### 3M Midway



Ceradyne, Inc. a 3M Company 510 Midway Circle Midway, TN 37809 423 422 6051

Tennessee Dept. of Environment and Conservation Johnson City Field Office 2305 Silverdale Dr. Johnson City, TN 37601

Reference: 3M Technical Ceramics Annual Storm Water Monitoring Report

TNR053148

Hello,

This letter is to satisfy our annual storm water testing requirements for the year of 2022.

Enclosed are the storm water monitoring reports, chain of custody and the laboratory analytical results to show compliance.

If you have any questions or concerns, please contact myself at (423) 422-2000.

Respectfully,

Mark Strong EHS Engineer

"I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document and all attachments are true, accurate, and complete."

Mr. Michael Wilds, Plant Manager

3M Technical Ceramics

<u>//4/2 3</u> 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: 3M. Technical Ceranics	TMSP Number:TNR053148		
Contact Person: Mark Strong	Phone Number: 423-422-605		
This report is submitted for the following calendar year (e.g. 2015): 2022	Outfall Number: 0 /		
List all TMSP sectors which apply to discharge from this outfall:	Sample Date: /2/5/22		
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.

mount of the same	Cut-off	Annual
Parameter	Conc.	Sample
	(mg/L)	Result (mg/L)
Aluminum, Total	0.75	ND
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	AD 0.115
Lead, Total	0.15	

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

**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.)

Mike Wilds	Plant Manager	mill ff	1/4/23
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: 3M. Technical Ceranics	TMSP Number: TNR053148
Contact Person: Mark Strong	Phone Number: 423-422-605
This report is submitted for the following calendar year (e.g. 2015): 2022	Outfall Number: 0,2
List all TMSP sectors which apply to discharge from this outfall:	Sample Date: 12/5/22
Low Concentration Waiver (Note 3): list all parameters for which the facility is certify significant change in industrial activity or the pollution prevention measures in the the outfall for which sampling was waived:	ying that there has not been a

**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.

	Cut-off	Annual
Parameter	Conc.	Sample
	(mg/L)	Result (mg/L)
Aluminum, Total	0.75	ND
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	班) 0.116
Lead, Total	0.15	

	Cut-off	Annual
Parameter (continued)	Conc.	Sample
	(mg/L)	Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	
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	ND
Zinc, Total	0.395	

**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.)

Mike Wilds	Plant Manager	millell	1/4/23
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: 3M Technical Ceranics	TMSP Number: TNR 053148
Contact Person: Mark Strong	Phone Number: 423-422-605
This report is submitted for the following calendar year (e.g. 2015): 2022	Outfall Number: 03
List all TMSP sectors which apply to discharge from this outfall:	Sample Date: 12/5/22
Low Concentration Waiver (Note 3): list all parameters for which the facility is cert significant change in industrial activity or the pollution prevention measures in the outfall for which sampling was waived:	ifying that there has not been a

**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.

	Cut-off	Annual
Parameter	Conc.	Sample
	(mg/L)	Result (mg/L)
Aluminum, Total	0.75	NO
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	0.125
Lead, Total	0.15	

	Cut-off	Annual
Parameter (continued)	Conc.	Sample
	(mg/L)	Result (mg/L)
Magnesium, Total	0.0636	
Mercury, Total	0.0024	
Nickel, Total	0.875	
Nitrate + Nitrite Nitrogen	0.68	
Oil and Grease	15	
рН	5.0-9.0	
Phosphorus, Total (as P)	2.0	į.
Selenium, Total	0.2385	
Silver, Total	0.032	
Total Suspended Solids	150	NO
Zinc, Total	0.395	

**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.)

Mike Wilds	Plant Manager	milled	1/4/23
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: 3M Technical Ceramics	TMSP Number: TNR053/48
Contact Person: Mark Strong	Phone Number: 423-422-605
This report is submitted for the following calendar year (e.g. 2015): $2022$	Outfall Number: 04
List all TMSP sectors which apply to discharge from this outfall:	Sample Date: 12/5/22
Low Concentration Waiver (Note 3): list all parameters for which the facility is certif significant change in industrial activity or the pollution prevention measures in the the outfall for which sampling was waived:	Mara electrical

**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.

	Cut-off	Annual
Parameter	Conc.	Sample
	(mg/L)	Result (mg/L)
Aluminum, Total	0.75	NS
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	0.117
Lead, Total	0.15	VIII

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

**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.)

Mike Wilds	Plant Manager	Signature	1/4/23
Printed Name	Official Title		Date
			Date



# Pace Analytical\* ANALYTICAL REPORT

December 16, 2022

# CERADYNE, INC. - A 3M Company

Sample Delivery Group:

L1566108

Samples Received:

12/09/2022

Project Number:

ANNUAL STORMWATER

Description:

Stormwater

Report To:

Mark Strong

510 Midway Circle

Midway, TN 37809















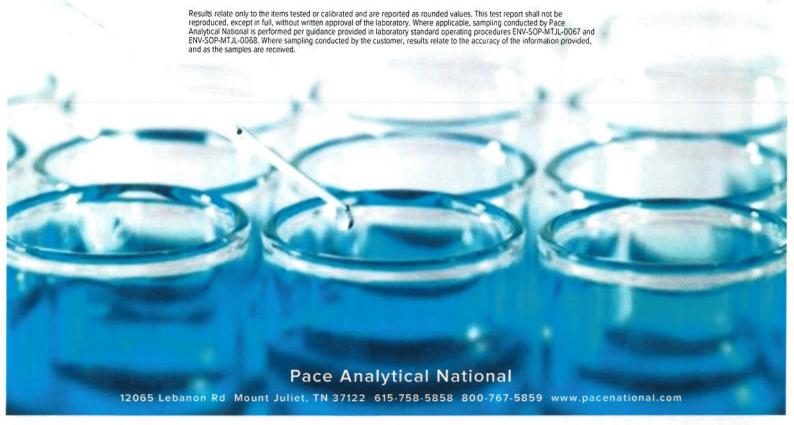






Entire Report Reviewed By: Ragam Jahrun

Reagan Johnson 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
SW-01 L1566108-01	5
SW-02 L1566108-02	6
SW-03 L1566108-03	7
SW-04 L1566108-04	8
Qc: Quality Control Summary	9
Gravimetric Analysis by Method 2540 D-2015	9
Metals (ICP) by Method 200.7	10
GI: Glossary of Terms	11
Al: Accreditations & Locations	12
Sc: Sample Chain of Custody	12























# SAMPLE SUMMARY

SW-01 L1566108-01 WW			Collected by Mark Strong	Collected date/time 12/06/22 06:30	Received da 12/09/22 08	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 D-2015	WG1973766	1	12/13/22 17:05	12/13/22 23:05	MMF	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1973868	1	12/14/22 09:16	12/16/22 01:02	ABL	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
SW-02 L1566108-02 WW			Mark Strong	12/06/22 06:30	12/09/22 08	:00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 D-2015	WG1973766	1	12/13/22 17:05	12/13/22 23:05	MMF	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1973868	1	12/14/22 09:16	12/16/22 01:11	ABL	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
SW-03 L1566108-03 WW			Mark Strong	12/06/22 06:30	12/09/22 08	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 D-2015	WG1973766	1	12/13/22 17:05	12/13/22 23:05	MMF	Mt. Juliet, TN
Metals (ICP) by Method 200.7	WG1973868	1	12/14/22 09:16	12/16/22 01:13	ABL	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
SW-04 L1566108-04 WW			Mark Strong	12/06/22 06:30	12/09/22 08:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Gravimetric Analysis by Method 2540 D-2015	WG1973766	1	12/13/22 17:05	12/13/22 23:05	MMF	Mt. Juliet, TN

WG1973868

12/14/22 09:16























Metals (ICP) by Method 200.7

ABL

Mt. Juliet, TN

12/16/22 01:16

### 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.



















Kagan drum

Reagan Johnson Project Manager

# SAMPLE RESULTS - 01

# Gravimetric Analysis by Method 2540 D-2015

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Suspended Solids	ND		2.63	1	12/13/2022 23:05	WG1973766

# Metals (ICP) by Method 200.7

Collected date/time: 12/06/22 06:30

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	-
Aluminum	ND		0.200	1	12/16/2022 01:02	WG1973868
Iron	0.115	B	0.100	1	12/16/2022 01:02	WG1973868















# SAMPLE RESULTS - 02

Collected date/time: 12/06/22 06:30

# Gravimetric Analysis by Method 2540 D-2015

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Suspended Solids	ND		2.83	1	12/13/2022 23:05	WG1973766

### Metals (ICP) by Method 200.7

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	12/16/2022 01:11	WG1973868
Iron	0.116	В	0.100	1	12/16/2022 01:11	WG1973868















# SAMPLE RESULTS - 03

Collected date/time: 12/06/22 06:30

### Gravimetric Analysis by Method 2540 D-2015

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Suspended Solids	ND		2.78	1	12/13/2022 23:05	WG1973766





	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	12/16/2022 01:13	WG1973868
Iron	0.125	B	0.100	1	12/16/2022 01:13	WG1973868















# SAMPLE RESULTS - 04

# Gravimetric Analysis by Method 2540 D-2015

	Result	Qualifier	RDL	Dilution	Analysis	Batch	
Analyte	mg/l		mg/l		date / time	Buten	
Suspended Solids	ND		2.50	1	12/13/2022 23:05	WG1973766	





Collected date/time: 12/06/22 06:30

	Result	Qualifier	RDL	Dilution	Analysis	Batch
Analyte	mg/l		mg/l		date / time	
Aluminum	ND		0.200	1	12/16/2022 01:16	WG1973868
Iron	0.117	B	0.100	1	12/16/2022 01:16	WG1973868













### r U Sc Ss S Ū V QUALITY CONTROL SUMMARY 1566108-01,02,03,04 DUP RPD Limits DUP RPD Limits LCS Qualifier **DUP Qualifier DUP Qualifier** T Rec. Limits MB RDL 85.7-114 ∥/gш 2.50 Dilution DUP RPD Dilution DUP RPD L1564704-01 Original Sample (OS) • Duplicate (DUP) L1565747-01 Original Sample (OS) • Duplicate (DUP) 5.88 1.90 (OS) L1564704-01 12/13/22 23:05 • (DUP) R3871859-3 12/13/22 23:05 (OS) L1565747-01 12/13/22 23:05 • (DUP) R3871859-4 12/13/22 23:05 % MB MDL LCS Rec. 2.50 l/gm 98.3 Gravimetric Analysis by Method 2540 D-2015 MB Qualifier Original Result DUP Result Original Result DUP Result Spike Amount LCS Result 28.0 mg/l mg/l mg/l 424 760 Laboratory Control Sample (LCS) MB Result (LCS) R3871859-2 12/13/22 23:05 (MB) R3871859-1 12/13/22 23:05 l/gm 26.4 l/gm mg/l mg/l 416 $\supset$ Method Blank (MB) WG1973766 Suspended Solids Suspended Solids Suspended Solids Suspended Solids Analyte Analyte Analyte Analyte

PAGE: 9 of 14

DATE/TIME: 12/16/22 16:10

L1566108

ANNUAL STORMWATER

CERADYNE, INC. - A 3M Company

ACCOUNT:

PROJECT:

(MB) R3872503-1 12/16/22 00:04	2/16/22 00:04												
	MB Result	MB Qualifier	MB MDL	MB RDL									
Analyte	l/gm		l/gm	l/gm									
Aluminum	D		0.0592	0.200									
Iron	0.0284	71	0.0205	0.100									
aboratory Co	Laboratory Control Sample (LCS)	(S)											
(LCS) R3872503-2 12/16/22 00:07	12/16/22 00:07												
	Spike Amount	it LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	- N							
Analyte	∥gm	l/gm	96	<b>%</b> €									
Aluminum	10.0	10.0	100	85.0-115									
Iron L1566014-01 0	Iron 10.0 10.2 85.0-115 L1566014-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)	10.2 (OS) • Matr	102 rix Spike (A	85.0-115 MS) • Matrix	Spike Du	plicate (MS)	í í						
OS) L1566014-01 1;	(OS) L1566014-01 12/16/22 00:09 • (MS) R3872503-4 12/16/22 00:15 • (MSD) R3872503-5 12/16/22 00:17	R3872503-4 1	2/16/22 00:15	• (MSD) R3872	503-5 12/16/2	2 00:17							
	Spike Amoun	Spike Amount Original Result MS Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	l/gm	∥/gm	l/gm	∥/gm	89	%		<b>3</b> %				86	
Aluminum	10.0	QN	9.92	10.0	99.2	100	-	70.0-130			1.22	20	
Iron	10.0	Q	10.0	10.0	100	100	-	70.0-130			0.140	20	
1566014-02 (	L1566014-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)	e (OS) • Mat	rix Spike (	MS) • Matri	x Spike Di	uplicate (MS	(OS						
OS) L1566014-02 1	(OS) L1566014-02 12/16/22 00:20 • (MS) R3872503-6 12/16/22 00:23 • (MSD) R3872503-7 12/16/22 00:25	3) R3872503-6	12/16/22 00:2:	3 • (MSD) R387;	2503-7 12/16/	22 00:25							
	Spike Amount	t Original Result MS Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	l/gm	l/gm	∥/gm	mg/l	86	%		<b>%</b>				98	
Aluminum	10.0	QN	9.59	9.71	95.9	97.1		70.0-130			1.33	20	
Iron	10.0	QN	9.63	9.90	96.3	0.66	-	70.0-130			2.76	20	

QUALITY CONTROL SUMMARY

WG1973868 Metals (ICP) by Method 200.7 PAGE: 10 of 14

DATE/TIME: 12/16/22 16:10

SDG: L1566108

PROJECT: ANNUAL STORMWATER

ACCOUNT: CERADYNE, INC. - A 3M Company

### **GLOSSARY OF TERMS**

### Guide to Reading and Understanding Your Laboratory Report

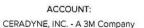
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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.



Appleviations at	ID DETITIONS
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
В	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
-	

RPD value not applicable for sample concentrations less than 5 times the reporting limit.



P1













# **ACCREDITATIONS & LOCATIONS**

## Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

r dee Andrytical National	12000 Lebanon Na Moun	Louilet, TIV 5/122	
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
daho	TN00003	Ohio-VAP	CL0069
Ilinois	200008	Oklahoma	9915
ndiana	C-TN-01	Oregon	TN200002
owa	364	Pennsylvania	68-02979
ansas	E-10277	Rhode Island	LAO00356
Centucky 16	KY90010	South Carolina	84004002
entucky <sup>2</sup>	16	South Dakota	n/a
ouisiana	Al30792	Tennessee 1 4	2006
ouisiana	LA018	Texas	T104704245-20-18
faine	TN00003	Texas <sup>5</sup>	LAB0152
laryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
fissouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
2LA - 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
PA-Crypto	TN00003		



<sup>\*</sup> Not all certifications held by the laboratory are applicable to the results reported in the attached report.

















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

Company Name/Address:			Billing information;	nation;				*	the state of the state of			- 1	
CERADYNE, INC A 3NI Company	M Company	•	Accounts Pa	Pavable		Pres			A TOTAL DE LA PER	er i procenzalnya		Chain of Custody Page	
510 Midway Circle			510 Midway	ray Circle	<del></del> ,	క్							
Midway, TN 37809			miaway, in	609/E NI	***							PEDTIC ABYANGING MCICHIC	OKHOL
Report to: Mark Strong			Email To: dr	Email To: dmstrong@mmm.com	com							MT JULIET, TN	
Project Description: Stormwater		City/State Midway,	Midwa	1/2/	PT WT CL/LT	30000000000	εc					Submilling at service was the others of suspense formalising combined and one weightness of suspense and the flag flash of the service and the service of th	states of the
Phane: 423-422-2000	Client Project # ANNUAL STORMWATER	ORMWAT	E.	عا	1	Contraction of the Contraction o	SE-HAC					30 335 7 #5ds	20
Collected by (print): Trans	Site/Facility ID #	#		P.G. #			Sikaskason					A183	
Collected by Isignature	Rush? (Lat	Rush? (Lab MUST Be Notified) Same Day five Day	Votified)	Quote #			\$\$\\$\$\\$\$\\$\$@#					Acctnum: MINCOMTN Template: T157997	
Immediately Packed on Ice N Y	Two Day	1 1 1	5 Day (Rad Only) 10 Day (Rad Only)	Date Results Needed		Mo.	HDPE					Prelogin: P948626	<b>7</b> ,
Sample ID	Comp/Grab	Matrix *	Depth	Oate	Time	<u> </u>	2000/15/2007					Shipped Via: FedEX Ground	2 E
\$W-01		100000000000000000000000000000000000000				77	Seza V 🗟					Remarks Sample # (196 anly)	(Ajua gej)
20-MS	220	MM		2000	02.30	7	×						ō
SALAS	(A)	WW		122	6306	7	× ×						
en en derskert i skildelet en en en de de de de bestelle en	وگر	ww		12/6/22	0819	7	×						/6
	3525	WW		12/6/22	Ø.30	2	×					11 1000	) Z
e de maniere en en entre de la companyación de material de la propertica de la companyación de sector													
MANY to emproprise material controlled states of controlled materials and the controlled materials and													
dest mit en fra en epin popular de la balla debut se melbana, paga meganat en en en perspectivo est en sesson en													
te delle er ette om etteke gerrine som ett in Mer ette segment ger													
den dake menengarapa daka darah kerabadah permetanya benjarah dan dake dake dake dake bankarang permeta													
* Matrix: Ss - Soil AtR - Air F - Filter. GW - Groundwater B - Bioassay WW - WasteWater	Remarks;					All the state of t	A THE PERSON OF		PH	Temp	CCC Seal Pro-	Receipt Checking antiloract: NP curate:	\
ا ا ا	Samples returned via: UPS PedExami	at Courte)		Tracking	11 W				and the second	- Company	Sarrest be	to need to the sente	 
Asignatural Asignatura		19 620	Time:	- E	ed by (Sudana		1,11	Ĭ.	Trio Brank Receive	Yes (Mg Hallman	COA Into Bandspace: Preservation Correct Run Screen (C.5 max	L/Checked) hr:	Z Z Z  Z XZ
Relinquished by (Signature)	Date:	Date: 13.3	Time:	C Hetrave	Retained by: (Signa) une	2	A THE STATE OF THE	Tem	32/28/2 12/28/21/20 12/28/20 12/28/21/20 1	Bottles Breeved	If preservatio	Il prestorvation required by Login: Date/Time	ne
Relinquished by : (Signature)	Date:	M	Time:	Mercel 1	Received for lab by, (\$400 alord)	(guarday)	ì	ro-¥*	221401	Time 7,700	Holds	Condition: NG: / BR	¦€
			*							5			3

