



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 1, 2014

Ms. Rhonda Morris
Alloway - Marion
1776 Marion-Waldo Road
Marion, OH 43302
USA

Dear Rhonda,

Thank you for participating in the DMRQA34-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 has been sent to all accrediting agencies you requested at the time of data submittal.

Thank you again for participating in the DMRQA34-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 866-942-2978.



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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: DMRQA34-Chem

Opening Date: March 21, 2014 - Closing Date: July 11, 2014

Facility: Alloway - Marion
1776 Marion-Waldo Road
Marion, OH 43302
USA

Contact: Ms. Rhonda Morris
740-389-5991

EPA Lab ID: OH01320

NPDES Permit ID:

Trace Metals (PT-TM1-DMRQA) Lot #: 8523-04

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1000	Aluminum		EPA 200.7	µg/L	266	395	223 - 318	200 - 342	Not Acceptable
1005	Antimony		EPA 200.8	µg/L	749	762	655 - 824	614 - 862	Acceptable
1010	Arsenic		EPA 200.8	µg/L	113	140	93.7 - 134	83.7 - 143	Acceptable
1015	Barium		EPA 200.8	µg/L	2090	2010		1780 - 2400	Acceptable
1020	Beryllium		EPA 200.8	µg/L	107	108		91.1 - 123	Acceptable
1030	Cadmium		EPA 200.8	µg/L	871	892		741 - 1000	Acceptable
1040	Chromium		EPA 200.8	µg/L	654	610		556 - 752	Acceptable
1055	Copper		EPA 200.8	µg/L	411	402		350 - 473	Acceptable
1070	Iron		EPA 200.7	µg/L	849	861		721 - 976	Acceptable
1050	Cobalt		EPA 200.8	µg/L	799	772		679 - 919	Acceptable
1075	Lead		EPA 200.8	µg/L	1000	1020		850 - 1150	Acceptable
1090	Manganese		EPA 200.7	µg/L	1050	1120		894 - 1210	Acceptable
1100	Molybdenum		EPA 200.8	µg/L	482	469	434 - 530	418 - 541	Acceptable
1105	Nickel		EPA 200.8	µg/L	1090	1070	983 - 1200	963 - 1230	Acceptable
1140	Selenium		EPA 200.8	µg/L	673	686		572 - 774	Acceptable
1150	Silver		EPA 200.7	µg/L	892	891		758 - 1030	Acceptable
1150	Silver		EPA 200.8	µg/L	892	915		758 - 1030	Acceptable
1165	Thallium		EPA 200.8	µg/L	409	396	358 - 453	334 - 477	Acceptable
1185	Vanadium		EPA 200.7	µg/L	1630	1630		1390 - 1880	Acceptable
1190	Zinc		EPA 200.7	µg/L	1830	1810		1550 - 2100	Acceptable

Mercury (PT-HG-DMRQA) Lot #: 8523-05B

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1095	Mercury		EPA 245.1	µg/L	17.0	19.0		11.9 - 22.1	Acceptable

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Mercury Low Level (PT-HGLL-DMRQA)								Lot #: 8523-47B	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1095	Mercury		EPA 1631E	ng/L	61.5	55.7	50.7 - 71.6	45.5 - 76.9	Acceptable
Chromium VI (PT-CR6-DMRQA)								Lot #: 8523-06B	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1045	Chromium VI		SM 3500-Cr-B	µg/L	463	457	412 - 510	388 - 533	Acceptable
Demand (PT-DEM-DMRQA)								Lot #: 8523-07	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1530	BOD		SM5210 B	mg/L	34.5	20.4	14.5 - 38.0	10.6 - 38.0	Acceptable
1555	CBOD		SM5210 B	mg/L	34.5	16.4	11.8 - 38.0	7.69 - 38.0	Acceptable
1565	COD		EPA 410.4	mg/L	35.3	31.8	25.3 - 43.5	20.8 - 48.0	Acceptable
2040	TOC		SM5310 B	mg/L	13.9	14.2	12.0 - 16.0	11.0 - 17.0	Acceptable
Solids (PT-SOL-DMRQA)								Lot #: 8523-09	
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1955	Total Dissolved Solids at 180° (TFR)		SM2540 C	mg/L	758	738	683 - 834	683 - 834	Acceptable
1960	Non-Filterable Residue (TSS)		SM2540 D	mg/L	31.6	34.0	25.0 - 35.1	22.5 - 37.7	Acceptable

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Minerals 1 (PT-MIN1-DMRQA) Lot #: 8523-08

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1505	Total Alkalinity(as CaCO ₃)		SM2320 B	mg/L	186	187		158 - 214	Acceptable
1575	Chloride		EPA 300.0	mg/L	144	137	129 - 158	127 - 161	Acceptable
1730	Fluoride		SM4500 F-C	mg/L	1.94	1.96	1.66 - 2.15	1.54 - 2.27	Acceptable
2000	Sulfate		EPA 300.0	mg/L	7.90	7.83	6.18 - 9.00	5.48 - 9.70	Acceptable

Minerals 2 - Hardness (PT-MIN2-DMRQA) Lot #: 8523-102B

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1755	Total Hardness (as CaCO ₃)		SM2340 C	mg/L	212	196		180 - 244	Acceptable

Specific Conductance (PT-COND-DMRQA) Lot #: 8523-72

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1610	Specific Conductance (25°C)		SM2510 B	µmhos/cm	359	358		323 - 395	Acceptable

Nutrients 1 - Simple (PT-NUT1-DMRQA) Lot #: 8523-10

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	5.16	5.40	4.39 - 5.96	4.00 - 6.35	Acceptable
1810	Nitrate as N		SM4500 NO ₃ -F	mg/L	22.0	24.0	19.6 - 24.3	18.4 - 25.5	Acceptable
1870	Orthophosphate as P		SM4500 P-E	mg/L	0.664	0.65		0.564 - 0.763	Acceptable

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Nutrients 2 - Complex (PT-NUT2-DMRQA) Lot #: 8523-11

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	13.0	14.1	10.7 - 15.0	9.63 - 16.1	Acceptable
1910	Total Phosphorous		SM4500 P-E	mg/L	5.44	5.25	4.81 - 6.01	4.51 - 6.31	Acceptable

Nutrients 3 - Nitrite (PT-NUT3-DMRQA) Lot #: 8523-69

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1840	Nitrite as N		SM4500 NO3-F	mg/L	1.99	2.16	1.79 - 2.19	1.69 - 2.29	Acceptable

Oil & Grease - 1L (PT-OGR1L-DMRQA) Lot #: 8523-103

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1860	n-Hexane Extractable Material (O&G) (Gravimetric)		EPA 1664 A	mg/L	134	131	106 - 147	97.0 - 153	Acceptable

Residual Chlorine (PT-CL-DMRQA) Lot #: 8523-13B

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1940	Total Residual Chlorine		SM4500 Cl-G	mg/L	0.727	0.75	0.604 - 0.833	0.547 - 0.891	Acceptable

pH (PT-PH-DMRQA) Lot #: 8523-15

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1900	pH		SM4500 H-B	S.U.	9.77	9.70		9.57 - 9.97	Acceptable

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Total Cyanide (PT-CN-DMRQA)									Lot #: 8523-14
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1645	Total Cyanide		EPA 335.4	mg/L	0.562	0.550		0.366 - 0.759	Acceptable
Phenolics (PT-PHEN-DMRQA)									Lot #: 8523-16
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1905	Total Phenolics (4AAP)		EPA 420.4	mg/L	1.46	0.973	0.640 - 1.60	0.480 - 1.60	Acceptable
Turbidity (PT-TURB-DMRQA)									Lot #: 8523-20
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2055	Turbidity		SM2130 B	NTU	24.5	24.2	21.9 - 27.2	20.6 - 28.5	Acceptable
Micro (Fecal, E. Coli & Total) (PT-MIC-DMRQA)									Lot #: 8525-12
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2530	Fecal Coliform, MF		SM 9222	CFU/100 mL	991	2067		358 - 2740	Acceptable
2500	Total Coliform, MF			CFU/100 mL	283			4 - 19800	NR
2525	E. Coli, MF			CFU/100 mL	777			216 - 2790	NR
2530	Fecal Coliform, MPN			MPN/100 mL	1280			441 - 3710	NR
2500	Total Coliform, MPN			MPN/100 mL	1530			1300 - 1790	NR
2525	E. Coli, MPN		SM 9223	MPN/100 mL	1570	1141		812 - 3050	Acceptable