	1000		89	80-120		984	10	20	

MB		Sample ID: VL151103-3			Units: UG/L		Analysis Date: 11/3/2015 14:24				
Client ID:		Run ID: VL151103-3A			Prep Date: 11/3/2015		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:

Client: Western Water and Land, Inc.
 Work Order: 1510477
 Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **AK151030-1-2** Instrument ID: **GALLERY** Method: **SM2320B**

LCS		Sample ID: AK151030-1			Units: MG/L		Analysis Date: 10/30/2015				
Client ID:		Run ID: AK151030-1A1			Prep Date: 10/30/2015		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	96.9	5	100		97	85-115				15	

MB		Sample ID: AK151030-1			Units: MG/L		Analysis Date: 10/30/2015				
Client ID:		Run ID: AK151030-1A1			Prep Date: 10/30/2015		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:

1510477-1

Client: Western Water and Land, Inc.
 Work Order: 1510477
 Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **IC151029-1-1** Instrument ID: **IC-2** Method: **EPA300.0**

LCS		Sample ID: IC151029-1			Units: MG/L		Analysis Date: 10/29/2015 12:32				
Client ID:		Run ID: IC151029-1A4			Prep Date: 10/29/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	5.23	0.2	5		105	90-110				15	
CHLORIDE	5.12	0.2	5		102	90-110				15	
FLUORIDE	2.05	0.1	2		102	90-110				15	
NITRATE AS N	5.1	0.2	5		102	90-110				15	
NITRITE AS N	1.99	0.1	2		99	90-110				15	
SULFATE	20.3	1	20		102	90-110				15	

MB		Sample ID: IC151029-1			Units: MG/L		Analysis Date: 10/29/2015 12:17				
Client ID:		Run ID: IC151029-1A4			Prep Date: 10/29/2015		DF: 1				
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
BROMIDE	ND	0.2									
CHLORIDE	ND	0.2									
FLUORIDE	ND	0.1									
NITRATE AS N	ND	0.2									
NITRITE AS N	ND	0.1									
SULFATE	ND	1									

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
Work Order: 1510477
Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **PH151102-1-2** Instrument ID: **pH-1** Method: **SM4500-H**

CCV	Sample ID: CCV1					Units: pH	Analysis Date: 11/2/2015				
Client ID:		Run ID: PH151102-1A1					Prep Date: 11/2/2015		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.04	0.1	7			6.9-7.1					

ICV	Sample ID: ICV					Units: pH	Analysis Date: 11/2/2015				
Client ID:		Run ID: PH151102-1A1					Prep Date: 11/2/2015		DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
PH	7.04	0.1	7			6.95-7.05					

The following samples were analyzed in this batch:

Client: Western Water and Land, Inc.
 Work Order: 1510477
 Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **SC151102-1-2** Instrument ID: **pH-2** Method: **SM2510B**

CCV	Sample ID: CCV1				Units: umhos/cm	Analysis Date: 11/2/2015					
Client ID:		Run ID: SC151102-1A1				Prep Date: 11/2/2015			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	1390	1	1410		98	71.7-1554					

ICV	Sample ID: ICV				Units: umhos/cm	Analysis Date: 11/2/2015					
Client ID:		Run ID: SC151102-1A1				Prep Date: 11/2/2015			DF: 1		
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
SPECIFIC CONDUCTIVITY	680	1	718		95	46.2-789.7					

The following samples were analyzed in this batch:

1510477-1

Client: Western Water and Land, Inc.
Work Order: 1510477
Project: WPX GM 323-28 BWQ

QC BATCH REPORT

Batch ID: **TD151102-1-1** Instrument ID: **Balance** Method: **SM2540C**

LCS	Sample ID: TD151102-1			Units: MG/L		Analysis Date: 11/3/2015					
Client ID:	Run ID: TD151103-1A1			Prep Date: 11/2/2015		DF: 1					
Analyte	Result	ReportLimit	SPK Val	SPK Ref Value	%REC	Control Limit	Decision Level	RPD Ref	RPD	RPD Limit	Qual
TOTAL DISSOLVED SOLIDS	406	20	400		102	85-115				5	

MB	Sample ID: TD151102-1			Units: MG/L		Analysis Date: 11/3/2015					
Client ID:	Run ID: TD151103-1A1			Prep Date: 11/2/2015		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:

Client: Western Water and Land, Inc.
Work Order: 1510477
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: