

State of Wisconsin
Department of Natural Resources



recognizes

**Wisconsin Certification under NR 149
of
Badger Laboratories & Eng Co Inc**

Laboratory Id: **445023150**

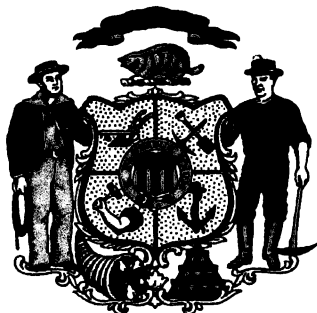
as a laboratory licensed to perform environmental sample analysis in support of covered environmental programs (ch. NR149.02 Note) for the parameter(s) specified in the attached Scope of Accreditation.

August 31, 2018

Expiration Date

August 17, 2017

Issued on



Steven Geis, Chief
Environmental Science Services

Cathy Stepp, Secretary
Department of Natural Resources

This certificate does not guarantee validity of data generated, but indicates the methodology, equipment, quality control practices, records, and proficiency of the laboratory have been reviewed and found to satisfy the requirements of ch. NR 149, Wis. Adm. Code.

Scope of Accreditation

Badger Laboratories & Eng Co Inc
501 W Bell Street
Neenah, WI 54956-1392

Laboratory Id: 445023150
Expiration Date: 08/31/18
Issued Date: 01/02/18

Wisconsin Certification under NR 149
Matrix: Potable Water (Drinking Water)

Class: SDWA - Primary Non-metals Cyanide - EPA 335.4 Fluoride - EPA 300.0 Nitrate + Nitrite - EPA 300.0 Nitrate - EPA 300.0 Nitrite - EPA 300.0
Class: SDWA - Primary Metals Antimony - SM 3113B Arsenic - SM 3113B Barium - SM 3111D Beryllium - SM 3113B Cadmium - SM 3113B Chromium - SM 3113B Copper - SM 3111B Lead - SM 3113B Mercury - EPA 245.1 Nickel - SM 3113B Selenium - SM 3113B
Class: SDWA - Secondary Non-metals Alkalinity - SM 2320B Chloride - EPA 300.0 Orthophosphate - SM 4500-P E Sulfate - EPA 300.0 TDS (Total Dissolved Solids) - SM 2540C pH - SM 4500-H+ B
Class: SDWA - Secondary Metals Aluminum - SM 3113B Iron - SM 3111B Magnesium - SM 3111 B Manganese - SM 3111B Silver - SM 3113B Sodium - SM 3111B Zinc - SM 3111B

The laboratory named above is hereby licensed under ch. NR 149, Wis. Adm. Code for the parameters listed in this attachment.

* Analyte groups are defined and listed at <http://dnr.wi.gov> by searching keywords "Lab Certification:".

Scope of Accreditation

Badger Laboratories & Eng Co Inc
501 W Bell Street
Neenah, WI 54956-1392

Laboratory Id: **445023150**
 Expiration Date: **08/31/18**
 Issued Date: **01/02/18**

Wisconsin Certification under NR 149 Matrix: Solid (Waste, Soil & Tissue)

<p>Class: General Chemistry</p> <ul style="list-style-type: none"> Ammonia as N by <i>Colorimetry</i> Chloride by <i>Colorimetry</i> Chloride by <i>IC</i> Cyanide, Available by <i>Colorimetry</i> Cyanide, Total by <i>Colorimetry</i> Fluoride by <i>IC</i> Kjeldahl Nitrogen, Total by <i>Colorimetry</i> Nitrate by <i>IC</i> Nitrate + Nitrite by <i>Colorimetry</i> Nitrate + Nitrite by <i>IC</i> Nitrite by <i>IC</i> Orthophosphate by <i>Colorimetry</i> Phenolics, Total by <i>Colorimetry</i> Phosphorus, Total by <i>Colorimetry</i> Residue, Total by <i>Grav</i> Sulfate by <i>Colorimetry</i> Sulfate by <i>IC</i> Sulfide by <i>Titration</i> 	<p>Class: Metals</p> <ul style="list-style-type: none"> Nickel by <i>FLAA</i> Nickel by <i>GFAA</i> Potassium by <i>FLAA</i> Selenium by <i>GFAA</i> Silver by <i>FLAA</i> Silver by <i>GFAA</i> Sodium by <i>FLAA</i> Strontium by <i>FLAA</i> Thallium by <i>FLAA</i> Thallium by <i>GFAA</i> Tin by <i>FLAA</i> Tin by <i>GFAA</i> Vanadium by <i>FLAA</i> Vanadium by <i>GFAA</i> Zinc by <i>FLAA</i>
	<p>Class: Waste Characterization Extractions</p> <ul style="list-style-type: none"> TCLP Extraction by <i>Waste Extractions</i>
<p>Class: Metals</p> <ul style="list-style-type: none"> Aluminum by <i>FLAA</i> Aluminum by <i>GFAA</i> Antimony by <i>FLAA</i> Antimony by <i>GFAA</i> Arsenic by <i>GFAA</i> Barium by <i>FLAA</i> Beryllium by <i>FLAA</i> Beryllium by <i>GFAA</i> Boron by <i>Colorimetry</i> Cadmium by <i>FLAA</i> Cadmium by <i>GFAA</i> Calcium by <i>FLAA</i> Chromium (Total) by <i>FLAA</i> Chromium (Total) by <i>GFAA</i> Cobalt by <i>FLAA</i> Cobalt by <i>GFAA</i> Copper by <i>FLAA</i> Copper by <i>GFAA</i> Iron by <i>FLAA</i> Lead by <i>FLAA</i> Lead by <i>GFAA</i> Magnesium by <i>FLAA</i> Manganese by <i>FLAA</i> Mercury by <i>Hyd-CVAA</i> Molybdenum by <i>FLAA</i> Molybdenum by <i>GFAA</i> 	<p>Class: Waste Characterization Assays</p> <ul style="list-style-type: none"> Ignitability, Pensky-Martens Closed Cup by <i>Waste Assays</i>

The laboratory named above is hereby licensed under ch. NR 149, Wis. Adm. Code for the parameters listed in this attachment.

* Analyte groups are defined and listed at <http://dnr.wi.gov> by searching keywords "Lab Certification:".

Scope of Accreditation

Badger Laboratories & Eng Co Inc
501 W Bell Street
Neenah, WI 54956-1392

Laboratory Id: 445023150
Expiration Date: 08/31/18
Issued Date: 01/02/18

Wisconsin Certification under NR 149 Matrix: Aqueous (Non-potable Water)

<p>Class: General Chemistry</p> <p>Acidity as CaCO₃ by <i>Titration</i></p> <p>Alkalinity by <i>Colorimetry</i></p> <p>Alkalinity by <i>Titration</i></p> <p>Ammonia as N by <i>Colorimetry</i></p> <p>Biochemical Oxygen Demand (BOD) by <i>5-d Assay</i></p> <p>Carbonaceous Oxygen Demand (cBOD) by <i>5-d Assay</i></p> <p>Chemical Oxygen Demand (COD) by <i>Colorimetry</i></p> <p>Chloride by <i>Colorimetry</i></p> <p>Chloride by <i>IC</i></p> <p>Cyanide, Available by <i>Colorimetry</i></p> <p>Cyanide, Total by <i>Colorimetry</i></p> <p>Fluoride by <i>IC</i></p> <p>HEM (Oil&Grease, Hexane Ext. Material (HEM)) by <i>Grav-HEM</i></p> <p>Hardness, Total as CaCO₃ by <i>Colorimetry</i></p> <p>Hardness, Total as CaCO₃ by <i>FLAA</i></p> <p>Kjeldahl Nitrogen, Total by <i>Colorimetry</i></p> <p>Nitrate by <i>IC</i></p> <p>Nitrate + Nitrite by <i>Colorimetry</i></p> <p>Nitrate + Nitrite by <i>IC</i></p> <p>Nitrite by <i>IC</i></p> <p>Orthophosphate by <i>Colorimetry</i></p> <p>Phenolics, Total by <i>Colorimetry</i></p> <p>Phosphorus, Total by <i>Colorimetry</i></p> <p>Residue, Filterable (TDS) by <i>Grav</i></p> <p>Residue, Nonfilterable (TSS) by <i>Grav</i></p> <p>Residue, Total by <i>Grav</i></p> <p>Residue, Volatile (TVS) by <i>Grav</i></p> <p>Residue, Volatile, Nonfilterable (TVSS) by <i>Grav</i></p> <p>Silica by <i>Colorimetry</i></p> <p>Sulfate by <i>Colorimetry</i></p> <p>Sulfate by <i>IC</i></p> <p>Sulfide by <i>Titration</i></p> <p>Sulfite by <i>Titration</i></p> <p>Surfactants by <i>Colorimetry</i></p>	<p>Class: Metals</p> <p>Barium by <i>ICP</i></p> <p>Beryllium by <i>FLAA</i></p> <p>Beryllium by <i>GFAA</i></p> <p>Beryllium by <i>ICP</i></p> <p>Boron by <i>Colorimetry</i></p> <p>Boron by <i>ICP</i></p> <p>Cadmium by <i>FLAA</i></p> <p>Cadmium by <i>GFAA</i></p> <p>Cadmium by <i>ICP</i></p> <p>Calcium by <i>FLAA</i></p> <p>Calcium by <i>ICP</i></p> <p>Chromium (Hexavalent) by <i>Colorimetry</i></p> <p>Chromium (Total) by <i>FLAA</i></p> <p>Chromium (Total) by <i>GFAA</i></p> <p>Chromium (Total) by <i>ICP</i></p> <p>Cobalt by <i>FLAA</i></p> <p>Cobalt by <i>GFAA</i></p> <p>Cobalt by <i>ICP</i></p> <p>Copper by <i>FLAA</i></p> <p>Copper by <i>GFAA</i></p> <p>Copper by <i>ICP</i></p> <p>Iron by <i>FLAA</i></p> <p>Iron by <i>ICP</i></p> <p>Lead by <i>FLAA</i></p> <p>Lead by <i>GFAA</i></p> <p>Lead by <i>ICP</i></p> <p>Lithium by <i>ICP</i></p> <p>Magnesium by <i>FLAA</i></p> <p>Magnesium by <i>ICP</i></p> <p>Manganese by <i>FLAA</i></p> <p>Manganese by <i>ICP</i></p> <p>Mercury by <i>Hyd-CVAA</i></p> <p>Molybdenum by <i>FLAA</i></p> <p>Molybdenum by <i>GFAA</i></p> <p>Molybdenum by <i>ICP</i></p> <p>Nickel by <i>FLAA</i></p> <p>Nickel by <i>GFAA</i></p> <p>Nickel by <i>ICP</i></p> <p>Potassium by <i>FLAA</i></p> <p>Potassium by <i>ICP</i></p> <p>Selenium by <i>GFAA</i></p> <p>Selenium by <i>ICP</i></p> <p>Silicon by <i>ICP</i></p> <p>Silver by <i>FLAA</i></p> <p>Silver by <i>GFAA</i></p>
<p>Class: Metals</p> <p>Aluminum by <i>FLAA</i></p> <p>Aluminum by <i>GFAA</i></p> <p>Aluminum by <i>ICP</i></p> <p>Antimony by <i>FLAA</i></p> <p>Antimony by <i>GFAA</i></p> <p>Antimony by <i>ICP</i></p> <p>Arsenic by <i>GFAA</i></p> <p>Arsenic by <i>ICP</i></p> <p>Barium by <i>FLAA</i></p>	

The laboratory named above is hereby licensed under ch. NR 149, Wis. Adm. Code for the parameters listed in this attachment.

* Analyte groups are defined and listed at <http://dnr.wi.gov> by searching keywords "Lab Certification:".

Scope of Accreditation

Page 2 of 2

Badger Laboratories & Eng Co Inc
501 W Bell Street
Neenah, WI 54956-1392

Laboratory Id: 445023150
Expiration Date: 08/31/18
Issued Date: 01/02/18

Wisconsin Certification under NR 149
Matrix: Aqueous (Non-potable Water)

Class: Metals

Silver *by ICP*
Sodium *by FLAA*
Sodium *by ICP*
Strontium *by FLAA*
Strontium *by ICP*
Thallium *by FLAA*
Thallium *by GFAA*
Thallium *by ICP*
Tin *by FLAA*
Tin *by GFAA*
Tin *by ICP*
Titanium *by ICP*
Vanadium *by FLAA*
Vanadium *by GFAA*
Vanadium *by ICP*
Zinc *by FLAA*
Zinc *by ICP*

The laboratory named above is hereby licensed under ch. NR 149, Wis. Adm. Code for the parameters listed in this attachment.

* Analyte groups are defined and listed at <http://dnr.wi.gov> by searching keywords "Lab Certification:".