SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017

CONSUMERS ENERGY/LABORATORY SERVICES
Laboratory Services
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ENVIRONMENTAL

Valid To: July 31, 2020 Certificate Number: 1097.04

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the laboratory's compliance with ISO/IEC 17025:2017 and the 2009 TNI Standard), accreditation is granted to this laboratory to perform recognized EPA methods and Standard Methods for the Examination of Water and Wastewater tests in various matrices, including groundwater, wastewater and solids, using the following testing technologies and in the analyte categories identified below:

Testing Technologies

Atomic Absorption, Atomic Fluorescence, Inductively Coupled Plasma/Mass-Spectrometry, Gas Chromatography, Gas Chromatography/Mass-Spectrometry, Ion Chromatography, Spectrophotometry, Miscellaneous-Electronic Probes (pH, O_2), Gravimetry, Titrimetry, and Hazardous Waste Characteristics Tests.

Parameter/Analyte	**Nonpotable Water**	**Solid Hazardous Waste**	
	Aqueous	**Aqueous**	**Solid**
Metals			
Aluminum	EPA 200.8	EPA 6020B	EPA 6020B
Antimony	EPA 200.8	EPA 6020B	EPA 6020B
Arsenic	EPA 200.8	EPA 6020B	EPA 6020B
Barium	EPA 200.8	EPA 6020B	EPA 6020B
Beryllium	EPA 200.8	EPA 6020B	EPA 6020B
Boron	EPA 200.8	EPA 6020B	EPA 6020B
Cadmium	EPA 200.8	EPA 6020B	EPA 6020B
Calcium	EPA 200.8	EPA 6020B	EPA 6020B
Chromium	EPA 200.8	EPA 6020B	EPA 6020B
Cobalt	EPA 200.8	EPA 6020B	EPA 6020B
Copper	EPA 200.8	EPA 6020B	EPA 6020B
Iron	EPA 200.8	EPA 6020B	EPA 6020B
Lead	EPA 200.8	EPA 6020B	EPA 6020B
Lithium	EPA 200.8	EPA 6020B	EPA 6020B
Magnesium	EPA 200.8	EPA 6020B	EPA 6020B
Manganese	EPA 200.8	EPA 6020B	EPA 6020B

Parameter/Analyte	Nonpotable Water	Solid Hazardous Waste	
	Aqueous	Aqueous	Solid
Molybdenum	EPA 200.8	EPA 6020B	EPA 6020B
Nickel	EPA 200.8	EPA 6020B	EPA 6020B
Potassium	EPA 200.8	EPA 6020B	EPA 6020B
Selenium	EPA 200.8	EPA 6020B	EPA 6020B
Silicon as SiO_2 (Silica)	EPA 200.8	EPA 6020B	EPA 6020B
Silver	EPA 200.8	EPA 6020B	EPA 6020B
Sodium	EPA 200.8	EPA 6020B	EPA 6020B
Thallium	EPA 200.8	EPA 6020B	EPA 6020B
Tin	EPA 200.8	EPA 6020B	EPA 6020B
Titanium	EPA 200.8	EPA 6020B	EPA 6020B
Vanadium	EPA 200.8	EPA 6020B	EPA 6020B
Zinc	EPA 200.8	EPA 6020B	EPA 6020B
Metals Sample Prep	SM 3030E	SM 3030E	EPA 3051
Mercury	EPA 245.1	EPA 7470A	EPA 7471B
Mercury, Low Level	EPA 1631E	EPA 1631E	- - - - - - - - -
Nutrients			
Ammonia (as N)	SM4500-NH_3 H	SM4500-NH_3 H	- - - - - - - - -
Nitrate (as N)	EPA 300.0	EPA 300.0	EPA 300.0
Nitrite (as N)	EPA 300.0	EPA 300.0	EPA 300.0
Total Phosphorus (as P)	SM4500-P B5, E	SM4500-P B5, E	- - - - - - - - -
General Chemistry			
Alkalinity	SM2320 B	SM2320 B	- - - - - - - - -
Available Cyanide	OIA-1677	OIA-1677	- - - - - - - - -
Fluoride	EPA 300.0	EPA 300.0	EPA 300.0
Hardness	SM2340 B	SM2340 B	- - - - - - - - -
pH / Corrosivity	SM4500-H^+ B	SM4500-H^+ B	EPA 9045C
Filterable Residue (TDS)	SM2540 C	SM2540 C	- - - - - - - - -
Nonfilterable Residue (TSS)	SM2540 D	SM2540 D	- - - - - - - - -
Sulfate	EPA 300.0	EPA 300.0	EPA 300.0
Residual Chlorine	SM4500-Cl D	SM4500-Cl D	- - - - - - - - -
Oil & Grease	EPA1664B	- - - - - - - - -	- - - - - - - - -

Parameter/Analyte	Nonpotable Water	Solid Hazardous Waste	
	Aqueous	Aqueous	Solid
Extractable Organics (Semivolatiles)			
Acenaphthene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Acenaphthylene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Anthracene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Azobenzene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Benzo(a)anthracene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Benzo(b)fluoranthene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Benzo(k)fluoranthene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Benzo(g,h,i)perylene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Benzo(a)pyrene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Bis(2-chloroethoxy) methane	- - - - - - - - - -	EPA 8270D	EPA 8270D
Bis(2-chloroethyl) ether	- - - - - - - - - -	EPA 8270D	EPA 8270D
Bis(2-chloroisopropyl) ether	- - - - - - - - - -	EPA 8270D	EPA 8270D
Bis(2-ethylhexyl) phthalate	- - - - - - - - - -	EPA 8270D	EPA 8270D
4-Bromophenyl phenyl ether	- - - - - - - - - -	EPA 8270D	EPA 8270D
Butyl benzyl phthalate	- - - - - - - - - -	EPA 8270D	EPA 8270D
Carbazole	- - - - - - - - - -	EPA 8270D	EPA 8270D
4-Chloroaniline	- - - - - - - - - -	EPA 8270D	EPA 8270D
4-Chloro-3-methylphenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Chloronaphthalene	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Chlorophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
4-Chlorophenyl phenyl ether	- - - - - - - - - -	EPA 8270D	EPA 8270D
Chrysene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Dibenzo(a,h)anthracene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Dibenzofuran	- - - - - - - - - -	EPA 8270D	EPA 8270D
Di-n-butyl phthalate	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,4-Dichlorophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
Diethyl phthalate	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,4-Dimethylphenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
Dimethyl phthalate	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,4-Dinitrophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,4-Dinitrotoluene	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,6-Dinitrotoluene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Di-n-octyl phthalate	- - - - - - - - - -	EPA 8270D	EPA 8270D
Fluoranthene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Fluorene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Hexachlorobenzene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Hexachlorobutadiene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Hexachlorocyclopentadiene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Hexachloroethane	- - - - - - - - - -	EPA 8270D	EPA 8270D
Indeno(1,2,3-cd) pyrene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Isophorone	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Methylnaphtalene	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Methyl-4,6-Dinitrophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Methylphenol	- - - - - - - - - -	EPA 8270D	EPA 8270D

Parameter/Analyte	Nonpotable Water	Solid Hazardous Waste	
	Aqueous	Aqueous	Solid
3- & 4-Methylphenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
Naphthalene	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Nitroaniline	- - - - - - - - - -	EPA 8270D	EPA 8270D
3-Nitroaniline	- - - - - - - - - -	EPA 8270D	EPA 8270D
4-Nitroaniline	- - - - - - - - - -	EPA 8270D	EPA 8270D
Nitrobenzene	- - - - - - - - - -	EPA 8270D	EPA 8270D
2-Nitrophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
4-Nitrophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
N-Nitrosodi-n-propylamine	- - - - - - - - - -	EPA 8270D	EPA 8270D
N-Nitrosodimethylamine	- - - - - - - - - -	EPA 8270D	EPA 8270D
Pentachlorophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
Phenanthrene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Phenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
Pyrene	- - - - - - - - - -	EPA 8270D	EPA 8270D
Pyridine	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,4,5-Trichlorophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
2,4,6-Trichlorophenol	- - - - - - - - - -	EPA 8270D	EPA 8270D
Semi-Volatiles Sample Prep	- - - - - - - - - -	EPA 3510C	EPA 3545A
PCBs			
Aroclor 1016	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1221	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1232	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1242	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1248	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1254	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1260	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1262	- - - - - - - - - -	EPA 8082A	EPA 8082A
Aroclor 1268	- - - - - - - - - -	EPA 8082A	EPA 8082A
PCB Sample Prep	- - - - - - - - - -	EPA 3510C	EPA 3545A
Hazardous Waste Characteristics			
Toxicity Characteristic Leaching Procedure (TCLP)* * Metals and Semi-Volatiles	- - - - - - - - - -	EPA 1311	EPA 1311

Accredited Laboratory

A2LA has accredited

CONSUMERS ENERGY/LABORATORY SERVICES

Jackson, MI

for technical competence in the field of

Environmental Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of 2009 TNI Environmental Testing Laboratory Standard. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 8th day of August 2018.

President and CEO
For the Accreditation Council
Certificate Number 1097.04
Valid to July 31, 2020
Revised on September 11, 2018

For the tests to which this accreditation applies, please refer to the laboratory's Testing Scope of Accreditation.