



The Sabine River Authority
An Agency of the State of Texas
www.sratx.org

Environmental Services Division
Water Quality Laboratory
1895 I-P Way
Orange, TX 77632
(409) 746-3284 Fax: (409) 746-2249

ANALYTICAL REPORT

Attn: Kyle Gillam
Arlanxeo USA LLC
P O BOX 2000
Orange TX 77631

Order ID: 202105403
Project ID: Special Project
Received Date: 5/27/2021 10:35:00 AM
Customer PO: 0100046607

The test results in this report meet all NELAP requirements related to SRA's NELAP accredited parameters unless noted otherwise. As of April 22, 2008, all reports and associated data will be retained by SRA for a minimum of five (5) years, unless prior written agreement is made with the client.

Due to the uncertainty of analytical measurements, the use of the measured values in this report for regulatory compliance must be evaluated by the client.

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NELAP Accredited #T104704266-21-18

Polle Holtham

Reviewed and Released
Pollie Holtham, Technical Director
pholtham@srax.org

Order ID
202105403

Prepared For: Arlanxeo USA LLC
Project Name: Lanxess Corporation

Receive Date: 5/27/2021 10:35:00 AM
Collector: ALAN MORPHIS

Sample #:	202105403-001	Collected:	5/27/2021	8:00	Site:	1810007
Customer:	POTABLE WATER TANK	Matrix:	Drinking Water			
Test	Method	Result	Units	RDL	Qualifier	Analysis Information
Sulfate	EPA 300.0 Rev. 2.1	<5.00	mg/L	5		nakbari 6/4/2021 9:54:00 AM
Residue, Total Dissolved Solids	SM 2540C-97	1200	mg/L	20		cbarbore 5/27/2021 12:35:00 PM
Conductivity, Temperature	SM 2510B-97	25.0000000	°C			kkahl 5/28/2021 10:35:00 AM
Conductivity	SM 2510B-97	1920	µmhos/cm	1		kkahl 5/28/2021 10:35:00 AM
Chloride	EPA 300.0 Rev. 2.1	616.0	mg/L	50	D	nakbari 6/7/2021 3:32:00 PM
Alkalinity, Total	SM 2320B-97	144.0	mg/L	20		jclaybar 6/3/2021 10:52:00 AM
Alkalinity pH End Point	SM 2320B-97	4.50	pH Units			jclaybar 6/3/2021 10:52:00 AM

Sample #:	202105403-002	Collected:	5/27/2021	8:00	Site:	1810007
Customer:	POTABLE WATER TANK	Matrix:	Drinking Water			
Test	Method	Result	Units	RDL	Qualifier	Analysis Information
Metals Digestion	EPA 200.2 Rev. 2.8	Complete				mguidry 6/2/2021 12:45:00 PM
Manganese, Total	EPA 200.8 Rev 5.4	249	µg/L	2	D	mguidry 6/3/2021 11:32:00 AM
Hardness, Total, Titrimetric	SM 2340C-97	132.0	mg/L as Ca	5		cbarbore 6/1/2021 9:54:00 AM

Sample #:	202105403-003	Collected:	5/27/2021	8:00	Site:	1810007
Customer:	POTABLE WATER TANK	Matrix:	Drinking Water			
Test	Method	Result	Units	RDL	Qualifier	Analysis Information
Subcontract	Subcontract	Attached				Eurofins

Sample #:	202105403-004	Collected:	5/27/2021	8:05	Site:	1810007
Customer:	CAFETERIA	Matrix:	Drinking Water			
Test	Method	Result	Units	RDL	Qualifier	Analysis Information
Sulfate	EPA 300.0 Rev. 2.1	<5.00	mg/L	5		nakbari 6/4/2021 10:24:00 AM
Residue, Total Dissolved Solids	SM 2540C-97	1190	mg/L	20		cbarbore 5/27/2021 12:35:00 PM
Conductivity, Temperature	SM 2510B-97	24.9000000	°C			kkahl 5/28/2021 10:35:00 AM
Conductivity	SM 2510B-97	1930	µmhos/cm	1		kkahl 5/28/2021 10:35:00 AM
Chloride	EPA 300.0 Rev. 2.1	619.0	mg/L	50	D	nakbari 6/7/2021 4:01:00 PM
Alkalinity, Total	SM 2320B-97	145.0	mg/L	20		jclaybar 6/3/2021 10:52:00 AM
Alkalinity pH End Point	SM 2320B-97	4.50	pH Units			jclaybar 6/3/2021 10:52:00 AM

Order ID
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Prepared For: Arlanxeo USA LLC
Project Name: Lanxess Corporation

Receive Date: 5/27/2021 10:35:00 AM
Collector: ALAN MORPHIS

Sample #: 202105403-005	Collected: 5/27/2021	8:05	Site: 1810007
Customer: CAFETERIA	Matrix: Drinking Water		

Test	Method	Result	Units	RDL	Qualifier	Analysis Information
Metals Digestion	EPA 200.2 Rev. 2.8	Complete				mguidry 6/2/2021 12:45:00 PM
Manganese, Total	EPA 200.8 Rev 5.4	223	µg/L	2	D	mguidry 6/3/2021 11:37:00 AM
Hardness, Total, Titrimetric	SM 2340C-97	132.0	mg/L as Ca	5		cbarbore 6/1/2021 9:54:00 AM

Sample #: 202105403-006	Collected: 5/27/2021	8:05	Site: 1810007
Customer: CAFETERIA	Matrix: Drinking Water		

Test	Method	Result	Units	RDL	Qualifier	Analysis Information
Subcontract	Subcontract	Attached				Eurofins

Order ID
202105403

Prepared For: Arlanxeo USA LLC
Project Name: Lanxess Corporation

Receive Date: 5/27/2021 10:35:00 AM
Collector: ALAN MORPHIS

QUALITY CONTROL DATA: BLANKS

Sample Number 202105403-001

Alkalinity, Total

<i>QCType</i>	<i>QCBatchID</i>	<i>Result</i>	<i>Qualifier</i>
Method Blank	LB048064	0.0	
Method Blank	LB048064	4.5	

Chloride

<i>QCType</i>	<i>QCBatchID</i>	<i>Result</i>	<i>Qualifier</i>
CCB	LB048104	<5.00	
CCB01	LB048104	<5.00	
CCB02	LB048104	<5.00	
Method Blank	LB048104	0.00	

Conductivity, Lab

<i>QCType</i>	<i>QCBatchID</i>	<i>Result</i>	<i>Qualifier</i>
Method Blank	LB048013	0.887	
Method Blank	LB048013	24.9	

Residue, Total Dissolved Solids

<i>QCType</i>	<i>QCBatchID</i>	<i>Result</i>	<i>Qualifier</i>
Method Blank	LB048003	-5.00	

Sulfate

<i>QCType</i>	<i>QCBatchID</i>	<i>Result</i>	<i>Qualifier</i>
CCB	LB048097	<5.00	
CCB01	LB048097	<5.00	
CCB02	LB048097	<5.00	
Method Blank	LB048097	0.00	

Sample Number 202105403-002

Hardness, Total, Titrimetric

<i>QCType</i>	<i>QCBatchID</i>	<i>Result</i>	<i>Qualifier</i>
Method Blank	LB048029	<5	

Order ID
202105403

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Collector: ALAN MORPHIS

Manganese, Total

QCType	QCBatchID	Result	Qualifier
CCB	LB048057	<1	
CCB01	LB048057	<1	
CCB02	LB048057	<1	
CCB03	LB048057	<1	
CCB04	LB048057	<1	
CCB05	LB048057	<1	
CCB06	LB048057	<1	
Method Blank	LB048057	0.00	

Sample Number **202105403-004**

Alkalinity, Total

QCType	QCBatchID	Result	Qualifier
Method Blank	LB048064	0.0	
Method Blank	LB048064	4.5	

Chloride

QCType	QCBatchID	Result	Qualifier
CCB	LB048104	<5.00	
CCB01	LB048104	<5.00	
CCB02	LB048104	<5.00	
Method Blank	LB048104	0.00	

Conductivity, Lab

QCType	QCBatchID	Result	Qualifier
Method Blank	LB048013	0.887	
Method Blank	LB048013	24.9	

Residue, Total Dissolved Solids

QCType	QCBatchID	Result	Qualifier
Method Blank	LB048003	-5.00	

Sulfate

QCType	QCBatchID	Result	Qualifier
CCB	LB048097	<5.00	
CCB01	LB048097	<5.00	

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CCB02	LB048097	<5.00
Method Blank	LB048097	0.00

Sample Number 202105403-005

Hardness, Total, Titrimetric

QCType	QCBatchID	Result	Qualifier
Method Blank	LB048029	<5	

Manganese, Total

QCType	QCBatchID	Result	Qualifier
CCB	LB048057	<1	
CCB01	LB048057	<1	
CCB02	LB048057	<1	
CCB03	LB048057	<1	
CCB04	LB048057	<1	
CCB05	LB048057	<1	
CCB06	LB048057	<1	
Method Blank	LB048057	0.00	

QUALITY CONTROL DATA: STANDARDS

SampleNumber 202105403-001

Alkalinity, Total

QC Batch ID: LB048064

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS	76.6	80		95.8	80.0	120.0
LCS01	79.5	80		99.4		
QCS INV#111663	31.6	33.8		93.5	90.5	108.0
CheckStandard	19.1	20		95.5	70.0	130.0

Chloride

QC Batch ID: LB048104

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
CheckStandard	4.78	5		95.6	70.0	130.0
ICV	19.5	20		97.5	90.0	110.0
CCV02	19.6	20		98.0	90.0	110.0

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CCV01	19.5	20	97.5	90.0	110.0
CCV	19.5	20	97.5	90.0	110.0
LCS	19.6	20	98.0	90.0	110.0

Conductivity, Lab

QC Batch ID: LB048013

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS	10.2	10.08		101.2	90.0	110.0
QCS INV#111672	257	265		97.0	95.1	106.0
Standard	99.7	100		99.7	90.0	110.0

Residue, Total Dissolved Solids

QC Batch ID: LB048003

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS INV#111672	168	179		93.9	84.9	110.0

Sulfate

QC Batch ID: LB048097

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
CCV01	18.8	20		94.0	90.0	110.0
ICV	18.7	20		93.5	90.0	110.0
LCS	18.6	20		93.0	90.0	110.0
CCV02	18.8	20		94.0	90.0	110.0
CCV	18.7	20		93.5	90.0	110.0
CheckStandard	5.17	5		103.4	70.0	130.0

SampleNumber 202105403-002

Hardness, Total, Titrimetric

QC Batch ID: LB048029

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS	20	20		100.0	100.0	100.0
QCS INV#111317	330	330		100.0		
Standard	100	100		100.0	80.0	120.0

Manganese, Total

QC Batch ID: LB048057

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
CCV01	100	100		100.0	85.0	115.0
CheckStandard	1.04	1		104.0	70.0	130.0
CCV06	103	100		103.0	85.0	115.0
CCV05	105	100		105.0	85.0	115.0

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CCV04	102	100	102.0	85.0	115.0
CCV02	103	100	103.0	85.0	115.0
ICV	103	100	103.0	90.0	110.0
CCV	102	100	102.0	85.0	115.0
LCS	104	100	104.0	85.0	115.0
CCV03	104	100	104.0	85.0	115.0

SampleNumber 202105403-004

Alkalinity, Total

QC Batch ID: LB048064

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS	76.6	80		95.8	80.0	120.0
LCS01	79.5	80		99.4		
QCS INV#111663	31.6	33.8		93.5	90.5	108.0
CheckStandard	19.1	20		95.5	70.0	130.0

Chloride

QC Batch ID: LB048104

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
CheckStandard	4.78	5		95.6	70.0	130.0
ICV	19.5	20		97.5	90.0	110.0
CCV02	19.6	20		98.0	90.0	110.0
CCV01	19.5	20		97.5	90.0	110.0
CCV	19.5	20		97.5	90.0	110.0
LCS	19.6	20		98.0	90.0	110.0

Conductivity, Lab

QC Batch ID: LB048013

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS	10.2	10.08		101.2	90.0	110.0
QCS INV#111672	257	265		97.0	95.1	106.0
Standard	99.7	100		99.7	90.0	110.0

Residue, Total Dissolved Solids

QC Batch ID: LB048003

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS INV#111672	168	179		93.9	84.9	110.0

Sulfate

QC Batch ID: LB048097

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
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CCV01	18.8	20	94.0	90.0	110.0
LCS	18.6	20	93.0	90.0	110.0
ICV	18.7	20	93.5	90.0	110.0
CCV	18.7	20	93.5	90.0	110.0
CCV02	18.8	20	94.0	90.0	110.0
CheckStandard	5.17	5	103.4	70.0	130.0

SampleNumber 202105403-005

Hardness, Total, Titrimetric

QC Batch ID: LB048029

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
LCS	20	20		100.0	100.0	100.0
QCS INV#111317	330	330		100.0		
Standard	100	100		100.0	80.0	120.0

Manganese, Total

QC Batch ID: LB048057

QCType	Result	SpikeAmount	Qualifier	PercentRecovery	LCL	UCL
CCV01	100	100		100.0	85.0	115.0
ICV	103	100		103.0	90.0	110.0
CheckStandard	1.04	1		104.0	70.0	130.0
CCV06	103	100		103.0	85.0	115.0
CCV05	105	100		105.0	85.0	115.0
CCV04	102	100		102.0	85.0	115.0
CCV02	103	100		103.0	85.0	115.0
CCV	102	100		102.0	85.0	115.0
LCS	104	100		104.0	85.0	115.0
CCV03	104	100		104.0	85.0	115.0

QUALITY CONTROL DATA: SPIKES

Sample Number 202105403-001

Alkalinity, Total

QC Batch ID: LB048064

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
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202105403

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LCSD01

Replicate 202105029-002

Replicate01 202106080-019

LCSD 77.2 96.5 0.8 7.3

LCSD01 78.5 98.1 1.3

Replicate 202105029-002 <20 0.0 20.0

Replicate01 202106080-019 164 7.6

LCSD

Chloride **QC Batch ID:** LB048104

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LFMD01	202106001-001	23.9		97.0	0.8			20.0
LCSD		19.6		98.0	0.0			20.0
LFM	202106061-001	13.9		94.1		80.0	120.0	
LFM01	202106001-001	23.7		95.0		80.0	120.0	
LFMD	202106061-001	13.9		94.1	0.0			20.0

Conductivity, Lab **QC Batch ID:** LB048013

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
Replicate	202105367-001	323			0.6			1.4
Replicate	202105367-001	24.9			0.4			

Residue, Total Dissolved Solids **QC Batch ID:** LB048003

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
Replicate	202105359-001	477			1.5			7.0

Sulfate **QC Batch ID:** LB048097

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LFMD	202106025-001	11.4		81.9	0.9			20.0
LFMD01	202106060-003	11.3		80.9	0.0			20.0

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LFM	202106025-001	11.3	80.9	80.0	120.0
LCSD		18.6	93.0	0.0	20.0
LFM01	202106060-003	11.3	80.9	80.0	120.0

Sample Number 202105403-002

Hardness, Total, Titrimetric

QC Batch ID: LB048029

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
Replicate	202105029-006	16			0.0			13.6
MS	202105029-006	116		100.0		80.0	120.0	
LCSD		20		100.0	0.0			0.0

Manganese, Total

QC Batch ID: LB048057

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LFM	202106080-002	273		104.0		70.0	130.0	
LFMD	202106080-002	282		113.0	8.3			20.0

Sample Number 202105403-004

Alkalinity, Total

QC Batch ID: LB048064

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
Replicate	202105029-002	<20			0.0			20.0
LCSD01		78.5		98.1	1.3			
Replicate01	202106080-019	164			7.6			
Replicate01	202106080-019							
Replicate	202105029-002							
LCSD01								
LCSD								
LCSD		77.2		96.5	0.8			7.3

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Chloride

QC Batch ID: LB048104

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LFM	202106061-001	13.9		94.1		80.0	120.0	
LFM01	202106001-001	23.7		95.0		80.0	120.0	
LFMD	202106061-001	13.9		94.1	0.0			20.0
LCSD		19.6		98.0	0.0			20.0
LFMD01	202106001-001	23.9		97.0	0.8			20.0

Conductivity, Lab

QC Batch ID: LB048013

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
Replicate	202105367-001	323			0.6			1.4
Replicate	202105367-001	24.9			0.4			

Residue, Total Dissolved Solids

QC Batch ID: LB048003

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
Replicate	202105359-001	477			1.5			7.0

Sulfate

QC Batch ID: LB048097

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LFMD	202106025-001	11.4		81.9	0.9			20.0
LFMD01	202106060-003	11.3		80.9	0.0			20.0
LFM	202106025-001	11.3		80.9		80.0	120.0	
LCSD		18.6		93.0	0.0			20.0
LFM01	202106060-003	11.3		80.9		80.0	120.0	

Sample Number **202105403-005**

Hardness, Total, Titrimetric

QC Batch ID: LB048029

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LCSD		20		100.0	0.0			0.0
MS	202105029-006	116		100.0		80.0	120.0	

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Replicate 202105029-006 16 0.0 13.6

Manganese, Total

QC Batch ID: LB048057

QCType	QCSamples	Result	Qualifier	% Recovery	RPD	LCL	UCL	RPD CL
LFMD	202106080-002	282		113.0	8.3			20.0
LFM	202106080-002	273		104.0		70.0	130.0	

DATA QUALIFIERS

REPORT COMMENTS

1) All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

2) Reporting limits are adjusted for sample size and dilutions.

3) According to 40 CFR Parts 136.3, pH, Chlorine Residual and Dissolved Oxygen analyses are to be performed immediately after aqueous sample collection. When these parameters are not indicated as field, (e.g. pH Field) they were not analyzed immediately, but as soon as possible when received by the laboratory.

A	Possible matrix interference present in sample.
A1	Spike recovery outside of established control limits, indicating a possible matrix interference. Method performance is demonstrated by acceptable LCS recoveries.
B	Sample value reported below RDL for spike (LFM) calculation.
B1	Target analyte was found in the method blank.
C	Poor RPD values observed due to the non-homogenous nature of the sample.
D	Sample reported from a dilution.
D1	Spike diluted.
D2	Due to the nature of matrix interferences, sample was diluted prior to analysis.
D3	50mL dilution was performed on sample prior to analysis.
E	The reported concentration exceeds the instrument calibration.
F	Out of control QA/QC not associated with this sample.
F1	Continuing Calibration verification (CCV) standard is not associated with the samples reported.
G	Marginal outlier within 1% of acceptance criteria.
H	Analysis was performed in duplicate to validate result.
I	Sample was filtered prior to analysis.
J	No volume filtered yielded an ideal plate count of 20-60 fecal coliform colonies per membrane.

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K	Out of control QC does not affect the quality of reported results.
L	BOD/CBOD LCS value is not within method acceptance criteria. Due to the nature of the test method, sample cannot be reanalyzed.
L1	BOD result calculated as > due to final DO readings for all dilutions used being <1.0 mg/L.
L2	BOD result calculated as < due to none of the dilutions used meeting the required depletion of 2.0 mg/L.
L3	BOD/CBOD dilution water blanks had a depletion > 0.2 mg/L.
L4	BOD/CBOD seed correction is not within method acceptance criteria. Due to the nature of the test method, the sample cannot be reanalyzed.
L5	BOD method blank was greater than 2, sample results may be biased slightly high.
L6	% deviation between Winkler titration DO values and meter values was >1.25%. Due to the nature of the test method, the sample cannot be reanalyzed.
L7	Sample result may be affected by potential toxicity. BOD results increased as sample dilutions increased and the results from the highest and lowest dilution differed by more than 30%.
M	LCS analysis yielded high recoveries, indicating a potential high bias.
M1	RDL check standard had a high recovery. Result may be biased high.
N	Laboratory not NELAC accredited for analyte.
N1	No NELAC Accreditation currently available for this analyte.
N2	Analyte approved under the TCEQ Drinking Water Laboratory program.
O	Sample required dilution due to matrix interference.
P	Insufficient sample volume to perform chlorine check prior to analysis.
Q	Equipment temperature fell outside of the required temperature range at some point during incubation/storage of this sample. It is not known if this deviation affected sample results.
Q1	An equipment temperature reading was not documented at some point during the incubation/storage of this sample. Temperature readings before and after were within range.
R	RPD value is outside method acceptance criteria.
S	Sample received in an unverified/inappropriate container not supplied by the laboratory and may not meet data quality standards.
S1	Sample received in container inappropriate for analysis.
S2	Sample received without preservation and was preserved at the lab upon receipt.
T	Analysis conducted outside of the required holding time based on client request.
T1	Analysis was conducted outside of the required 15 minute holding time.
U	Sample was filtered upon receipt at lab, more than 15 minutes after collections.
V	Analyte was detected in both the sample and the associated method blank
W	The LFM/LFMD recoveries are outside QC acceptance criteria because the spike amount is much less than the amount found in the sample.

Order ID
202105403

Prepared For: Arlanxeo USA LLC
Project Name: Lanxess Corporation

Receive Date: 5/27/2021 10:35:00 AM
Collector: ALAN MORPHIS

X	QCS/LCS failed to meet provider's acceptance criteria. Data accepted based on other QC.
Y	QC failed due to analyst technical error.
Z	See case narrative.

Order ID
202105403

Prepared For: Arlanxeo USA LLC
Project Name: Lanxess Corporation

Receive Date: 5/27/2021 10:35:00 AM
Collector: ALAN MORPHIS

SAMPLE CONDITION RECORD

Is there sufficient air space in bottle for bacteriological analysis?	N/A
Is the volume of sample submitted sufficient for the requested test(s)?	Yes
Were all samples within the holding time for the requested test(s)?	Yes
Were samples received cold?	Yes
Were samples received on ice?	Yes
Were samples received with applicable perservative?	Yes
Are bottle caps tight and securely in place?	Yes
Are the number of samples the same as stated on the chain of custody?	Yes
Are samples submitted with a correct and complete chain of custody?	Yes

ANALYTICAL REPORT

Eurofins Xenco, Stafford
4147 Greenbriar Dr
Stafford, TX 77477
Tel: (281)240-4200

Laboratory Job ID: 860-5112-1

Client Project/Site: PWS_1810007_AC_20210527 DWQP
Analysis Rt

For:

Sabine River Authority
1895 Owens-Illinois Road
Orange, Texas 77632

Attn: Ms. Pollie Holtham



Authorized for release by:
6/8/2021 11:03:27 AM

C. Lance Tigrett, Project Manager II
(713)690-4444

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	7
QC Association Summary	8
Lab Chronicle	9
Certification Summary	10
Method Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	16



Definitions/Glossary

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis Rt

Job ID: 860-5112-1

Job ID: 860-5112-1

Laboratory: Eurofins Xenco, Stafford

Narrative

Job Narrative 860-5112-1

Receipt

The samples were received on 6/2/2021 2:30 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

Metals

Method 200.7: Due to the high concentration of Sodium the matrix spike (MS) for preparation batch 860-9902 and analytical batch 860-10223 could not be evaluated for accuracy and precision. The associated laboratory control sample / laboratory control sample duplicate (LCS/LCSD) met acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Client Sample ID: PBCU001

Lab Sample ID: 860-5112-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	37		0.20	0.029	mg/L	1		200.7 Rev 4.4	Total
									Recoverable
Iron	1.3		0.20	0.028	mg/L	1		200.7 Rev 4.4	Total
									Recoverable
Sodium	430		25	3.3	mg/L	50		200.7 Rev 4.4	Total
									Recoverable

Client Sample ID: DS01

Lab Sample ID: 860-5112-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Calcium	37		0.20	0.029	mg/L	1		200.7 Rev 4.4	Total
									Recoverable
Iron	1.1		0.20	0.028	mg/L	1		200.7 Rev 4.4	Total
									Recoverable
Sodium	420		25	3.3	mg/L	50		200.7 Rev 4.4	Total
									Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Xenco, Stafford

Client Sample Results

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Client Sample ID: PBCU001

Date Collected: 05/27/21 08:00

Date Received: 06/02/21 14:30

Lab Sample ID: 860-5112-1

Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	37		0.20	0.029	mg/L		06/03/21 15:12	06/04/21 23:38	1
Iron	1.3		0.20	0.028	mg/L		06/03/21 15:12	06/04/21 23:38	1
Sodium	430		25	3.3	mg/L		06/03/21 15:12	06/04/21 23:56	50

Client Sample ID: DS01

Date Collected: 05/27/21 08:05

Date Received: 06/02/21 14:30

Lab Sample ID: 860-5112-2

Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	37		0.20	0.029	mg/L		06/03/21 15:12	06/04/21 23:45	1
Iron	1.1		0.20	0.028	mg/L		06/03/21 15:12	06/04/21 23:45	1
Sodium	420		25	3.3	mg/L		06/03/21 15:12	06/05/21 00:00	50

QC Sample Results

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 860-9902/1-A

Matrix: Water

Analysis Batch: 10223

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 9902

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	<0.029		0.20	0.029	mg/L		06/03/21 15:12	06/04/21 22:58	1
Iron	<0.028		0.20	0.028	mg/L		06/03/21 15:12	06/04/21 22:58	1
Sodium	<0.067		0.50	0.067	mg/L		06/03/21 15:12	06/04/21 22:58	1

Lab Sample ID: LCS 860-9902/2-A

Matrix: Water

Analysis Batch: 10223

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 9902

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	25.0	26.0		mg/L		104	85 - 115
Iron	5.00	5.11		mg/L		102	85 - 115
Sodium	25.0	26.0		mg/L		104	85 - 115

Lab Sample ID: LCSD 860-9902/3-A

Matrix: Water

Analysis Batch: 10223

Client Sample ID: Lab Control Sample Dup

Prep Type: Total Recoverable

Prep Batch: 9902

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Calcium	25.0	26.0		mg/L		104	85 - 115	0	20
Iron	5.00	5.10		mg/L		102	85 - 115	0	20
Sodium	25.0	26.0		mg/L		104	85 - 115	0	20

Lab Sample ID: 860-5112-1 MS

Matrix: Water

Analysis Batch: 10223

Client Sample ID: PBCU001

Prep Type: Total Recoverable

Prep Batch: 9902

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	37		25.0	60.0		mg/L		92	70 - 130
Iron	1.3		5.00	6.18		mg/L		97	70 - 130
Sodium	390	E	25.0	399	E 4	mg/L		41	70 - 130

QC Association Summary

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Metals

Prep Batch: 9902

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-5112-1	PBCU001	Total Recoverable	Water	200.7	
860-5112-2	DS01	Total Recoverable	Water	200.7	
MB 860-9902/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 860-9902/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 860-9902/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	
860-5112-1 MS	PBCU001	Total Recoverable	Water	200.7	

Analysis Batch: 10223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
860-5112-1	PBCU001	Total Recoverable	Water	200.7 Rev 4.4	9902
860-5112-1	PBCU001	Total Recoverable	Water	200.7 Rev 4.4	9902
860-5112-2	DS01	Total Recoverable	Water	200.7 Rev 4.4	9902
860-5112-2	DS01	Total Recoverable	Water	200.7 Rev 4.4	9902
MB 860-9902/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	9902
LCS 860-9902/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	9902
LCSD 860-9902/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	9902
860-5112-1 MS	PBCU001	Total Recoverable	Water	200.7 Rev 4.4	9902

Lab Chronicle

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Client Sample ID: PBCU001

Lab Sample ID: 860-5112-1

Date Collected: 05/27/21 08:00

Matrix: Water

Date Received: 06/02/21 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			50 mL	50 mL	9902	06/03/21 15:12	VD	XEN STF
Total Recoverable	Analysis	200.7 Rev 4.4		1			10223	06/04/21 23:38	DP	XEN STF
Total Recoverable	Prep	200.7			50 mL	50 mL	9902	06/03/21 15:12	VD	XEN STF
Total Recoverable	Analysis	200.7 Rev 4.4		50			10223	06/04/21 23:56	DP	XEN STF

Client Sample ID: DS01

Lab Sample ID: 860-5112-2

Date Collected: 05/27/21 08:05

Matrix: Water

Date Received: 06/02/21 14:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			50 mL	50 mL	9902	06/03/21 15:12	VD	XEN STF
Total Recoverable	Analysis	200.7 Rev 4.4		1			10223	06/04/21 23:45	DP	XEN STF
Total Recoverable	Prep	200.7			50 mL	50 mL	9902	06/03/21 15:12	VD	XEN STF
Total Recoverable	Analysis	200.7 Rev 4.4		50			10223	06/05/21 00:00	DP	XEN STF

Laboratory References:

XEN STF = Eurofins Xenco, Stafford, 4147 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Accreditation/Certification Summary

Client: Sabine River Authority
Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Job ID: 860-5112-1

Laboratory: Eurofins Xenco, Stafford

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	20-025-0	08-04-21
Florida	NELAP	E871002	06-30-21
Louisiana	NELAP	03054	06-30-21
North Carolina (WW/SW)	State	681	12-31-21
Oklahoma	State	1306	08-31-21
Texas	NELAP	T104704215-21-41	06-30-21

Method Summary

Client: Sabine River Authority

Job ID: 860-5112-1

Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	XEN STF
200.7	Preparation, Total Recoverable Metals	EPA	XEN STF

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

XEN STF = Eurofins Xenco, Stafford, 4147 Greenbriar Dr, Stafford, TX 77477, TEL (281)240-4200

Sample Summary

Client: Sabine River Authority

Job ID: 860-5112-1

Project/Site: PWS_1810007_AC_20210527 DWQP Analysis R

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
860-5112-1	PBCU001	Water	05/27/21 08:00	06/02/21 14:30	
860-5112-2	DS01	Water	05/27/21 08:05	06/02/21 14:30	

En "Orient es
merca

Corrected Temp: 2.8
C/F +0.1

Regulatory Program. ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TestAmerica Laboratories, Inc.

[illegible]

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
WATER QUALITY PARAMETER MONITORING FORM 20679
WS (or Agent)

[illegible]

Login Sample Receipt Checklist

Client: Sabine River Authority

Job Number: 860-5112-1

Login Number: 5112

List Number: 1

Creator: Rubio, Yuri

List Source: Eurofins Xenco, Stafford

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	

Login Sample Receipt Checklist

Client: Sabine River Authority

Job Number: 860-5112-1

Login Number: 5112

List Number: 2

Creator: Rubio, Yuri

List Source: Eurofins Xenco, Stafford

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Parameters Requested: Analyses are required for the parameters checked. * If inhibitors containing phosphate or silica are used, then these parameters should also be analyzed depending on which is in use.