



phenova™
Certified Reference Materials

A Phenomenex®
Company



6390 Joyce Drive
100
Golden, CO 80403

Phone 303-940-0033
Fax 866-283-0269
www.phenova.com

August 16, 2019

Ms. Lana Jackson
Alloway - Lima
1101 N. Cole Street
Lima, OH 45805
United States

Dear Lana,

Thank you for participating in the DMRQA39-CHEM DMRQA PT Study. Enclosed is your final report, which has been carefully reviewed by the PT specialists at Phenova.

For any analyte falling outside the established acceptance limits, our PT management staff would like to assist you in determining the most appropriate course of corrective action for your facility. Please contact us at any time if we may be of service to you. A final report for your laboratory will be sent to all accrediting agencies you requested at the time of data submittal.

Thank you again for participating in the DMRQA39-CHEM DMRQA PT Study. We appreciate working with you and look forward to our next study. If you have any questions, please call us at 303-940-0033.



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Report Definitions:

NELAC Experimental Analytes

NELAC Experimental Analytes must be run twice a year. Due to the experimental nature of the acceptance limits, accreditation status is not based on the evaluation received.

Assigned Value

The Assigned Value is determined from the study mean, gravimetric and volumetric true concentration of an analyte to be analyzed, calculation and/or an appropriate reference value as stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Document (current version), the National Environmental Laboratory Accreditation Conference (NELAC) criteria (ref: NELAC FOT tables, NELAC PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation Limits

Acceptance Limits are derived from fixed limits, coefficients, constants and calculations stipulated in the EPA National Standards for Water Proficiency Testing Studies Criteria Documents (current version), the National Environmental Laboratory Accreditation Conference (NELAC) criteria (ref: NELAC PT FOT tables, NELAC PT Committee) and other documents distributed by accrediting agencies as applicable.

Evaluation

Acceptable

The reported value falls within the Acceptance Limits.

Not Acceptable

The reported value falls outside the Acceptance Limits.

No Evaluation

The reported value is non-numeric and can not be evaluated.

NR

As required by the NELAC standards and requested by state authorities, any analyte purchased but not reported by your facility is listed as NR (Not Reported).

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Final Report - DMRQA PT

Study: DMRQA39-CHEM

Opening Date: March 22, 2019 - Closing Date: July 19, 2019

Facility: Alloway - Lima
1101 N. Cole Street
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UNITED STATES

Contact: Ms. Lana Jackson, Laboratory Manager
419-223-1362

EPA Lab ID: OH00202

NPDES Permit ID:

Trace Metals (PT-TM1-DMRQA)

Lot #: 8542-04

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1000	Aluminum		200.7	µg/L	3510	3520	3100 - 3860	2920 - 3980	Acceptable
1005	Antimony		200.8	µg/L	705	719	615 - 775	576 - 812	Acceptable
1010	Arsenic		200.8	µg/L	510	492	453 - 561	427 - 587	Acceptable
1015	Barium		200.7	µg/L	1840	1920		1560 - 2110	Acceptable
1015	Barium		200.8	µg/L	1840	1800		1560 - 2110	Acceptable
1020	Beryllium		200.7	µg/L	117	126		99.6 - 135	Acceptable
1020	Beryllium		200.8	µg/L	117	113		99.6 - 135	Acceptable
1030	Cadmium		200.7	µg/L	852	868		724 - 980	Acceptable
1030	Cadmium		200.8	µg/L	852	836		724 - 980	Acceptable
1040	Chromium		200.7	µg/L	812	796		690 - 933	Acceptable
1040	Chromium		200.8	µg/L	812	771		690 - 933	Acceptable
1050	Cobalt		200.7	µg/L	144	150		122 - 166	Acceptable
1050	Cobalt		200.8	µg/L	144	138		122 - 166	Acceptable
1055	Copper		200.7	µg/L	914	888		777 - 1050	Acceptable
1055	Copper		200.8	µg/L	914	889		777 - 1050	Acceptable
1070	Iron		200.7	µg/L	1460	1400		1240 - 1680	Acceptable
1075	Lead		200.7	µg/L	1310	1340		1110 - 1510	Acceptable
1075	Lead		200.8	µg/L	1310	1240		1110 - 1510	Acceptable
1090	Manganese		200.7	µg/L	1430	1460		1220 - 1650	Acceptable
1090	Manganese		200.8	µg/L	1430	1400		1220 - 1650	Acceptable
1100	Molybdenum		200.7	µg/L	397	402	357 - 436	343 - 447	Acceptable
1100	Molybdenum		200.8	µg/L	397	394	357 - 436	343 - 447	Acceptable
1105	Nickel		200.7	µg/L	1550	1570	1400 - 1710	1370 - 1740	Acceptable
1105	Nickel		200.8	µg/L	1550	1520	1400 - 1710	1370 - 1740	Acceptable
1140	Selenium		200.8	µg/L	592	617		504 - 681	Acceptable
1150	Silver		200.7	µg/L	857	864		729 - 986	Acceptable
1150	Silver		200.8	µg/L	857	907		729 - 986	Acceptable

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Trace Metals (PT-TM1-DMRQA) cont'd Lot #: 8542-04

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1165	Thallium		200.8	µg/L	125	118	103 - 143	92.3 - 154	Acceptable
1185	Vanadium		200.7	µg/L	1810	1820		1540 - 2090	Acceptable
1185	Vanadium		200.8	µg/L	1810	1720		1540 - 2090	Acceptable
1190	Zinc		200.7	µg/L	1920	1840		1630 - 2210	Acceptable
1190	Zinc		200.8	µg/L	1920	1840		1630 - 2210	Acceptable

Mercury (PT-HG-DMRQA) Lot #: 8542-05

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1095	Mercury		EPA 245.1	µg/L	28.4	29.6		19.9 - 36.9	Acceptable

Chromium VI (PT-CR6-DMRQA) Lot #: 8542-06

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1045	Chromium VI		SM 3500 CrB	µg/L	269	274	238 - 298	223 - 313	Acceptable

Demand (PT-DEM-DMRQA) Lot #: 8542-07

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1530	BOD		SM 5210B	mg/L	132	116	87.0 - 220	67.8 - 220	Acceptable
1555	CBOD		SM 5210B	mg/L	132	121	73.4 - 220	53.3 - 220	Acceptable
1565	COD		Hach 8000	mg/L	205	241	177 - 225	165 - 237	Not Acceptable
2040	TOC		SM 5310 B	mg/L	80.8	78.6	72.0 - 88.9	67.9 - 92.9	Acceptable

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Solids (PT-SOL-DMRQA)								Lot #: 8542-09	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1955	Total Dissolved Solids at 180° (TFR)		USGS-I1375085	mg/L	634	629	570 - 697	570 - 697	Acceptable
1960	Non-Filterable Residue (TSS)		USGS-I1376585	mg/L	32.5	28.8	25.9 - 36.1	23.3 - 38.6	Acceptable
Minerals 1 (PT-MIN1-DMRQA)								Lot #: 8542-08	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1505	Total Alkalinity(as CaCO ₃)		SM 2320B	mg/L	166	166		141 - 191	Acceptable
1575	Chloride		EPA 300.0	mg/L	261	245	235 - 287	231 - 292	Acceptable
1730	Fluoride		EPA 300.0	mg/L	1.06	1.05	0.893 - 1.21	0.813 - 1.29	Acceptable
2000	Sulfate		EPA 300.0	mg/L	92.8	88.4	82.0 - 102	77.3 - 106	Acceptable
Minerals 2 - Hardness (PT-MIN2-DMRQA)								Lot #: 8542-102	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1755	Total Hardness (as CaCO ₃)		SM 2340C	mg/L	242	240		206 - 278	Acceptable
Specific Conductance (PT-COND-DMRQA)								Lot #: 8542-72	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1610	Specific Conductance (25°C)		EPA 120.1	µmhos/cm	607	613		546 - 667	Acceptable

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Nutrients 1 - Simple (PT-NUT1-DMRQA) Lot #: 8542-10

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1515	Ammonia as N		EPA 350.1	mg/L	10.3	10.2	8.92 - 11.7	8.23 - 12.4	Acceptable
1810	Nitrate as N		EPA 353.2/SM4500NO3	mg/L	6.30	6.29	5.52 - 7.05	5.14 - 7.44	Acceptable
1810	Nitrate as N		EPA 300.0	mg/L	6.30	5.99	5.52 - 7.05	5.14 - 7.44	Acceptable
1870	Orthophosphate as P		EPA 365.3	mg/L	4.25	3.99		3.61 - 4.88	Acceptable

Nutrients 2 - Complex (PT-NUT2-DMRQA) Lot #: 8542-11

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1795	Total Kjeldahl Nitrogen (TKN)		EPA 351.2	mg/L	19.6	20.6	16.2 - 22.3	14.7 - 23.8	Acceptable
1910	Total Phosphorous		EPA 365.3	mg/L	0.972	0.910	0.825 - 1.12	0.750 - 1.20	Acceptable

Nutrients 3 - Nitrite (PT-NUT3-DMRQA) Lot #: 8542-69

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1840	Nitrite as N		EPA 300.0	mg/L	0.938	0.902	0.816 - 1.06	0.755 - 1.12	Acceptable
1840	Nitrite as N		SM 450NO2B	mg/L	0.938	0.980	0.816 - 1.06	0.755 - 1.12	Acceptable

Oil & Grease - 1L (PT-OGR1L-DMRQA) Lot #: 8542-103

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1803	Oil & Grease		EPA 1664A	mg/L	100	100	78.5 - 110	71.0 - 116	Acceptable

Residual Chlorine (PT-CL-DMRQA) Lot #: 8542-13

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1940	Total Residual Chlorine		SM 4500 Cl G	mg/L	2.22	1.91	1.79 - 2.44	1.63 - 2.59	Acceptable

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pH (PT-PH-DMRQA)									Lot #: 8542-15
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1900	pH		SM 4500-H,B	S.U.	7.63	7.67		7.43 - 7.83	Acceptable
Total Cyanide (PT-CN-DMRQA)									Lot #: 8542-14
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1645	Total Cyanide		SM 4500-CN E	mg/L	0.780	0.703		0.507 - 1.05	Acceptable
Phenolics (PT-PHEN-DMRQA)									Lot #: 8542-16
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1905	Total Phenolics (4AAP)		EPA 420.1	mg/L	4.37	2.61	1.90 - 4.81	1.44 - 4.81	Acceptable
Settleable Solids (PT-SSOL-DMRQA)									Lot #: 8542-17
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1965	Settleable Solids		SM 2540 F	mL/L	16.6	20.0	14.4 - 20.1	12.9 - 21.6	Acceptable
Turbidity (PT-TURB-DMRQA)									Lot #: 8542-20
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2055	Turbidity		SM 2130B	NTU	26.8	24.7	24.0 - 29.7	22.6 - 31.2	Acceptable

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Micro (Fecal, E. Coli & Total) (PT-MIC-DMRQA)								Lot #: 8545-12	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2530	Fecal Coliform, MF			CFU/100 mL	383			61 - 2410	NR
2500	Total Coliform, MF			CFU/100 mL	548			452 - 665	NR
2525	E. Coli, MF			CFU/100 mL	613			229 - 1640	NR
2530	Fecal Coliform, MPN		SM 9223 B	MPN/100 mL	522	523		173 - 1580	Acceptable
2530	Fecal Coliform, MPN		SM 9221 C,E	MPN/100 mL	522	920		173 - 1580	Acceptable
2500	Total Coliform, MPN			MPN/100 mL	608			276 - 1340	NR
2525	E. Coli, MPN		SM 9223 B	MPN/100 mL	614	582		287 - 1310	Acceptable