February 21, 2022

Ms. Jessica Murphy
Enforcement and Compliance Section
Tennessee Department of Environment and Conservation
Division of Water Pollution Control
6th Floor, L&C Annex, 401 Church Street
Nashville, TN 37243-1534

Subject: 2021 Annual Storm Water Discharge Monitoring Report
Aqua-Chem, Inc.
3001 E. Gov John Sevier Highway
Knoxville, Tennessee
TMSP Number: TNR050328
Wood Project No. 3031142002

Dear Ms. Murphy:

On behalf of Aqua-Chem, Inc. (Water Technology Division), Wood Environment & Infrastructure Solutions, Inc. (Wood), is submitting the attached 2021 Annual Stormwater Monitoring Reports for Outfalls SW-001 through SW-005 (SW-004 combines and comingles with SW-003 and has been deleted).

Aqua-Chem Inc. (Water Technology Division), located at 3001 East Governor John Sevier Highway, Knoxville, Tennessee is covered under Sector AA of the Tennessee Multi-Sector General Permit for industrial stormwater discharges (TNR 050000). Annual stormwater sampling was conducted on August 17, 2021. The samples were analyzed for aluminum, iron, nitrate as nitrogen, and zinc. There were no exceedances of the respective Benchmark Values from the 2021 Annual Stormwater Monitoring Event. Attachment A provides a copy of the analytical results. Completed CN-1115 forms for the sampling event is provided in Attachment B.

If you have any questions or require any additional information, please contact me at (865) 218-1028 or william.teichert@woodplc.com in Knoxville.

Sincerely,
Wood Environment & Infrastructure Solutions, Inc.

W. Paul Teichert
Senior Environmental Principal

Jacob Parker, PE
Senior Engineer

Attachment A
Analytical Results

ANALYTICAL REPORT

August 26, 2021

Cp Tc Ss Cn Sr Qc Gl Al Sc

Wood E&I Solutions Inc. - Knoxville, TN

Sample Delivery Group:	L1391614
Samples Received:	08/18/2021
Project Number:	3031142002.05
Description:	Aqua Chem ECS
Site:	AQUACHEM
Report To:	William Teichert
	2030 Falling Waters Road
	Suite 300
	Knoxville, TN 37922

Entire Report Reviewed By:

T. Alan Harvill
Project Manager

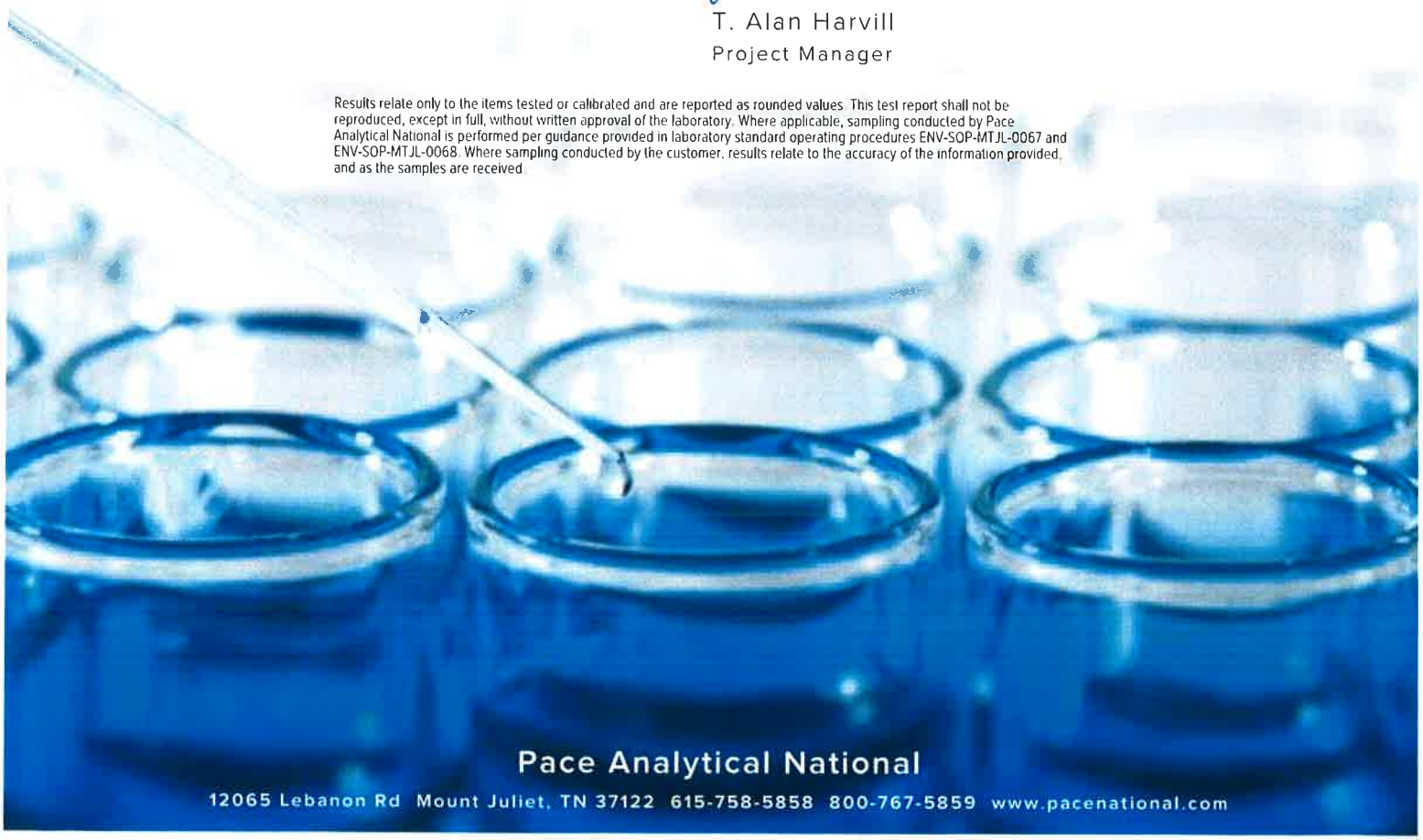

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
SWOF-001 L1391614-01	5
SWOF-002 L1391614-02	6
SWOF-003 L1391614-03	7
SWOF-005 L1391614-04	8
Qc: Quality Control Summary	9
Wet Chemistry by Method 300.0	9
Metals (ICP) by Method 200.7	10
Gl: Glossary of Terms	11
Al: Accreditations & Locations	12
Sc: Sample Chain of Custody	13

SAMPLE SUMMARY

SWOF-001 L1391614-01 WW

Collected by: Jacob Parker | Collected date/time: 08/17/21 13:10 | Received date/time: 08/18/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1725100	1	08/18/21 14:08	08/18/21 14:08	ELN	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1725256	1	08/20/21 11:32	08/24/21 17:27	CCE	Mt. Juliet, TN

SWOF-002 L1391614-02 WW

Collected by: Jacob Parker | Collected date/time: 08/17/21 12:45 | Received date/time: 08/18/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1725100	1	08/18/21 14:31	08/18/21 14:31	ELN	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1725256	1	08/20/21 11:32	08/24/21 17:08	CCE	Mt. Juliet, TN

SWOF-003 L1391614-03 WW

Collected by: Jacob Parker | Collected date/time: 08/17/21 12:55 | Received date/time: 08/18/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1725100	1	08/18/21 15:06	08/18/21 15:06	ELN	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1725256	1	08/20/21 11:32	08/24/21 17:35	CCE	Mt. Juliet, TN

SWOF-005 L1391614-04 WW

Collected by: Jacob Parker | Collected date/time: 08/17/21 13:45 | Received date/time: 08/18/21 08:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 300.0	WG1725100	1	08/18/21 15:40	08/18/21 15:40	ELN	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1725256	1	08/20/21 11:32	08/24/21 17:38	CCE	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

T. Alan Harvill
Project Manager

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Nitrate as (N)	0.524		0.100	1	08/18/2021 14:08	WG1725100

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	08/24/2021 17:27	WG1725256
Iron	ND		0.100	1	08/24/2021 17:27	WG1725256
Zinc	ND		0.0500	1	08/24/2021 17:27	WG1725256

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Nitrate as (N)	ND		0.100	1	08/18/2021 14:31	WG1725100

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	0.580		0.200	1	08/24/2021 17:08	WG1725256
Iron	1.60		0.100	1	08/24/2021 17:08	WG1725256
Zinc	0.220		0.0500	1	08/24/2021 17:08	WG1725256

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Nitrate as (N)	ND		0.100	1	08/18/2021 15:06	WG1725100

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	08/24/2021 17:35	WG1725256
Iron	0.136	B	0.100	1	08/24/2021 17:35	WG1725256
Zinc	ND		0.0500	1	08/24/2021 17:35	WG1725256

Wet Chemistry by Method 300.0

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Nitrate as (N)	ND		0.100	1	08/18/2021 15:40	WG1725100

Metals (ICP) by Method 200.7

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	08/24/2021 17:38	WG1725256
Iron	ND		0.100	1	08/24/2021 17:38	WG1725256
Zinc	ND		0.0500	1	08/24/2021 17:38	WG1725256

QUALITY CONTROL SUMMARY

L1391614-01,02,03,04

Method Blank (MB)

(MB) R3695244-1 08/18/21 07:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Nitrate	U		0.0480	0.100

L1391614-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1391614-01 08/18/21 14:08 • (DUP) R3695244-3 08/18/21 14:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	0.524	0.509	1	2.96		20

L1391717-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1391717-01 08/18/21 18:21 • (DUP) R3695244-6 08/18/21 18:33

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate	0.500	0.498	1	0.421		20

Laboratory Control Sample (LCS)

(LCS) R3695244-2 08/18/21 08:01

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Nitrate	8.00	8.05	101	90.0-110	

L1391614-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1391614-02 08/18/21 14:31 • (MS) R3695244-4 08/18/21 14:43 • (MSD) R3695244-5 08/18/21 14:54

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate	5.00	ND	5.25	5.25	105	105	1	80.0-120			0.105	20

L1391717-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1391717-01 08/18/21 18:21 • (MS) R3695244-7 08/18/21 18:44

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate	5.00	0.500	5.67	103	1	80.0-120	

Method Blank (MB)

(MB) R3696024-1 08/24/21 17:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Aluminum	U		0.0592	0.200
Iron	0.0246	J	0.0205	0.100
Zinc	U		0.00578	0.0500

Laboratory Control Sample (LCS)

(LCS) R3696024-2 08/24/21 17:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Aluminum	10.0	9.63	96.3	85.0-115	
Iron	10.0	9.67	96.7	85.0-115	
Zinc	1.00	0.953	95.3	85.0-115	

L1391614-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1391614-02 08/24/21 17:08 • (MS) R3696024-4 08/24/21 17:13 • (MSD) R3696024-5 08/24/21 17:16

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Aluminum	10.0	0.580	10.5	10.5	99.1	98.9	1	70.0-130			0.206	20
Iron	10.0	1.60	11.2	11.3	96.1	96.6	1	70.0-130			0.507	20
Zinc	1.00	0.220	1.16	1.16	93.8	94.4	1	70.0-130			0.506	20

L1391703-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1391703-03 08/24/21 17:19 • (MS) R3696024-6 08/24/21 17:21 • (MSD) R3696024-7 08/24/21 17:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Aluminum	10.0	0.203	9.91	9.81	97.1	96.1	1	70.0-130			0.976	20
Iron	10.0	0.143	9.84	9.81	97.0	96.7	1	70.0-130			0.311	20
Zinc	1.00	ND	0.952	0.946	94.3	93.7	1	70.0-130			0.643	20

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

Company Name/Address:
Wood E&I Solutions Inc. - Knoxville, TN

2030 Falling Waters Road
Suite 300
Knoxville, TN 37922

Billing Information:
Accounts Payable
2030 Falling Waters Road
Suite 300
Knoxville, TN 37922

Pres Chk

Report to: William Teichert

Email To: jacob.parker@woodplc.com;william.teichert@w

Project Description: Aqua Chem ECS

City/State Collected: Knoxville, TN

Please Circle: PT MT CT (ET)

Phone: 865-671-6774

Client Project # 3031142002.05

Lab Project # MACTECKTN-AQUACHEM

Collected by (print): Jacob Parker

Site/Facility ID # Aquachem

P.O. # 3031142002.05

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote # NA

Date Results Needed: Standard

Immediately Packed on Ice N ___ Y ✓

No. of Cntrs

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALICP, FEICP, ZNICP 250mlHDPE-HNO3	NITRATE 125mlHDPE-NoPres	Remarks	Sample # (lab only)
SWOF-001	Grab	WW	NA	8/17/21	1310	2	X	X		-01
SWOF-002		WW			1245	2	X	X		-02
SWOF-003		WW			1255	2	X	X		-03
SWOF-004		WW			1345	2	X	X		-04

Chain of Custody Page 1 of 1

Pace Analytical

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1391614
F144

Acctnum: MACTECKTN
Template: T135430
Prelogin: P847873
PM: 3513 - Jennifer Huckaba
PB:
Shipped Via: Courier

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: *Nitrate (short hold) (ship same day), Metals = Al, Fe, Zn

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: ___ UPS ___ FedEx ✓ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	8/17/21	16:10		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
	8-17-21	17:20		2.7+.28 8
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			M. Sund	8/14/21 815

If preservation required by Login: Date/Time

Hold:

Condition: NCF OK

Attachment B
Completed CN-1115 Forms

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

ANNUAL STORMWATER MONITORING REPORT
for Stormwater Discharges Associated with Industrial Activity under the
TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)

Facility Name: Aqua-Chem, Inc.	TMSP Number: TNR050328
Contact Person: Frank Keefer	Phone Number: 865-540-1933
This report is submitted for the following calendar year (e.g. 2015): 2021	Outfall Number: SW001
List all TMSP sectors which apply to discharge from this outfall: AA	Sample Date: 8/17/21
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

DIRECTIONS: In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75	<0.200
Ammonia	4.0	
Arsenic, Total	0.16854	
BOD, 5-Day	30	
Cadmium, Total	0.0159	
COD	120	
Copper, Total	0.018	
Cyanide, Total	0.064	
Fluoride	1.8	
Iron, Total	5.0	<0.100
Lead, Total	0.15	

Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	0.524
Oil and Grease	15	
pH	5.0-9.0	
Phosphorus, Total (as P)	2.0	
Selenium, Total	0.2385	
Silver, Total	0.032	
Total Suspended Solids	150	
Zinc, Total	0.395	<0.0500

CERTIFICATION AND SIGNATURE: (Make all entries in ink, not with a pencil. This report must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency.)

I certify under penalty of law that this document and all of its attachments were prepared under my direction or my supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

William (Paul) Teichert	Project Manager		2/17/22
Printed Name	Official Title	Signature	Date

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

ANNUAL STORMWATER MONITORING REPORT
for Stormwater Discharges Associated with Industrial Activity under the
TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)

Facility Name: Aqua-Chem, Inc.	TMSP Number: TNR050328
Contact Person: Frank Keefer	Phone Number: 865-540-1933
This report is submitted for the following calendar year (e.g. 2015): 2021	Outfall Number: SW002
List all TMSP sectors which apply to discharge from this outfall: AA	Sample Date: 8/17/21
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

DIRECTIONS: In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75	0.58
Ammonia	4.0	
Arsenic, Total	0.16854	
BOD, 5-Day	30	
Cadmium, Total	0.0159	
COD	120	
Copper, Total	0.018	
Cyanide, Total	0.064	
Fluoride	1.8	
Iron, Total	5.0	1.6
Lead, Total	0.15	

Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	<0.100
Oil and Grease	15	
pH	5.0-9.0	
Phosphorus, Total (as P)	2.0	
Selenium, Total	0.2385	
Silver, Total	0.032	
Total Suspended Solids	150	
Zinc, Total	0.395	0.220

CERTIFICATION AND SIGNATURE: (Make all entries in ink, not with a pencil. This report must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency.)

I certify under penalty of law that this document and all of its attachments were prepared under my direction or my supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

William (Paul) Teichert	Project Manager		2/17/22
Printed Name	Official Title	Signature	Date

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

ANNUAL STORMWATER MONITORING REPORT
for Stormwater Discharges Associated with Industrial Activity under the
TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)

Facility Name: Aqua-Chem, Inc.	TMSP Number: TNR050328
Contact Person: Frank Keefer	Phone Number: 865-540-1933
This report is submitted for the following calendar year (e.g. 2015): 2021	Outfall Number: SW003
List all TMSP sectors which apply to discharge from this outfall: AA	Sample Date: 8/17/21
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

DIRECTIONS: In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75	<0.200
Ammonia	4.0	
Arsenic, Total	0.16854	
BOD, 5-Day	30	
Cadmium, Total	0.0159	
COD	120	
Copper, Total	0.018	
Cyanide, Total	0.064	
Fluoride	1.8	
Iron, Total	5.0	0.136
Lead, Total	0.15	

Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	<0.100
Oil and Grease	15	
pH	5.0-9.0	
Phosphorus, Total (as P)	2.0	
Selenium, Total	0.2385	
Silver, Total	0.032	
Total Suspended Solids	150	
Zinc, Total	0.395	0.0500

CERTIFICATION AND SIGNATURE: (Make all entries in ink, not with a pencil. This report must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency.)

I certify under penalty of law that this document and all of its attachments were prepared under my direction or my supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

William (Paul) Teichert	Project Manager		2/17/22
Printed Name	Official Title	Signature	Date

Tennessee Department of Environment and Conservation
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 11th Floor, Nashville, Tennessee 37243

ANNUAL STORMWATER MONITORING REPORT
for Stormwater Discharges Associated with Industrial Activity under the
TENNESSEE MULTI-SECTOR GENERAL PERMIT (TMSP)

Facility Name: Aqua-Chem, Inc.	TMSP Number: TNR050328
Contact Person: Frank Keefer	Phone Number: 865-540-1933
This report is submitted for the following calendar year (e.g. 2015): 2021	Outfall Number: SW005
List all TMSP sectors which apply to discharge from this outfall: AA	Sample Date: 8/17/21
Low Concentration Waiver (Note 3): list all parameters for which the facility is certifying that there has not been a significant change in industrial activity or the pollution prevention measures in the area of the facility that drains to the outfall for which sampling was waived:	

DIRECTIONS: In the spaces below, provide the results of stormwater monitoring for the designated outfall. For each outfall, one Annual Stormwater Monitoring Report must be submitted. The parameters for which monitoring must be conducted depend on which industry sector(s) of the TMSP applies to the discharge. Look up your sector(s) in the TMSP and analyze for the parameters that apply. If parameter is not listed below, submit additional sheets. All samples should be grab.

Parameter	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Aluminum, Total	0.75	<0.200
Ammonia	4.0	
Arsenic, Total	0.16854	
BOD, 5-Day	30	
Cadmium, Total	0.0159	
COD	120	
Copper, Total	0.018	
Cyanide, Total	0.064	
Fluoride	1.8	
Iron, Total	5.0	<0.100
Lead, Total	0.15	

Parameter (continued)	Cut-off Conc. (mg/L)	Annual Sample Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	<0.100
Oil and Grease	15	
pH	5.0-9.0	
Phosphorus, Total (as P)	2.0	
Selenium, Total	0.2385	
Silver, Total	0.032	
Total Suspended Solids	150	
Zinc, Total	0.395	<0.0500

CERTIFICATION AND SIGNATURE: (Make all entries in ink, not with a pencil. This report must be signed by a responsible corporate officer for a corporation, a general partner for a partnership, the proprietor for a sole proprietorship, or a principal executive officer or ranking elected official for a public agency.)

I certify under penalty of law that this document and all of its attachments were prepared under my direction or my supervision in accordance with a system designed to assure qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. As specified in Tennessee Code Annotated Section 39-16-702(a)(4), this declaration is made under penalty of perjury.

William (Paul) Teichert	Project Manager		2/17/22
Printed Name	Official Title	Signature	Date