ALS Environmental
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November 30, 2015

Analytical Report for Service Request No: K1512769

Amy Wolf
ALS Fort Collins
225 Commerce Drive
Fort Collins, CO 80524

RE: WPX GM 323-28 BWQ

Dear Amy,

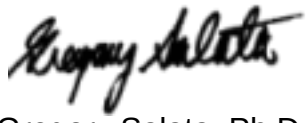
Enclosed are the results of the sample(s) submitted to our laboratory November 07, 2015
For your reference, these analyses have been assigned our service request number **K1512769.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Gregory Salata, Ph.D.
Client Services
Manager

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Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	ALS Environmental - Fort Collins	**Service Request No.:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Received:**	11/07/15
Sample Matrix:	Water		

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Additional quality control analyses reported herein include: Laboratory Duplicate (DUP), Matrix Spike (MS), and Matrix/Duplicate Matrix Spike (MS/DMS).

Sample Receipt

One water sample was received for analysis at ALS Environmental on 11/07/15. The sample was received in good condition and consistent with the accompanying chain of custody form. The sample was stored in a refrigerator at 4ºC upon receipt at the laboratory.

General Chemistry Parameters

Bromide, Fluoride, Nitrite and Nitrate as Nitrogen by EPA Method 300.0:
The matrix spike recovery for sample GM 323-28-151879 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

Fluoride by EPA Method 300.0:
The Relative Percent Difference (RPD) criterion in sample GM 323-28-151879 was not applicable because the analyte concentration was not significantly greater than the Method Reporting Limit (MRL). Analytical values derived from measurements close to the detection limit are not subject to the same accuracy and precision criteria as results derived from measurements higher on the calibration range for the method.

Nitrite and Nitrate as Nitrogen by Method 300.0:
Sample was received past holding time remaining. The analysis was performed as soon as possible after receipt by the laboratory. The data was flagged to indicate the holding time violation.

No other anomalies associated with the analysis of this sample were observed.

Approved by_____

Chain of Custody

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Chain-of-Custody

LAB ID	K1512769
DATE	11/6/15
PAGE	of
TURNAROUND	Due ~~Standard~~ 11/23
DISPOSAL	By Lab or Return to Client

PROJECT NAME	WPX GM 323-28 BWQ	E-MAIL	amy.wolf@alsglobal.com
PROJECT No.		PHONE	970-~~49~~ 490-1511
REPORT TO	Amy Wolf	SALESPERSON	
COMPANY	ALS Environmental		
ADDRESS	225 Commerce Dr., Fort Collins, CO 80524		

Lab ID	Field ID	Matrix	Sample Date	Sample Time	# Btls	QC	Anions 300.0
	GM 323-28-151879	water	11/5/15	1210	1		X

COMMENTS: ALS FC SDG

standard report, standar EDD

Anions: Br, Cl, F, SO4, NO2, NO3 (summed NO2/NO3).

	SIGNATURE	PRINTED NAME	DATE	TIME	COMPANY
Relinquished By					
Received By	BKell	Bobbi Kell	11/7/15	1000	ALS
Relinquished By					
Received By					

PC CC

Cooler Receipt and Preservation Form

Client / Project: ALS Fort Collins Service Request *K15* 12769

Received: 11/7/15 Opened: 11/7/15 By: BK Unloaded: 11/7/15 By: BK

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA (Y) N If yes, how many and where? 1 Side front
   If present, were custody seals intact? (Y) N If present, were they signed and dated? (Y) N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.4	0.6			0.2	350		6154 4212 5126	

4. Packing material: *Inserts* *Baggies* (*Bubble Wrap*) *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y (N)
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____

SHORT HOLD TIME

Page ____ *of* ____

General Chemistry

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Analytical Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/5/15
Sample Matrix:	Water	**Date Received:**	11/7/15
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Bromide

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GM 323-28-151879	K1512769-001	ND U	0.050	1	11/07/15 12:51	11/9/15	
Method Blank	K1512769-MB	ND U	0.050	1	11/07/15 12:37	11/9/15	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/07/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1512769-001DUP Result	Average	RPD	RPD Limit
Bromide	300.0	0.050	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/7/15
		Date Extracted:	11/9/15

Duplicate Matrix Spike Summary
Bromide

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1512769-001MS			K1512769-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bromide	ND U	0.229	2.00	11 *	0.219	2.00	11 *	90-110	5	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Analyzed:**	11/07/15
Sample Matrix:	Water	**Date Extracted:**	11/09/15

Lab Control Sample Summary
Bromide

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	471203

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1512769-LCS	2.50	2.50	100	90-110

ALS Group USA, Corp.
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Analytical Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/5/15
Sample Matrix:	Water	**Date Received:**	11/7/15
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Chloride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GM 323-28-151879	K1512769-001	**26.0**	5.0	50	11/10/15 10:33	11/10/15	
Method Blank	K1512769-MB	ND U	0.10	1	11/10/15 09:22	11/10/15	

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project	WPX GM 323-28 BWQ	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/10/15

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1513301-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1513301-03DUP Result	Average	RPD	RPD Limit
Chloride	300.0	0.20	3.17	3.16	3.17	<1	20

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Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/10/15
		Date Extracted:	11/10/15

Duplicate Matrix Spike Summary
Chloride

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1513301-03	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike KQ1513301-03MS			Duplicate Matrix Spike KQ1513301-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chloride	3.17	12.1	10.0	90	12.2	10.0	91	90-110	<1	20

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QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Analyzed:**	11/10/15
Sample Matrix:	Water	**Date Extracted:**	11/10/15

Lab Control Sample Summary
Chloride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	471618

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1512769-LCS	4.68	5.00	94	90-110

Analytical Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/5/15
Sample Matrix:	Water	**Date Received:**	11/7/15
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Fluoride

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GM 323-28-151879	K1512769-001	**0.62**	0.10	1	11/07/15 12:51	11/9/15	
Method Blank	K1512769-MB	ND U	0.10	1	11/07/15 12:37	11/9/15	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/07/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1512769-001DUP Result	Average	RPD	RPD Limit
Fluoride	300.0	0.10	0.62	0.85	0.738	31 *	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/7/15
		Date Extracted:	11/9/15

Duplicate Matrix Spike Summary
Fluoride

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike K1512769-001MS			**Duplicate Matrix Spike** K1512769-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fluoride	0.62	2.11	2.00	74 *	2.09	2.00	73 *	90-110	1	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Analyzed:**	11/07/15
Sample Matrix:	Water	**Date Extracted:**	11/09/15

Lab Control Sample Summary
Fluoride

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	471203

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1512769-LCS	5.18	5.00	104	90-110

Analytical Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/5/15
Sample Matrix:	Water	**Date Received:**	11/7/15
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrite as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GM 323-28-151879	K1512769-001	ND U	0.050	1	11/07/15 12:51	11/9/15	*
Method Blank	K1512769-MB	ND U	0.050	1	11/07/15 12:37	11/9/15	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/07/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1512769-001DUP Result	Average	RPD	RPD Limit
Nitrite as Nitrogen	300.0	0.050	ND U	ND U	NC	NC	20

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Results flagged with a pound (#) indicate the control criteria is not applicable.

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/7/15
		Date Extracted:	11/9/15

Duplicate Matrix Spike Summary
Nitrite as Nitrogen

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		K1512769-001MS			K1512769-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrite as Nitrogen	ND U	1.05	2.00	53 *	1.07	2.00	54 *	90-110	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
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QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Analyzed:**	11/07/15
Sample Matrix:	Water	**Date Extracted:**	11/09/15

Lab Control Sample Summary
Nitrite as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	471203

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1512769-LCS	2.70	2.50	108	90-110

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Analytical Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/5/15
Sample Matrix:	Water	**Date Received:**	11/7/15
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Nitrate as Nitrogen

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GM 323-28-151879	K1512769-001	ND U	0.050	1	11/07/15 12:51	11/9/15	*
Method Blank	K1512769-MB	ND U	0.050	1	11/07/15 12:37	11/9/15	

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QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/07/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1512769-001DUP Result	Average	RPD	RPD Limit
Nitrate as Nitrogen	300.0	0.050	ND U	ND U	NC	NC	20

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QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/05/15
Sample Matrix:	Water	**Date Received:**	11/07/15
		Date Analyzed:	11/7/15
		Date Extracted:	11/9/15

Duplicate Matrix Spike Summary
Nitrate as Nitrogen

Sample Name:	GM 323-28-151879	**Units:**	mg/L
Lab Code:	K1512769-001	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			K1512769-001MS	**Duplicate Matrix Spike**		K1512769-001DMS		
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate as Nitrogen	ND U	0.127	2.00	6 *	0.130	2.00	6 *	90-110	2	20

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dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Analyzed:**	11/07/15
Sample Matrix:	Water	**Date Extracted:**	11/09/15

Lab Control Sample Summary
Nitrate as Nitrogen

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	471203

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1512769-LCS	2.42	2.50	97	90-110

Analytical Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	11/5/15
Sample Matrix:	Water	**Date Received:**	11/7/15
Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA

Sulfate

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Date Extracted	Q
GM 323-28-151879	K1512769-001	**185**	5.0	50	11/10/15 10:33	11/10/15	
Method Blank	K1512769-MB	ND U	0.10	1	11/10/15 09:22	11/10/15	

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QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project	WPX GM 323-28 BWQ	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/10/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1513301-03	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample KQ1513301-03DUP Result	Average	RPD	RPD Limit
Sulfate	300.0	0.20	4.19	4.17	4.18	<1	20

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QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	11/10/15
		Date Extracted:	11/10/15

Duplicate Matrix Spike Summary
Sulfate

Sample Name:	Batch QC	**Units:**	mg/L
Lab Code:	KQ1513301-03	**Basis:**	NA
Analysis Method:	300.0		
Prep Method:	Method		

		Matrix Spike			Duplicate Matrix Spike					
		KQ1513301-03MS			KQ1513301-03DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Sulfate	4.19	13.7	10.0	95	13.8	10.0	96	90-110	<1	20

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Fort Collins	**Service Request:**	K1512769
Project:	WPX GM 323-28 BWQ	**Date Analyzed:**	11/10/15
Sample Matrix:	Water	**Date Extracted:**	11/10/15

Lab Control Sample Summary
Sulfate

Analysis Method:	300.0	**Units:**	mg/L
Prep Method:	Method	**Basis:**	NA
		Analysis Lot:	471618

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1512769-LCS	4.90	5.00	98	90-110