

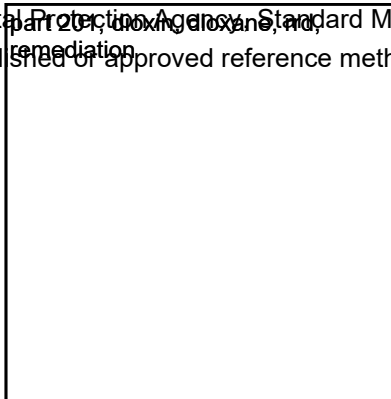
14 August 2019

Work Order: 1908073

Price: \$650.00

Dan Hamel
MDEQ-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



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

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ENVIRONMENT, GREAT LAKES, AND ENERGY
ENVIRONMENTAL LABORATORY

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

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

Project: GELMAN SCIENCES, INC
Site Code: 81000018/6130
Project Manager: Dan Hamel

Reported:
08/14/2019

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
HC/HR	1908073-01	Water	08/07/2019	08/08/2019	
Unnamed Tributary-Park	1908073-02	Water	08/07/2019	08/08/2019	
Honey Creek-Dexter	1908073-03	Water	08/07/2019	08/08/2019	
Honey Creek-W Huron Dr.	1908073-04	Water	08/07/2019	08/08/2019	
Huron River-N Maple Rd Bridge	1908073-05	Water	08/07/2019	08/08/2019	

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: HC/HR

Lab ID: 1908073-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									See note Y28
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/12/19	B9H1313	8260 Modified	



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Client ID: Unnamed Tributary-Park

Lab ID: 1908073-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									See note Y28
123-91-1	1,4-dioxane	4.1	1.0	ug/L	1	08/12/19	B9H1313	8260 Modified	



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Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: Honey Creek-Dexter

Lab ID: 1908073-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									See note Y28
123-91-1	1,4-dioxane	1.5	1.0	ug/L	1	08/12/19	B9H1313	8260 Modified	



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Client ID: Honey Creek-W Huron Dr.

Lab ID: 1908073-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									See note Y28
123-91-1	1,4-dioxane	1.2	1.0	ug/L	1	08/12/19	B9H1313	8260 Modified	



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Lansing, MI 48909
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FAX: (517) 335-9600

Client ID: Huron River-N Maple Rd Bridge

Lab ID: 1908073-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									See note Y28
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	08/12/19	B9H1313	8260 Modified	



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FAX: (517) 335-9600

Organics-Dioxane - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B9H1313 - Method: 5030				Prepared: 08/12/2019							
Blank (B9H1313-BLK1)											
1,4-dioxane	ND	1.0	ug/L							08/12/2019	
LCS (B9H1313-BS1)											
1,4-dioxane	10.4	1.0	ug/L	10.00		104	70-130			08/12/2019	
Matrix Spike (B9H1313-MS1) Source: 1908072-01											
1,4-dioxane	10.3	1.0	ug/L	10.00	ND	103	70-130			08/12/2019	
Matrix Spike Dup (B9H1313-MSD1) Source: 1908072-01											
1,4-dioxane	10.4	1.0	ug/L	10.00	ND	104	70-130	1.16	30	08/12/2019	



Analysis Request Sheet

Lab Work Order Number

Project Name

Matrix

1908073

Gelman Sciences

WATER

Site Code/Project Number

AY

CC Email 1

Project TAT Days

Sample Collector

8100018/Location 6130

19

lundk@michigan.gov

Project Due Date

Dan Hamel

Dept-Division-District

Index

CC Email 2

Project Due Date

Sample Collector Phone

EGLE-RRD-Jackson

PCA

CC Email 3

Accept Analysis hold time codes

Contract Firm

State Project Manager

Dan Hamel

State Project Manager Email

hameld@michigan.gov

Project

Location-6130

Overflow Lab Choice 1

Primary Contact Phone

State Project Manager Phone

(517)745-6595

Phase

Overflow Lab Choice 2

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
01	HC/HR	8/7/2019	1418	2	Please include QA/QC with Lab Data Report(s)
02	Unnamed Tributary - Park	8/7/2019	1534	2	
03	Unnamed Tributary - Jackson	8/7/2019	No Sample	No Sample	
03	Honey Creek - Dexter	8/7/2019	1230	2	
04	Little Lake	8/7/2019	No Sample	No Sample	
04	Honey Creek - W Huron Dr.	8/7/2019	1440	2	
05	Huron River - N Maple Rd Bridge	8/7/2019	1400	2	

ORGANIC CHEMISTRY	MAD - DISSOLVED METALS	MA - TOTAL METALS	GENERAL CHEMISTRY
VOA - Volatile Organic Acidic 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	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 - 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	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	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 Nitrite - NO ₂ 1 2 3 4 5 6 7 8 9 10 GN Nitrate - NO ₃ (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 ₄ 1 2 3 4 5 6 7 8 9 10 MN Chromium 6+ - Cr+6 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 (Field - Filtered & Preserved) 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 ₃ 1 2 3 4 5 6 7 8 9 10 GA Nitrate+Nitrite - NO ₃ +NO ₂ 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

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org. Dan Hamel EGLE-RRD	Michelle Smith	8/8/19 8:39
	Signature: Dan Hamel	[Signature]	
	Print Name & Org.		
Signature:			
Print Name & Org.			
Signature:			