

05 November 2020

Work Order: 2010095

Price: \$910.00

Dan Hamel  
EGLE-RRD-JACKSON  
301 E. Louis Glick Highway  
Jackson, MI 49201-1556  
RE: GELMAN SCIENCES, INC

This is the official environmental laboratory report for testing conducted by the Michigan Department of Environment, Great Lakes, and Energy. Analyses performed by the laboratory were conducted using methods published by the U.S. Environmental Protection Agency, Standard Methods for the Examination of Water and Wastewater, ASTM, or other published or approved reference methods.

Kirby Shane  
Laboratory Director



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ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENTAL LABORATORY

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
FAX: (517) 335-9600

EGLE-RRD-JACKSON  
301 E. Louis Glick Highway  
Jackson MI, 49201-1556

Project: GELMAN SCIENCES, INC  
Site Code: 81000018  
Project Manager: Dan Hamel

**Reported:**  
11/05/2020

**Analytical Report for Samples**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
ALLEN CREEK-GLENDALE	2010095-01	Water	10/07/2020	10/07/2020	
SMITH POND-EAST	2010095-02	Water	10/07/2020	10/07/2020	
SMITH POND-WEST	2010095-03	Water	10/07/2020	10/07/2020	
ARBOR LANDING POND	2010095-04	Water	10/07/2020	10/07/2020	
UNNAMED TRIB-JACKSON	2010095-05	Water	10/07/2020	10/07/2020	
WEST PARK POND	2010095-06	Water	10/07/2020	10/07/2020	
HANNA NATURE AREA	2010095-07	Water	10/07/2020	10/07/2020	

**Notes and Definitions**

- Y28 1,4-dioxane analysis is performed using selective ion monitoring (SIM). Results reported below 5 ug/L (aqueous) or 1000 ug/Kg (solids) are estimated.
- ND Indicates compound analyzed for but not detected at or above the reporting limit (RL).
- RL Reporting Limit
- NA Not Applicable



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Client ID: ALLEN CREEK-GLENDALE

Lab ID: 2010095-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



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Client ID: SMITH POND-EAST

Lab ID: 2010095-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



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Client ID: SMITH POND-WEST

Lab ID: 2010095-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



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Client ID: ARBOR LANDING POND

Lab ID: 2010095-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



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Client ID: UNNAMED TRIB-JACKSON

Lab ID: 2010095-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	<b>1,4-dioxane</b>	<b>3.8</b>	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



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Client ID: WEST PARK POND

Lab ID: 2010095-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	





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Client ID: HANNA NATURE AREA

Lab ID: 2010095-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
<b>Organics-Dioxane</b>									<b>See note Y28</b>
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



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Organics-Dioxane - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
<b>Batch B0J1522 - Method: 5030</b>				<b>Prepared: 10/14/2020</b>							
<b>Blank (B0J1522-BLK1)</b>											
1,4-dioxane	ND	1.0	ug/L							10/14/2020	
<b>LCS (B0J1522-BS1)</b>											
1,4-dioxane	10.2	1.0	ug/L	10.00		102	70-130			10/14/2020	
<b>Matrix Spike (B0J1522-MS1) Source: 2010095-01</b>											
1,4-dioxane	9.63	1.0	ug/L	10.00	ND	96.3	70-130			10/14/2020	
<b>Matrix Spike Dup (B0J1522-MSD1) Source: 2010095-01</b>											
1,4-dioxane	9.79	1.0	ug/L	10.00	ND	97.9	70-130	1.65	30	10/14/2020	



# Analysis Request Sheet

Lab Work Order Number

Project Name

Matrix

2010095

Gelman Sciences

WATER

Location ID  
**8100018/Location 6130**

Program

CC Email 1

Project TAT Days

Sample Collector  
**Dan Hamel**

Dept-Division-District  
**EGLE-RRD-Jackson**

Activity

CC Email 2

Project Due Date

Sample Collector Phone  
**(517) 745-6595**

State Project Manager  
**Dan Hamel**

Funding Source

CC Email 3

Accept Analysis hold time codes

Contract Firm

State Project Manager Email  
**hameld@miichigan.gov**

Location Code  
**6130**

Overflow Lab Choice 1

Contract Firm Primary Contact

State Project Manager Phone  
**(517) 745-6595**

SUD Location Code

Overflow Lab Choice 2

Primary Contact Phone

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	01 ALLEN CREEK - GLENDALE	10/7/20	1020		Please include QA/QC with lab Data Reports
2	02 SMITH POND - EAST	10/7/20	1104		
3	03 SMITH POND - WEST	10/7/20	1108		
4	04 ARBOR LANDING POND	10/7/20	1127		
5	05 UNNAMED TRIG - JACKSON	10/7/20	1155		
6	06 WEST PARK POND	10/7/20	1220		
7	07 HANNA NATURE AREA	10/7/20	1252		
8					
9					
10					

ORGANIC CHEMISTRY	MAD - DISSOLVED METALS	MA - TOTAL METALS	GENERAL CHEMISTRY
VOA - Volatile Organic Acids Volatiles - Full List 1 2 3 4 5 6 7 8 9 10 BTEX/MTBE/TMB only 1 2 3 4 5 6 7 8 9 10 Chlorinated only 1 2 3 4 5 6 7 8 9 10 GRO 1 2 3 4 5 6 7 8 9 10 1,4 Dioxane 1 2 3 4 5 6 7 8 9 10 METH - Methane, Ethane, Ethene Methane, Ethane, Ethene 1 2 3 4 5 6 7 8 9 10 ON - Pesticides, PCBs Pesticides & PCBs 1 2 3 4 5 6 7 8 9 10 Pesticides only 1 2 3 4 5 6 7 8 9 10 PCBs only 1 2 3 4 5 6 7 8 9 10 Toxaphene 1 2 3 4 5 6 7 8 9 10 Chlordane 1 2 3 4 5 6 7 8 9 10 BNA - Base Neutral Acids BNAs 1 2 3 4 5 6 7 8 9 10 Benzidines 1 2 3 4 5 6 7 8 9 10 PNAs only 1 2 3 4 5 6 7 8 9 10 BNs only 1 2 3 4 5 6 7 8 9 10 Acids only 1 2 3 4 5 6 7 8 9 10 Organic Specialty Requests Library search - Volatiles 1 2 3 4 5 6 7 8 9 10 Library search - SemiVols 1 2 3 4 5 6 7 8 9 10 Finger Print 1 2 3 4 5 6 7 8 9 10 DRO / ORO 1 2 3 4 5 6 7 8 9 10	Diss - Silver - Ag 1 2 3 4 5 6 7 8 9 10 Diss - Aluminum - Al 1 2 3 4 5 6 7 8 9 10 Diss - Arsenic - As 1 2 3 4 5 6 7 8 9 10 Diss - Boron - B 1 2 3 4 5 6 7 8 9 10 Diss - Barium - Ba 1 2 3 4 5 6 7 8 9 10 Diss - Beryllium - Be 1 2 3 4 5 6 7 8 9 10 Diss - Cadmium - Cd 1 2 3 4 5 6 7 8 9 10 Diss - Cobalt - Co 1 2 3 4 5 6 7 8 9 10 Diss - Chromium - Cr 1 2 3 4 5 6 7 8 9 10 Diss - Copper - Cu 1 2 3 4 5 6 7 8 9 10 Diss - Iron - Fe 1 2 3 4 5 6 7 8 9 10 Diss - Mercury - Hg 1 2 3 4 5 6 7 8 9 10 Diss - Lithium - Li 1 2 3 4 5 6 7 8 9 10 Diss - Manganese - Mn 1 2 3 4 5 6 7 8 9 10 Diss - Molybdenum - Mo 1 2 3 4 5 6 7 8 9 10 Diss - Nickel - Ni 1 2 3 4 5 6 7 8 9 10 Diss - Lead - Pb 1 2 3 4 5 6 7 8 9 10 Diss - Antimony - Sb 1 2 3 4 5 6 7 8 9 10 Diss - Selenium - Se 1 2 3 4 5 6 7 8 9 10 Diss - Strontium - Sr 1 2 3 4 5 6 7 8 9 10 Diss - Titanium - Ti 1 2 3 4 5 6 7 8 9 10 Diss - Thallium - Tl 1 2 3 4 5 6 7 8 9 10 Diss - Uranium - U 1 2 3 4 5 6 7 8 9 10 Diss - Vanadium - V 1 2 3 4 5 6 7 8 9 10 Diss - Zinc - Zn 1 2 3 4 5 6 7 8 9 10 Diss - Calcium - Ca 1 2 3 4 5 6 7 8 9 10 Diss - Potassium - K 1 2 3 4 5 6 7 8 9 10 Diss - Magnesium - Mg 1 2 3 4 5 6 7 8 9 10 Diss - Sodium - Na 1 2 3 4 5 6 7 8 9 10 Diss - Hardness - Ca, Mg 1 2 3 4 5 6 7 8 9 10 MD - Metals Dissolved Lab Filtration 1 2 3 4 5 6 7 8 9 10	Silver - Ag 1 2 3 4 5 6 7 8 9 10 Aluminum - Al 1 2 3 4 5 6 7 8 9 10 Arsenic - As 1 2 3 4 5 6 7 8 9 10 Boron - B 1 2 3 4 5 6 7 8 9 10 Barium - Ba 1 2 3 4 5 6 7 8 9 10 Beryllium - Be 1 2 3 4 5 6 7 8 9 10 Cadmium - Cd 1 2 3 4 5 6 7 8 9 10 Cobalt - Co 1 2 3 4 5 6 7 8 9 10 Chromium - Cr 1 2 3 4 5 6 7 8 9 10 Copper - Cu 1 2 3 4 5 6 7 8 9 10 Iron - Fe 1 2 3 4 5 6 7 8 9 10 Mercury - Hg 1 2 3 4 5 6 7 8 9 10 Lithium - Li 1 2 3 4 5 6 7 8 9 10 Manganese - Mn 1 2 3 4 5 6 7 8 9 10 Molybdenum - Mo 1 2 3 4 5 6 7 8 9 10 Nickel - Ni 1 2 3 4 5 6 7 8 9 10 Lead - Pb 1 2 3 4 5 6 7 8 9 10 Antimony - Sb 1 2 3 4 5 6 7 8 9 10 Selenium - Se 1 2 3 4 5 6 7 8 9 10 Strontium - Sr 1 2 3 4 5 6 7 8 9 10 Titanium - Ti 1 2 3 4 5 6 7 8 9 10 Thallium - Tl 1 2 3 4 5 6 7 8 9 10 Uranium - U 1 2 3 4 5 6 7 8 9 10 Vanadium - V 1 2 3 4 5 6 7 8 9 10 Zinc - Zn 1 2 3 4 5 6 7 8 9 10 Calcium - Ca 1 2 3 4 5 6 7 8 9 10 Potassium - K 1 2 3 4 5 6 7 8 9 10 Magnesium - Mg 1 2 3 4 5 6 7 8 9 10 Sodium - Na 1 2 3 4 5 6 7 8 9 10 Hardness - Ca, Mg 1 2 3 4 5 6 7 8 9 10 LHG - Low Level Mercury Mercury Low Level - Hg 1 2 3 4 5 6 7 8 9 10	GB Total Cyanide - CN 1 2 3 4 5 6 7 8 9 10 GCN Available Cyanide - CN 1 2 3 4 5 6 7 8 9 10 (Amenable / Weak Acid Dissociable) CA Chlorophyll 1 2 3 4 5 6 7 8 9 10 GN Ortho Phosphate - OP 1 2 3 4 5 6 7 8 9 10 GN Diss Ortho Phosphate - *FF 1 2 3 4 5 6 7 8 9 10 GN Nitrite - NO <sub>2</sub> 1 2 3 4 5 6 7 8 9 10 GN Nitrate - NO <sub>3</sub> (Calc.) 1 2 3 4 5 6 7 8 9 10 GN Suspended Solids - SS 1 2 3 4 5 6 7 8 9 10 GN Dissolved Solids - TDS 1 2 3 4 5 6 7 8 9 10 MN Diss Solids - TDS (Calc.) 1 2 3 4 5 6 7 8 9 10 GN Turbidity 1 2 3 4 5 6 7 8 9 10 MN Total Alkalinity 1 2 3 4 5 6 7 8 9 10 MN Bicarb/Carb Alkalinity 1 2 3 4 5 6 7 8 9 10 (Includes Total Alkalinity) MN Chloride - Cl 1 2 3 4 5 6 7 8 9 10 MN Fluoride - F 1 2 3 4 5 6 7 8 9 10 MN Sulfate - SO <sub>4</sub> 1 2 3 4 5 6 7 8 9 10 MN Diss Chromium 6 - *FF 1 2 3 4 5 6 7 8 9 10 MN Conductivity 1 2 3 4 5 6 7 8 9 10 MN pH 1 2 3 4 5 6 7 8 9 10 GA Chem Oxyg Dem - COD 1 2 3 4 5 6 7 8 9 10 GA Diss Org Carbon - DOC - *FF 1 2 3 4 5 6 7 8 9 10 GN Diss Org Carbon - DOC (LF) 1 2 3 4 5 6 7 8 9 10 (Lab - Filtered & Preserved) GA Total Org Carbon - TOC 1 2 3 4 5 6 7 8 9 10 GA Ammonia - NH <sub>3</sub> 1 2 3 4 5 6 7 8 9 10 GA Nitrate+Nitrite - NO <sub>3</sub> +NO <sub>2</sub> 1 2 3 4 5 6 7 8 9 10 GA Kjeldahl Nitrogen - KN 1 2 3 4 5 6 7 8 9 10 GA Total Phosphorus - TP 1 2 3 4 5 6 7 8 9 10 * (FF)-Field Filtered

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org. <b>DAN HAMEL EGLE-RRD</b>	<b>Marlene Kane EGLE</b>	<b>10/7/20 1600</b>
	Signature: <i>Dan Hamel</i>	<i>Marlene Kane</i>	
	Print Name & Org. Signature:		
Print Name & Org. Signature:			