NORTH DAKOTA DEPARTMENT OF ENVIRONMENTAL QUALITY RECOGNITION OF CERTIFICATION OR ACCREDITATION

The North Dakota Department of Environmental Quality recognizes the certification or accreditation of

Minnesota Valley Testing Laboratories, Inc. - 2616 East Broadway Avenue - Bismarck, ND

State of Minnesota Department of Health, ELCP

for

All Clean Water Act, Resource Conservation and Recovery Act, Safe Drinking Water Act chemical parameters by the methods on the accompanying list of certified parameters for this laboratory

Certification Number: ND-016

Date of Issue: January 11, 2023, Expiration Date: December 31, 2023, Covers: 1/1/2023 - 12/31/2023

This certificate remains the property of the North Dakota Department of Environmental Quality and may be recalled, for cause, at any time, by the Department. Recognition of an out-of-state laboratory's certification or accreditation from another state certification or accreditation program by the North Dakota Department of Environmental Quality is neither an endorsement of the results reported by the laboratory, nor a guarantee of the validity or accuracy of the results reported by the laboratory.

Director, Division of Chemistry

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Certification Officer

Certified Parameters for Minnesota Valley Testing Laboratories, Inc. 2616 East Broadway Avenue, Bismarck, ND Issued by

North Dakota Department of Environmental Quality Division of Chemistry January 11, 2023

Certification Period: January 1, 2023, through December 31, 2023

Lab Certification No: ND-016 Based on Certificate No: 2405647

From the State of Minnesota Department of Health, ELCP

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Program	Parameter	Method	Source #	Status
Clean Water Act		e .		
	Sulfate	ASTM D516-16	159	Certified
	Oil and Grease (HEM)	EPA 1664 B	111	Certified
	Aluminum	EPA 200.7	2	Certified
	Barium	EPA 200.7	2	Certified
	Beryllium	EPA 200.7	2	Certified
	Boron	EPA 200.7	2	Certified
	Cadmium	EPA 200.7	2	Certified
	Calcium	EPA 200.7	2	Certified
	Chromium	EPA 200.7	2	Certified
	Chromium (Total)	EPA 200.7	2	Certified
	Cobalt	EPA 200.7	2	Certified
	Copper	EPA 200.7	2	Certified
	Iron	EPA 200.7	2	Certified
	Lead	EPA 200.7	2	Certified
	Magnesium	EPA 200.7	2	Certified
	Manganese	EPA 200.7	2	Certified
	Molybdenum	EPA 200.7	2	Certified
	Nickel	EPA 200.7	2	Certified
	Potassium	EPA 200.7	2	Certified
	Sodium	EPA 200.7	2	Certified
	Tin	EPA 200.7	2	Certified
	Titanium	EPA 200.7	2	Certified
	Vanadium	EPA 200.7	2	Certified
	Zinc	EPA 200.7	2	Certified
	Antimony	EPA 200.8	2	Certified
	Arsenic	EPA 200.8	2	Certified
	Barium	EPA 200.8	2	Certified
	Beryllium	EPA 200.8	2	Certified
	Cadmium	EPA 200.8	2	Certified
	Chromium	EPA 200.8	2	Certified
	Chromium (Total)	EPA 200.8	2	Certified
	Cobalt	EPA 200.8	2	Certified

Program	Parameter	Method	Source #	Status
Clean Water Act				
	Copper	EPA 200.8	2	Certified
	Lead	EPA 200.8	2	Certified
	Manganese	EPA 200.8	2	Certified
	Molybdenum	EPA 200.8	2	Certified
	Nickel	EPA 200.8	2	Certified
	Selenium	EPA 200.8	2	Certified
	Silver	EPA 200.8	2	Certified
	Thallium	EPA 200.8	2	Certified
	Vanadium	EPA 200.8	2	Certified
	Mercury	EPA 245.1	2	Certified
	Cyanide (Total)	EPA 335.4	9	Certified
	Ammonia as N	EPA 350.1	9	Certified
	Nitrate + Nitrite as N	EPA 353.2	9	Certified
	Nitrite as N	EPA 353.2	9	Certified
	Nitrate as N	EPA 353.2 (calc)	9	Certified
	Orthophosphate as P	EPA 365.1	9	Certified
	Phosphorus (Total)	EPA 365.1	9	Certified
	Phenolics (Total)	EPA 420.4	9	Certified
	Chemical Oxygen Demand (COD)	Hach 8000	45	Certified
	Total Kjeldahl Nitrogen (TKN)	PAI-DK01	103	Certified
	Turbidity	SM 2130 B-2011	107	Certified
	Alkalinity as CaCO3	SM 2320 B-2011	107	Certified
	Total Hardness as CaCO3	SM 2340 B-2011	107	Certified
	Conductivity	SM 2510 B-2011	107	Certified
	Chloride	SM 4500 CI-E-2011	107	Certified
	pH	SM 4500-H+B-2011	107	Certified
	Biochemical Oxygen Demand (BOD)	SM 5210 B-2016	144	Certified
	Total Organic Carbon (TOC)	SM 5310 C-2014 (23rd Ed)	144	Certified
	Filterable Residue (Total Dissolved Solids)	USGS I-1750-85	39	Certified
	Total Solids	USGS I-3750-85	39	Certified
	Non-filterable Residue (Total Suspended Solids)	USGS I-3765-85	39	Certified
Resource Conservation and	, , ,	00001010000		
**	Ignitability	SW846 1020B	85	Certified
	Aluminum	SW846 6010D	131	Certified
	Barium	SW846 6010D	131	Certified
	Beryllium	SW846 6010D	131	Certified
	Boron	SW846 6010D	131	Certified
	Cadmium	SW846 6010D	131	Certified
	Calcium	SW846 6010D	131	Certified
	Chromium	SW846 6010D	131	Certified
	Cobalt	SW846 6010D	131	Certified
	Copper	SW846 6010D	131	Certified
	Iron	SW846 6010D	131	Certified
	Lead	SW846 6010D	131	Certified
	Magnesium	SW846 6010D	131	Certified
	Manganese	SW846 6010D	131	Certified
	Molybdenum	SW846 6010D	131	Certified
	Nickel	SW846 6010D	131	Certified

Program	Parameter	Method	Source #	Status
Resource Conservation and	d Recovery Act			
	Potassium	SW846 6010D	131	Certified
	Sodium	SW846 6010D	131	Certified
	Strontium	SW846 6010D	131	Certified
	Tin	SW846 6010D	131	Certified
	Titanium	SW846 6010D	131	Certified
	Vanadium	SW846 6010D	131	Certified
	Zinc	SW846 6010D	131	Certified
	Antimony	SW846 6020B	131	Certified
	Arsenic	SW846 6020B	131	Certified
	Barium	SW846 6020B	131	Certified
	Beryllium	SW846 6020B	131	Certified
	Cadmium	SW846 6020B	131	Certified
	Chromium	SW846 6020B	131	Certified
	Cobalt	SW846 6020B	131	Certified
	Copper	SW846 6020B	131	Certified
	Lead	SW846 6020B	131	Certified
	Manganese	SW846 6020B	131	Certified
	Molybdenum	SW846 6020B	131	Certified
	Nickel	SW846 6020B	131	Certified
	Selenium	SW846 6020B	131	Certified
	Silver	SW846 6020B	131	Certified
	Thallium	SW846 6020B	131	Certified
	Uranium	SW846 6020B	131	Certified
	Vanadium	SW846 6020B	131	Certified
*	Mercury	SW846 7470A	82	Certified
**	Mercury	SW846 7471B	96	Certified
Safe Drinking Water Act				
	Sulfate	ASTM D516-16	156	Certified
	Aluminum	EPA 200.7	2	Certified
	Barium	EPA 200.7	2	Certified
	Calcium	EPA 200.7	2	Certified
	Chromium	EPA 200.7	2	Certified
	Copper	EPA 200.7	2	Certified
	Magnesium	EPA 200.7	2	Certified
	Manganese	EPA 200.7	2	Certified
	Nickel	EPA 200.7	2	Certified
	Sodium	EPA 200.7	2	Certified
	Zinc	EPA 200.7	2	Certified
	Antimony	EPA 200.8	2	Certified
	Arsenic	EPA 200.8	2	Certified
	Barium	EPA 200.8	2	Certified
	Beryllium	EPA 200.8	2	Certified
	Cadmium	EPA 200.8	2	Certified
	Chromium	EPA 200.8	2	Certified
	Copper	EPA 200.8	2	Certified
	Lead	EPA 200.8	2	Certified
	Manganese	EPA 200.8	2	Certified
	Nickel	EPA 200.8	2	Certified

Program Safe Drinking Water Act	Parameter	Method	Source #	Status
seye 2g	Selenium	EPA 200.8	2	Certified
	Silver	EPA 200.8	2	Certified
	Thallium	EPA 200.8	2	Certified
	Uranium	EPA 200.8	2	Certified
	Mercury	EPA 245.1	2	Certified
	Cyanide	EPA 335.4	9	Certified
	Nitrate as N	EPA 353.2	9	Certified
	Nitrite as N	EPA 353.2	9	Certified
	Orthophosphate as P	EPA 365.1	9	Certified
	Conductivity	SM 2510 B-2011	107	Certified
	Filterable Residue (Total Dissolved Solids)	SM 2540 C-2015	144	Certified
	Chloride	SM 4500-CI E-2011	107	Certified
	Fluoride	SM 4500-F- C-2011	107	Certified
	pH	SM 4500-H+ B-2011	107	Certified
	Total Organic Carbon (TOC)	SM 5310 C-2014 (23rd Ed)	144	Certified

Symbol Reference

- * Limited to RCRA Water Samples Only
- ** Limited to RCRA Solid Samples Only

Source Reference

- 2 "Methods for the Determination of Metals in Environmental Samples Supplement I", EPA/600/R-94/111, May 1994
- 9 "Methods for the Determination of Inorganic Substances in Environmental Samples", EPA/600/R-93-100, August 1993
- "Methods for Analysis of Inorganic Substances in Water and Fluvial Sediments," U.S. Department of the Interior, Techniques of Water-Resource Investigations of the U.S. Geological Survey, Denver, CO, Revised 1989, unless otherwise stated
- 45 Hach Handbook of Water Analysis, 1979, Hach Chemical Company, Loveland, CO
- Test Methods for Evaluating Solid Waste Physical Chemical Methods (SW846) Third Edition, as amended by Update II, September 1994, EPA Office of Solid Waste and Emergency Response
- Test Methods for Evaluating Solid Waste Physical Chemical Methods (SW846) Third Edition, as amended by Final Update IIIB, November 2004, EPA Office of Solid Waste and Emergency Response
- Test Methods for Evaluating Solid Waste Physical Chemical Methods (SW846) Third Edition, as amended by Final Update IV, February 2007, EPA Office of Solid Waste and Emergency Response
- 103 OI Analytical/ALPKEM, P.O. Box 9010, College Station, TX, Revised 12/22/94.
- 107 Standard Methods for the Examination of Water and Wastewater, 22nd Edition, American Public Health Association
- 111 www.epa.gov/waterscience/methods/
- 131 Test Methods for Evaluating Solid Waste Physical Chemical Methods (SW846) Third Edition, as amended by Update V, July 2014, EPA Office of Solid Waste and Emergency Response
- 144 Standard Methods for the Examination of Water and Wastewater, 23rd Edition, American Public Health Association
- 156 ASTM 2016 EDITION Standard Test Method for Sulfate Ion in Water June 15, 2016
- Annual Book of ASTM Standards, Section Eleven Water and Evnironmental Technology, Volume 11.01, 2016 or any year containing the cited version of the method, ASTM International, West Conshohocken, PA