



**MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY**

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

04 November 2020

Work Order: 2010072

Price: \$1,820.00

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



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
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:  
11/04/2020

**Analytical Report for Samples**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
ALLEN CREEK-WEST PARK SW	2010072-01	Water	10/05/2020	10/06/2020	
ALLEN CREEK-CHAPIN	2010072-02	Water	10/05/2020	10/06/2020	
STORM GRATE-8TH	2010072-03	Water	10/05/2020	10/06/2020	
UNNAMED TRIB-MARSHY AREA	2010072-04	Water	10/05/2020	10/06/2020	
UNNAMED TRIB-OUTFALL	2010072-05	Water	10/05/2020	10/06/2020	
THIRD SISTER LAKE	2010072-06	Water	10/05/2020	10/06/2020	
SECOND SISTER LAKE	2010072-07	Water	10/05/2020	10/06/2020	
FIRST SISTER LAKE	2010072-08	Water	10/05/2020	10/06/2020	
LITTLE LAKE	2010072-09	Water	10/05/2020	10/06/2020	
UNNAMED TRIB-PARK	2010072-10	Water	10/05/2020	10/06/2020	
HONEY CREEK- DEXTER	2010072-11	Water	10/05/2020	10/06/2020	
HURON RIVER-MAPLE RD BRIDGE	2010072-12	Water	10/05/2020	10/06/2020	
HC/HR	2010072-13	Water	10/05/2020	10/06/2020	
HONEY CREEK- W. HURON DRIVE	2010072-14	Water	10/05/2020	10/06/2020	

**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



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: ALLEN CREEK-WEST PARK SW

Lab ID: 2010072-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
-------	---------	--------	----	-------	----------	---------------	----------	--------	-----------

Organics-Dioxane

123-91-1	1,4-dioxane	49	1.0	ug/L	1	10/07/20	BOJ1521	8260 Modified	
----------	-------------	----	-----	------	---	----------	---------	---------------	--



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: ALLEN CREEK-CHAPIN

Lab ID: 2010072-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
-------	---------	--------	----	-------	----------	---------------	----------	--------	-----------

Organics-Dioxane

123-91-1	1,4-dioxane	28	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	
----------	-------------	----	-----	------	---	----------	---------	---------------	--



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: STORM GRATE-8TH

Lab ID: 2010072-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
-------	---------	--------	----	-------	----------	---------------	----------	--------	-----------

Organics-Dioxane

123-91-1	1,4-dioxane	11	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	
----------	-------------	----	-----	------	---	----------	---------	---------------	--



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: UNNAMED TRIB-MARSHY AREA

Lab ID: 2010072-04

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	1.5	1.0	ug/L	1	10/14/20	B0J1522	8260 Modified	



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: UNNAMED TRIB-OUTFALL

Lab ID: 2010072-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
-------	---------	--------	----	-------	----------	---------------	----------	--------	-----------

Organics-Dioxane

123-91-1	1,4-dioxane	5.2	1.0	ug/L	1	10/07/20	B0J1521	8260 Modified	
----------	-------------	-----	-----	------	---	----------	---------	---------------	--



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: THIRD SISTER LAKE

Lab ID: 2010072-06

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	3.2	1.0	ug/L	1	10/07/20	B0J1521	8260 Modified	





MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: SECOND SISTER LAKE

Lab ID: 2010072-07

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	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: FIRST SISTER LAKE

Lab ID: 2010072-08

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	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: LITTLE LAKE

Lab ID: 2010072-09

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>4.9</b>	1.0	ug/L	1	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY

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

Client ID: UNNAMED TRIB-PARK

Lab ID: 2010072-10

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	3.9	1.0	ug/L	1	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY

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

Client ID: HONEY CREEK- DEXTER

Lab ID: 2010072-11

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>1.6</b>	1.0	ug/L	1	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: HURON RIVER-MAPLE RD BRIDGE

Lab ID: 2010072-12

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	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: HC/HR

Lab ID: 2010072-13

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	10/07/20	B0J1521	8260 Modified	



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY ENVIRONMENTAL LABORATORY

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

Client ID: HONEY CREEK- W. HURON DRIVE

Lab ID: 2010072-14

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	1.2	1.0	ug/L	1	10/07/20	B0J1521	8260 Modified	





MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
ENVIRONMENTAL LABORATORY

P.O. Box 30270  
Lansing, MI 48909  
TEL: (517) 335-9800  
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 B0J1521 - Method: 5030**

**Prepared: 10/07/2020**

**Blank (B0J1521-BLK1)**

1,4-dioxane	ND	1.0	ug/L							10/07/2020	
-------------	----	-----	------	--	--	--	--	--	--	------------	--

**LCS (B0J1521-BS1)**

1,4-dioxane	9.27	1.0	ug/L	10.00		92.7	70-130			10/07/2020	
-------------	------	-----	------	-------	--	------	--------	--	--	------------	--

**Matrix Spike (B0J1521-MS1)**

**Source: 2010072-14**

1,4-dioxane	10.3	1.0	ug/L	10.00	1.15	91.3	70-130			10/07/2020	
-------------	------	-----	------	-------	------	------	--------	--	--	------------	--

**Matrix Spike Dup (B0J1521-MSD1)**

**Source: 2010072-14**

1,4-dioxane	10.3	1.0	ug/L	10.00	1.15	91.5	70-130	0.194	30	10/07/2020	
-------------	------	-----	------	-------	------	------	--------	-------	----	------------	--

**Batch B0J1522 - Method: 5030**

**Prepared: 10/14/2020**

**Blank (B0J1522-BLK1)**

1,4-dioxane	ND	1.0	ug/L							10/14/2020	
-------------	----	-----	------	--	--	--	--	--	--	------------	--

**LCS (B0J1522-BS1)**

1,4-dioxane	10.2	1.0	ug/L	10.00		102	70-130			10/14/2020	
-------------	------	-----	------	-------	--	-----	--------	--	--	------------	--

**Matrix Spike (B0J1522-MS1)**

**Source: 2010095-01**

1,4-dioxane	9.63	1.0	ug/L	10.00	ND	96.3	70-130			10/14/2020	
-------------	------	-----	------	-------	----	------	--------	--	--	------------	--

**Matrix Spike Dup (B0J1522-MSD1)**

**Source: 2010095-01**

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

*Bj/Hj*

Lab Work Order Number

Project Name

Matrix

2010072

Gelman Sciences

WATER

Location ID <b>8100018/Location 6130</b>	Program	CC Email 1	Project TAT Days	Sample Collector <b>Dan Hamel</b>
Dept-Division-District <b>EGLE-RRD-Jackson</b>	Activity	CC Email 2	Project Due Date	Sample Collector Phone <b>(517) 745-6595</b>
State Project Manager <b>Dan Hamel</b>	Funding Source	CC Email 3	Accept Analysis hold time codes	Contract Firm
State Project Manager Email <a href="mailto:hameld@michigan.gov">hameld@michigan.gov</a>	Location Code <b>6130</b>	Overflow Lab Choice 1		Contract Firm Primary Contact
State Project Manager Phone <b>(517) 745-6595</b>	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 - WEST PARK SW	10/5/20	0929	2	Please include QA/QC with lab Data Reports
2	02 ALLEN CREEK - CHAPIN	10/5/20	0955	2	
3	03 STORM GRATE - 8th	10/5/20	1010	2	
4	04 UNNAMED TRIB - MARSHY AREA	10/5/20	1047	2	
5	05 UNNAMED TRIB - OUTFALL	10/5/20	1052	2	
6	06 THIRD SISTER LAKE	10/5/20	1124	2	
7	07 SECOND SISTER LAKE	10/5/20	1245	2	
8	08 FIRST SISTER LAKE	10/5/20	1308	2	
9	09 LITTLE LAKE	10/5/20	1340	2	
10	10 UNNAMED TRIB - PARK	10/5/20	1406	2	

ORGANIC CHEMISTRY		MAD - DISSOLVED METALS		MA - TOTAL METALS		GENERAL CHEMISTRY	
VOA - Volatile Organic Acidic	1 2 3 4 5 6 7 8 9 10	Diss - Silver - Ag	1 2 3 4 5 6 7 8 9 10	Silver - Ag	1 2 3 4 5 6 7 8 9 10	GB Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
Volatiles - Full List	1 2 3 4 5 6 7 8 9 10	Diss - Aluminum - Al	1 2 3 4 5 6 7 8 9 10	Aluminum - Al	1 2 3 4 5 6 7 8 9 10	GCN Available Cyanide - CN (Amenable / Weak Acid Dissociable)	1 2 3 4 5 6 7 8 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10	Diss - Arsenic - As	1 2 3 4 5 6 7 8 9 10	Arsenic - As	1 2 3 4 5 6 7 8 9 10	CA Chlorophyll	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10	Diss - Boron - B	1 2 3 4 5 6 7 8 9 10	Boron - B	1 2 3 4 5 6 7 8 9 10	GN Ortho Phosphate - OP	1 2 3 4 5 6 7 8 9 10
GRD	1 2 3 4 5 6 7 8 9 10	Diss - Barium - Ba	1 2 3 4 5 6 7 8 9 10	Barium - Ba	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
1,4 Dioxane	1 2 3 4 5 6 7 8 9 10	Diss - Beryllium - Be	1 2 3 4 5 6 7 8 9 10	Beryllium - Be	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
METH - Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10	Diss - Cadmium - Cd	1 2 3 4 5 6 7 8 9 10	Cadmium - Cd	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
Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10	Diss - Cobalt - Co	1 2 3 4 5 6 7 8 9 10	Cobalt - Co	1 2 3 4 5 6 7 8 9 10	GN Suspended Solids - SS	1 2 3 4 5 6 7 8 9 10
ON - Pesticides, PCBs	1 2 3 4 5 6 7 8 9 10	Diss - Chromium - Cr	1 2 3 4 5 6 7 8 9 10	Chromium - Cr	1 2 3 4 5 6 7 8 9 10	GN Dissolved Solids - TDS	1 2 3 4 5 6 7 8 9 10
Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10	Diss - Copper - Cu	1 2 3 4 5 6 7 8 9 10	Copper - Cu	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
Pesticides only	1 2 3 4 5 6 7 8 9 10	Diss - Iron - Fe	1 2 3 4 5 6 7 8 9 10	Iron - Fe	1 2 3 4 5 6 7 8 9 10	GN Turbidity	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10	Diss - Mercury - Hg	1 2 3 4 5 6 7 8 9 10	Mercury - Hg	1 2 3 4 5 6 7 8 9 10	MN Total Alkalinity	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10	Diss - Lithium - Li	1 2 3 4 5 6 7 8 9 10	Lithium - Li	1 2 3 4 5 6 7 8 9 10	MN Bicarb/Carb Alkalinity (includes Total Alkalinity)	1 2 3 4 5 6 7 8 9 10
Chlordane	1 2 3 4 5 6 7 8 9 10	Diss - Manganese - Mn	1 2 3 4 5 6 7 8 9 10	Manganese - Mn	1 2 3 4 5 6 7 8 9 10	MN Chloride - Cl	1 2 3 4 5 6 7 8 9 10
BNA - Base Neutral Acids	1 2 3 4 5 6 7 8 9 10	Diss - Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10	Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10	MN Fluoride - F	1 2 3 4 5 6 7 8 9 10
BNAs	1 2 3 4 5 6 7 8 9 10	Diss - Nickel - Ni	1 2 3 4 5 6 7 8 9 10	Nickel - Ni	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
Benzidines	1 2 3 4 5 6 7 8 9 10	Diss - Lead - Pb	1 2 3 4 5 6 7 8 9 10	Lead - Pb	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
PNAs only	1 2 3 4 5 6 7 8 9 10	Diss - Antimony - Sb	1 2 3 4 5 6 7 8 9 10	Antimony - Sb	1 2 3 4 5 6 7 8 9 10	MN Conductivity	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10	Diss - Selenium - Se	1 2 3 4 5 6 7 8 9 10	Selenium - Se	1 2 3 4 5 6 7 8 9 10	MN pH	1 2 3 4 5 6 7 8 9 10
Acids only	1 2 3 4 5 6 7 8 9 10	Diss - Strontium - Sr	1 2 3 4 5 6 7 8 9 10	Strontium - Sr	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
Organic Specialty Requests	1 2 3 4 5 6 7 8 9 10	Diss - Titanium - Ti	1 2 3 4 5 6 7 8 9 10	Titanium - Ti	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
Library search - Volatiles	1 2 3 4 5 6 7 8 9 10	Diss - Thallium - Tl	1 2 3 4 5 6 7 8 9 10	Thallium - Tl	1 2 3 4 5 6 7 8 9 10	GN Diss Org Carbon - DOC (LF) (Lab - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
Library search - SemiVol	1 2 3 4 5 6 7 8 9 10	Diss - Uranium - U	1 2 3 4 5 6 7 8 9 10	Uranium - U	1 2 3 4 5 6 7 8 9 10	GA Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10	Diss - Vanadium - V	1 2 3 4 5 6 7 8 9 10	Vanadium - V	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
DRO / ORO	1 2 3 4 5 6 7 8 9 10	Diss - Zinc - Zn	1 2 3 4 5 6 7 8 9 10	Zinc - Zn	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
METALS CHEMISTRY PACKAGES	1 2 3 4 5 6 7 8 9 10	Diss - Calcium - Ca	1 2 3 4 5 6 7 8 9 10	Calcium - Ca	1 2 3 4 5 6 7 8 9 10	GA Kjeldahl Nitrogen - KN	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Total	1 2 3 4 5 6 7 8 9 10	Diss - Potassium - K	1 2 3 4 5 6 7 8 9 10	Potassium - K	1 2 3 4 5 6 7 8 9 10	GA Total Phosphorus - TP	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Dissolved	1 2 3 4 5 6 7 8 9 10	Diss - Magnesium - Mg	1 2 3 4 5 6 7 8 9 10	Magnesium - Mg	1 2 3 4 5 6 7 8 9 10		
(Sb,As,Ba,Bi,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	1 2 3 4 5 6 7 8 9 10	Diss - Sodium - Na	1 2 3 4 5 6 7 8 9 10	Sodium - Na	1 2 3 4 5 6 7 8 9 10		
Michigan10 - Total	1 2 3 4 5 6 7 8 9 10	Diss - Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10	Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10		
Michigan10 - Dissolved	1 2 3 4 5 6 7 8 9 10	MD - Metals Dissolved	1 2 3 4 5 6 7 8 9 10	LHG - Low Level Mercury	1 2 3 4 5 6 7 8 9 10		
(As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	1 2 3 4 5 6 7 8 9 10	Lab Filtration	1 2 3 4 5 6 7 8 9 10	Mercury Low Level - Hg	1 2 3 4 5 6 7 8 9 10		

Chain of Custody	Relinquished by	Received By	Date / Time
	Print Name & Org. <b>DAN HAMEL EGLE - RRD</b>		
	Signature: <i>Dan Hamel</i>		
	Print Name & Org. <b>Labby</b>		
Signature: <i>Labby</i>	<i>Labby 10-6-20</i>		
Print Name & Org. <b>Labby</b>			
Signature: <i>Labby</i>	<i>Carl Smith</i>		<i>10-7-2020 0551</i>

## Analysis Request Sheet

*Pg 2 of 2*

Lab Work Order Number

Project Name

Matrix

2010072

Gelman Sciences

WATER

Location ID <b>8100018/Location 6130</b>	Program	CC Email 1	Project TAT Days	Sample Collector <b>Dan Hamel</b>
Dept-Division-District <b>EGLE-RRD-Jackson</b>	Activity	CC Email 2	Project Due Date	Sample Collector Phone <b>(517) 745-6595</b>
State Project Manager <b>Dan Hamel</b>	Funding Source	CC Email 3	Accept Analysis hold time codes	Contract Firm
State Project Manager Email <a href="mailto:hameld@michigan.gov">hameld@michigan.gov</a>	Location Code <b>6130</b>	Overflow Lab Choice 1		Contract Firm Primary Contact
State Project Manager Phone <b>(517) 745-6595</b>	SUD Location Code	Overflow Lab Choice 2		Primary Contact Phone

Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Bottle Count	Comments
1	11 HONEY CREEK - DEXTER	10/5/20	1543	2	Please include QA/QC with lab Data Reports
2	12 HURON RIVER - MAPLE RD BRIDGE	10/5/20	1614	2	
3	13 HC/HR	10/5/20	1632	2	
4	14 HONEY CREEK - W. HURON DRIVE	10/5/20	1648	2	✓
5					
6					
7					
8					
9					
10					

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 - 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. Signature: <i>Dan Hamel</i>		
	Print Name & Org. Signature: <i>Lobby</i>	<i>Lobby</i>	10-7-2020
	Print Name & Org. Signature: <i>Carl</i>	<i>Carl</i>	0551