

6390 Joyce Drive
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Golden, CO 80403

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

August 4, 2017

Mrs. Marcy Bolek
Alloway - Lima
1101 N. Cole Street
Lima, OH 45805
United States

Dear Marcy,

Thank you for participating in the DMRQA37-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 DMRQA37-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.

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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Opening Date: March 24, 2017 - Closing Date: July 7, 2017

Facility: Alloway - Lima
1101 N. Cole Street
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Contact: Mrs. Marcy Bolek
800-436-1243

EPA Lab ID: OH00202

NPDES Permit ID:

Trace Metals (PT-TM1-DMRQA) Lot #: 8535-04

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1000	Aluminum		EPA 200.7	µg/L	2080	2080	1840 - 2290	1730 - 2390	Acceptable
1005	Antimony		EPA 200.8	µg/L	511	529	443 - 563	412 - 594	Acceptable
1010	Arsenic		EPA 200.8	µg/L	176	179	151 - 201	138 - 214	Acceptable
1015	Barium		EPA 200.7	µg/L	1810	1850		1540 - 2080	Acceptable
1015	Barium		EPA 200.8	µg/L	1810	1900		1540 - 2080	Acceptable
1020	Beryllium		EPA 200.7	µg/L	330	336		281 - 380	Acceptable
1020	Beryllium		EPA 200.8	µg/L	330	344		281 - 380	Acceptable
1030	Cadmium		EPA 200.7	µg/L	264	274		224 - 303	Acceptable
1030	Cadmium		EPA 200.8	µg/L	264	284		224 - 303	Acceptable
1040	Chromium		EPA 200.7	µg/L	352	348		299 - 405	Acceptable
1040	Chromium		EPA 200.8	µg/L	352	339		299 - 405	Acceptable
1050	Cobalt		EPA 200.7	µg/L	717	720		610 - 825	Acceptable
1050	Cobalt		EPA 200.8	µg/L	717	695		610 - 825	Acceptable
1055	Copper		EPA 200.7	µg/L	816	803		694 - 939	Acceptable
1055	Copper		EPA 200.8	µg/L	816	797		694 - 939	Acceptable
1070	Iron		EPA 200.7	µg/L	3120	3210		2650 - 3590	Acceptable
1075	Lead		EPA 200.7	µg/L	676	682		575 - 777	Acceptable
1075	Lead		EPA 200.8	µg/L	676	714		575 - 777	Acceptable
1090	Manganese		EPA 200.7	µg/L	1510	1530		1290 - 1740	Acceptable
1090	Manganese		EPA 200.8	µg/L	1510	1520		1290 - 1740	Acceptable
1100	Molybdenum		EPA 200.7	µg/L	179	183	160 - 197	150 - 206	Acceptable
1100	Molybdenum		EPA 200.8	µg/L	179	181	160 - 197	150 - 206	Acceptable
1105	Nickel		EPA 200.7	µg/L	1470	1460	1320 - 1620	1300 - 1650	Acceptable
1105	Nickel		EPA 200.8	µg/L	1470	1420	1320 - 1620	1300 - 1650	Acceptable
1140	Selenium		EPA 200.8	µg/L	556	549		473 - 640	Acceptable
1150	Silver		EPA 200.7	µg/L	338	350		287 - 389	Acceptable
1150	Silver		EPA 200.8	µg/L	338	338		287 - 389	Acceptable

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Trace Metals (PT-TM1-DMRQA) cont'd Lot #: 8535-04

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1165	Thallium		EPA 200.8	µg/L	455	474	399 - 503	373 - 530	Acceptable
1185	Vanadium		EPA 200.7	µg/L	273	275		232 - 313	Acceptable
1185	Vanadium		EPA 200.8	µg/L	273	258		232 - 313	Acceptable
1190	Zinc		EPA 200.7	µg/L	465	494		395 - 535	Acceptable
1190	Zinc		EPA 200.8	µg/L	465	473		395 - 535	Acceptable

Mercury (PT-HG-DMRQA) Lot #: 8535-05B

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1095	Mercury		EPA 245.1	µg/L	5.52	5.76		3.87 - 7.18	Acceptable

Chromium VI (PT-CR6-DMRQA) Lot #: 8535-06

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	463	411 - 509	387 - 533	Acceptable

Demand (PT-DEM-DMRQA) Lot #: 8535-07

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1530	BOD		SM 5210 B	mg/L	121	116	79.6 - 201	61.9 - 201	Acceptable
1555	CBOD		SM 5210 B	mg/L	121	111	67.1 - 201	48.6 - 201	Acceptable
1565	COD		HACH 8000	mg/L	187	179	162 - 206	151 - 217	Acceptable
2040	TOC		SM 5310 B	mg/L	74.0	66.5	65.9 - 81.4	62.0 - 85.2	Acceptable

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Solids (PT-SOL-DMRQA) Lot #: 8535-09

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1955	Total Dissolved Solids at 180° (TFR)		USGS-I375085	mg/L	486	502	437 - 534	437 - 534	Acceptable
1960	Non-Filterable Residue (TSS)		USGS-I376585	mg/L	24.4	22.4	18.5 - 27.8	16.2 - 30.1	Acceptable

Minerals 1 (PT-MIN1-DMRQA) Lot #: 8535-08

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1505	Total Alkalinity(as CaCO3)		SM 2320 B	mg/L	280	274		238 - 321	Acceptable
1575	Chloride		EPA 300.0	mg/L	158	160	142 - 174	139 - 177	Acceptable
1730	Fluoride		EPA 300.0	mg/L	3.96	3.94	3.44 - 4.36	3.22 - 4.54	Acceptable
2000	Sulfate		EPA 300.0	mg/L	79.8	77.9	70.5 - 87.8	66.4 - 91.0	Acceptable

Minerals 2 - Hardness (PT-MIN2-DMRQA) Lot #: 8535-102

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1755	Total Hardness (as CaCO3)		SM 2340 C	mg/L	214	230		182 - 246	Acceptable

Specific Conductance (PT-COND-DMRQA) Lot #: 8535-72

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	1100	1090		990 - 1210	Acceptable

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Nutrients 1 - Simple (PT-NUT1-DMRQA) Lot #: 8535-10

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	10.8	10.4	9.31 - 12.2	8.59 - 12.9	Acceptable
1810	Nitrate as N		EPA 353.2/SM4500NO3	mg/L	14.7	15.4	13.1 - 16.3	12.2 - 17.1	Acceptable
1870	Orthophosphate as P		EPA 365.3	mg/L	3.36	3.45		2.85 - 3.86	Acceptable

Nutrients 2 - Complex (PT-NUT2-DMRQA) Lot #: 8535-11

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	7.86	7.96	6.41 - 9.31	5.68 - 10.0	Acceptable
1910	Total Phosphorous		EPA 365.3	mg/L	1.70	1.78	1.48 - 1.92	1.36 - 2.03	Acceptable

Nutrients 3 - Nitrite (PT-NUT3-DMRQA) Lot #: 8535-69

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1840	Nitrite as N		SM 4500NO2B	mg/L	2.76	2.79	2.49 - 3.04	2.38 - 3.15	Acceptable

Oil & Grease - 1L (PT-OGR1L-DMRQA) Lot #: 8535-103B

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1803	Oil & Grease		EPA 1664 A	mg/L	155	161	124 - 170	113 - 176	Acceptable

Residual Chlorine (PT-CL-DMRQA) Lot #: 8535-13

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	1.66	1.60	1.35 - 1.83	1.22 - 1.95	Acceptable

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pH (PT-PH-DMRQA) Lot #: 8535-15									
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1900	pH		SM 4500 H,B	S.U.	7.03	7.05		6.83 - 7.23	Acceptable
Total Cyanide (PT-CN-DMRQA) Lot #: 8535-14									
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	0.674	0.555		0.438 - 0.910	Acceptable
Phenolics (PT-PHEN-DMRQA) Lot #: 8535-16									
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	2.48	1.30	1.08 - 2.73	0.817 - 2.73	Acceptable
Settleable Solids (PT-SSOL-DMRQA) Lot #: 8535-17									
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
1965	Settleable Solids		SM 2540 F	mL/L	12.8	13.0	10.9 - 15.7	9.65 - 16.9	Acceptable
Turbidity (PT-TURB-DMRQA) Lot #: 8535-20									
NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2055	Turbidity		SM 2130 B	NTU	12.8	11.0	11.3 - 14.3	10.5 - 15.1	Acceptable

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Micro (Fecal, E. Coli & Total) (PT-MIC-DMRQA) Lot #: 8537-12

NELAC Code	Analyte	Method Code	Method Description	Units	Assigned Value	Result	Warning Limits	Acceptance Limits	Evaluation
2530	Fecal Coliform, MF		SM 9222D	CFU/100 mL	665	490		220 - 2010	Acceptable
2525	E. Coli, MF			CFU/100 mL	1030			535 - 1980	NR
2530	Fecal Coliform, MPN		SM 9221 C,E	MPN/100 mL	852	920		498 - 1460	Acceptable
2500	Total Coliform, MPN			MPN/100 mL	1010			583 - 1760	NR
2525	E. Coli, MPN		SM 9223 B	MPN/100 mL	1060	1204		526 - 2120	Acceptable