STATE OF MICHIGAN
DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY
LANSING

GRETCHEN WHITMER
GOVERNOR

LIESL EICHLER CLARK
DIRECTOR

February 19, 2020

Ms. Christine J. Loeffler, Environmental Team Lead
Domtar – Port Huron Mill
1700 Washington Avenue
Port Huron, Michigan 48060

Dear Ms. Loeffler:

SUBJECT: Notification of Voiding of Self-Declared Inert Designation

In 1998, Domtar – Port Huron Mill, formerly known as E.B. Eddy Paper, Inc., (Domtar) self-declared the paper mill sludge they produced as an inert material for the express purpose of composting it at the Techni-Comp Compost Facility (Techni-Comp) located at 4152 Dove Road, Port Huron. The notification was made pursuant to Rule 114(2)(g) of the administrative rules promulgated pursuant to Part 115, Solid Waste Management, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Part 115). Rule 114 has since been rescinded.

Recent testing performed by Domtar on the sludge indicates the presence of per- and polyfluoroalkyl substances (PFAS) in the sludge. In addition, recent testing (results enclosed) performed by the Department of Environment, Great Lakes, and Energy (EGLE), Materials Management Division (MMD), on surface water, paper mill sludge, and finished compost containing paper mill sludge at Techni-Comp indicates that management of your paper mill sludge at this site has contributed to PFAS contaminant impact to surface waters. Based on the above referenced testing data, EGLE has determined that the paper mill sludge generated by Domtar no longer meets the Part 115 criteria for inertness and that your historical self-declared inert designation is no longer valid. Therefore, the sludge produced by your mill must be managed as a regulated solid waste under Part 115.

Domtar is advised to immediately discontinue sending sludge to Techni-Comp and to ensure that it is disposed into a licensed municipal solid waste landfill and/or otherwise managed in compliance with other applicable provisions of Part 115. EGLE will be notifying the owner of Techni-Comp that they must remediate any surface water impacts at the site; investigate any potential groundwater impacts; and properly dispose the compost, sludge, and any impacted soils containing elevated levels of PFAS at a licensed solid waste disposal area. If any impacts are found at Techni-Comp related to the sludge brought to the site from Domtar, you may be liable for the cost of any environmental remediation needed.

Please provide a written response to EGLE by March 12, 2020, documenting the new disposal location for the paper mill sludge generated by Domtar. Please send the written response to:

Duane Roskoskey
Sustainable Materials Management Unit
Solid Waste Section
Materials Management Division
Department of Environment, Great lakes, and Energy
P.O. Box 30241
Lansing, Michigan 48909-7741

Should you require further information, please contact Mr. Duane Roskoskey, Sustainable Materials Management Unit, Solid Waste Section, MMD, at 517 582 3445; roskoskeyd@michigan.gov; or EGLE, P.O. Box 30241, Lansing, Michigan, 48909.

Sincerely,

Rhonda S. Oyer, Manager
Solid Waste Section
Materials Management Division
517-897-1395

Enclosures
cc: Mr. Steven Sliver, MPART
Ms. Tracy Kecskemeti, EGLE – Warren
Mr. Jeff Spencer, EGLE
Ms. Melinda Stiffler, EGLE – Warren
Mr. Duane Roskoskey/File, EGLE

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

26 December 2019

Work Order: 1911302

Price: $1,596.00

Micky Leonard
EGLE-WRD-LANSING
525 W. Allegan, P.O. Box 30242
Lansing, MI 48909-7742

RE: TECHNI-COMP

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-WRD-LANSING	Project: TECHNI-COMP	
525 W. Allegan, P.O. Box 30242	Site Code: MI00	**Reported:**
Lansing MI, 48909-7742	Project Manager: Micky Leonard	12/26/2019

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
UP1	1911302-01	Water	11/21/2019	11/21/2019	
UP2	1911302-02	Water	11/21/2019	11/21/2019	
DWN1	1911302-03	Water	11/21/2019	11/21/2019	
DWN2	1911302-04	Water	11/21/2019	11/21/2019	
DWN3	1911302-05	Water	11/21/2019	11/21/2019	
DWN3-DUP	1911302-06	Water	11/21/2019	11/21/2019	
P	1911302-07	Water	11/21/2019	11/21/2019	

Notes and Definitions

X3	Spike recovery is not applicable due to large target analyte concentration in the source sample.
I	Dilution required due to matrix interference; reporting limit (RL) raised.
A04	Result is estimated due to high matrix spike recovery.
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: UP1

Lab ID: 1911302-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**0.02**	0.01	mg/L	1	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**120**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	ND	0.010	mg/L	1	11/22/19	B9K2201	353.2	
18785-72-3	**Sulfate**	**34**	5	mg/L	1	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**440**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.022**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	Total Suspended Solids	ND	4	mg/L	1	11/22/19	B9K2209	2540 D	
Inorganics-Metals									
7440-38-2	Arsenic	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-39-3	**Barium**	**35**	5.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/13/19	B9L0211	200.8	
7440-47-3	Chromium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-50-8	**Copper**	**1.2**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-92-1	Lead	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	Selenium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/19/19	B9L1610	200.8	
7440-66-6	Zinc	ND	5.0	ug/L	1	12/13/19	B9L0211	200.8	

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: UP2

Lab ID: 1911302-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**0.01**	0.01	mg/L	1	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**8.2**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	ND	0.010	mg/L	1	11/22/19	B9K2201	353.2	
18785-72-3	**Sulfate**	**33**	5	mg/L	1	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**170**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.025**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	Total Suspended Solids	ND	4	mg/L	1	11/22/19	B9K2209	2540 D	
Inorganics-Metals									
7440-38-2	Arsenic	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-39-3	**Barium**	**37**	5.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/13/19	B9L0211	200.8	
7440-47-3	**Chromium**	**1.2**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-50-8	**Copper**	**1.1**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-92-1	Lead	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	Selenium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/19/19	B9L1610	200.8	
7440-66-6	**Zinc**	**8.7**	5.0	ug/L	1	12/13/19	B9L0211	200.8	

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: DWN1

Lab ID: 1911302-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**0.06**	0.01	mg/L	1	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**120**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	**0.091**	0.010	mg/L	1	11/22/19	B9K2201	353.2	
18785-72-3	**Sulfate**	**38**	5	mg/L	1	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**460**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.024**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	Total Suspended Solids	ND	4	mg/L	1	11/22/19	B9K2210	2540 D	
Inorganics-Metals									
7440-38-2	Arsenic	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-39-3	**Barium**	**36**	5.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/13/19	B9L0211	200.8	
7440-47-3	Chromium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-50-8	**Copper**	**1.3**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-92-1	Lead	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	Selenium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/19/19	B9L1610	200.8	
7440-66-6	Zinc	ND	5.0	ug/L	1	12/13/19	B9L0211	200.8	

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: DWN2

Lab ID: 1911302-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**16**	0.10	mg/L	10	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**260**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	ND	0.10	mg/L	10	11/22/19	B9K2201	353.2	I
18785-72-3	**Sulfate**	**160**	5	mg/L	1	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**1600**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.92**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	**Total Suspended Solids**	**21**	4	mg/L	1	11/22/19	B9K2210	2540 D	
Inorganics-Metals									
7440-38-2	**Arsenic**	**8.1**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-39-3	**Barium**	**230**	5.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/13/19	B9L0211	200.8	
7440-47-3	**Chromium**	**5.2**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-50-8	**Copper**	**12**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-92-1	**Lead**	**2.3**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	**Selenium**	**2.2**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/19/19	B9L1610	200.8	
7440-66-6	**Zinc**	**12**	5.0	ug/L	1	12/13/19	B9L0211	200.8	

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: DWN3

Lab ID: 1911302-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**0.16**	0.01	mg/L	1	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**120**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	**0.091**	0.010	mg/L	1	11/22/19	B9K2201	353.2	
18785-72-3	**Sulfate**	**42**	5	mg/L	1	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**460**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.031**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	Total Suspended Solids	ND	4	mg/L	1	11/22/19	B9K2210	2540 D	
Inorganics-Metals									
7440-38-2	Arsenic	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-39-3	**Barium**	**38**	5.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/13/19	B9L0211	200.8	
7440-47-3	Chromium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-50-8	**Copper**	**1.4**	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-92-1	Lead	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	Selenium	ND	1.0	ug/L	1	12/13/19	B9L0211	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/19/19	B9L1610	200.8	
7440-66-6	Zinc	ND	5.0	ug/L	1	12/13/19	B9L0211	200.8	

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: DWN3-DUP

Lab ID: 1911302-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**0.15**	0.01	mg/L	1	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**120**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	**0.099**	0.010	mg/L	1	11/22/19	B9K2201	353.2	
18785-72-3	**Sulfate**	**38**	5	mg/L	1	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**460**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.030**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	Total Suspended Solids	ND	4	mg/L	1	11/22/19	B9K2210	2540 D	
Inorganics-Metals									
7440-38-2	Arsenic	ND	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-39-3	**Barium**	**36**	5.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/17/19	B9L0310	200.8	
7440-47-3	Chromium	ND	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-50-8	**Copper**	**1.4**	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7439-92-1	Lead	ND	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	Selenium	ND	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/17/19	B9L0310	200.8	
7440-66-6	Zinc	ND	5.0	ug/L	1	12/17/19	B9L0310	200.8	

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: P

Lab ID: 1911302-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Inorganics-General Chemistry									
7664-41-7	**Ammonia-N**	**2.7**	0.10	mg/L	10	12/02/19	B9L0202	350.1	
16887-00-6	**Chloride**	**120**	1.0	mg/L	1	11/25/19	B9K2515	4500 Cl- E	
	Nitrate/Nitrite-N	**0.077**	0.010	mg/L	1	11/22/19	B9K2201	353.2	
18785-72-3	**Sulfate**	**240**	50	mg/L	10	11/26/19	B9K2603	375.2	
TDS	**Total Dissolved Solids**	**1000**	20	mg/L	1	11/22/19	B9K2211	2540 C	
7723-14-0	**Total Phosphorus-P**	**0.15**	0.010	mg/L	1	11/26/19	B9K2604	365.1	
TSS	**Total Suspended Solids**	**28**	4	mg/L	1	11/22/19	B9K2210	2540 D	
Inorganics-Metals									
7440-38-2	**Arsenic**	**4.3**	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-39-3	**Barium**	**230**	5.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-43-9	Cadmium	ND	0.2	ug/L	1	12/17/19	B9L0310	200.8	
7440-47-3	**Chromium**	**3.0**	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7440-50-8	**Copper**	**8.0**	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7439-92-1	**Lead**	**4.8**	1.0	ug/L	1	12/17/19	B9L0310	200.8	
7439-97-6	Mercury	ND	0.2	ug/L	1	11/27/19	B9K2504	245.1	
7782-49-2	**Selenium**	**1.1**	1.0	ug/L	1	12/18/19	B9L0310	200.8	
7440-22-4	Silver	ND	0.2	ug/L	1	12/17/19	B9L0310	200.8	
7440-66-6	**Zinc**	**12**	5.0	ug/L	1	12/17/19	B9L0310	200.8	

Michigan Department of Environmental Quality
Laboratory Services Section

Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
19 11302	Techni-Comp	WASTE WATER

Site Code/Project Number	AY	CC Email 1	Project TAT Days	Sample Collector
MI00	19			Micky Leonard
Dept-Division-District	**Index**	**CC Email 2**	**Project Due Date**	**Sample Collector Phone**
DEQ-WRD-FOS-PSM	761NPDP3			248-763-1635
State Project Manager	**PCA**	**CC Email 3**		**Contract Firm**
Micky Leonard	8400			
State Project Manager Email	**Project**	**Overflow Lab Choice 1**	**Accept Analysis hold time codes**	**Contract Firm Primary Contact**
leonardm4@michigan.gov	CO__			
State Project Manager Phone	**Phase**	**Overflow Lab Choice 2**		**Primary Contact Phone**
248-763-1635				

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
1	01	UP 1	11-21-19	1045	3	
2	02	UP 2		1120		
3	03	Dwn 1		1105		
4	04	Dwn 2		1130		
5	05	Dwn 3		1200		
6	06	Dwn 3 - DUP		1205		
7	07	P		1220		
8						
9						
10						

ORGANIC 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

ON - Pesticides, PCBs
- Scan 3 (No PCBs): 1 2 3 4 5 6 7 8 9 10
- PCBs: 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

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

METALS CHEMISTRY PACKAGES
- OpMemo2 - Total: 1 2 3 4 5 6 7 8 9 10
- OpMemo2 - Dissolved: 1 2 3 4 5 6 7 8 9 10
  (Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)
- Michigan10 - Total: 1 2 3 4 5 6 7 8 9 10
- Michigan10 - Dissolved: 1 2 3 4 5 6 7 8 9 10
  (As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)

MAD - DISSOLVED METALS

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

MA - TOTAL METALS

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

GENERAL CHEMISTRY

GB	Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
GB	Amenable 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
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 (Includes Total Alkalinity)	1 2 3 4 5 6 7 8 9 10
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 - SO4	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) (Field - Filtered & Preserved)	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
GA	Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
GA	Ammonia - NH3	1 2 3 4 5 6 7 8 9 10
GA	Nitrate+Nitrite - NO3+NO2	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.	Micky Leonard EGLE	Melissa Smith	11-21-19 1620
Signature:			11/21/19 1608
Print Name & Org.			
Signature:			
Print Name			

TECHNI-COMP COMPOSTING: PFAS INVESTIGATION & WATER QUALITY CHARACTERIZATION POST SAMPLING REPORT

Micky Leonard & Eric Moore

Introduction

On Thursday, November 21, 2019 staff of the Michigan Department of Environment, Great Lakes and Energy gathered for a sampling inspection of Techni-Comp composting. The Quality Assurance Project Plan was approved by District Supervisor, Melinda Steffler, on November 20, 2019 and is titled Techni-Comp QAPP 11FY19.

This sampling report will serve to document any deviations from the approved QAPP. Herein also is displayed the results of onsite monitoring activities, sampling times, and sample labels.

Attendees

Micky Leonard PSM, Eric Moore WRD, Wendy Lukianoff MMD, Duane Roskoskey MMD, Alexander Whitlow MMD and Ed Forton of Techni-Comp

Onsite Results

Table 1. Aqueous sample label, time, DO, pH

Sample Label	Sample Time	Dissolved Oxygen (mg/L)	pH (S.U.))	Notes
UP 1	10:45	10.07	7.48	---
UP 2	11:20	4.11	6.56	No flow
Dwn 1	11:05	10.02	7.79	---
Dwn 2	11:30	1.93	7.41	Very low flow
Dwn 3	12:00	10.13	8.03	---
Dwn3-DUP	12:05	NA	NA	---
P	12:20	4.66	7.68	Used dip pole
FIELD BLANK	12:10	NA	NA	---

Field Blank and Duplicate samples were collected in conjunction with sampling “Dwn 3” which was the downstream combined drain sampling location. See Figure 1 for approximate actual sampling locations.

Compost Sampling Method

Compost samples were obtained from three different rows/piles. Sample “1” was obtained from a pile consisting mainly of recently deposited paper mill waste sludge. Sample “2” was obtained from a pile consisting mainly of old compost and sample “3” represented a middle aged compost. For each sample, different equipment was used, though all sampling equipment was decontaminated prior to the sample event and triple DI rinsed immediately before sample collection. For solids collection 3-4 scoops from different areas of the pile were mixed in a bucket and placed in the sample container. Compost aliquots were obtained using plastic scoopers and came from immediately beneath the outer most layer of the piles.

Table 2. Compost sample label, time, description

Sample Label	Sample Time	Sample Description	Equipment
1	13:00	Recently deposited paper mill waste sludge	HDPE scooper + stainless steel bucket
2	12:45	Old/Finished compost	HDPE scooper + stainless steel bucket
3	12:35	Middle-aged compost	HDPE scooper + HDPE bucket

Figure 1. Approximate actual sample locations

Other Parameters

Other parameters were collected at all water sample locations in addition to PFAS. Other parameters included Michigan 10 Metals, Total Suspended Solids, Total Dissolved Solids, $CBOD_5$, Total Phosphorus, Ammonia, Nitrate, Nitrite, Chloride, and Sulfate. It was intended that Fecal Coli samples be collected from each location as well however a shortage of Fecal Coli sampling bottles resulted in these samples being collected only from "Dwn 2," "Dwn 1," "UP 1," and "P."

Duplicate samples were obtained at "Dwn 3" and were run for all parameters but Fecal Coli. No Field Blank was collected for these parameters.

Sample Dropoff

All samples were dropped off at the labs on the same day as collection all within hold time. PFAS Samples were dropped off at the Brighton Eurofins TestAmerica Service Center at approximately 14:40 and the rest of the samples were dropped off at the EGLE Environmental Laboratory located in Lansing,

MI at approximately 16:45. Chain of Custody was maintained and the signed forms can be found in Appendix I of this report below.

Conclusion

It is anticipated analysis will take approximately 4-6 weeks. Upon receipt, results will be reviewed by WRD and MMD staff and course of further action (if any) will be determined in conjunction with supervisory staff including Melinda Steffler DS-WRD and Tracy Kecskemeti DS-MMD.

Appendix I: Signed Chain of Custody Forms