National Testing Laboratories, Ltd.
Quality Water Analysis

Corporate Headquarters
6571 Wilson Mills Road
Cleveland, Ohio 44143

Phone: 800-458-3330

This report package contains 22 pages

This package contains reports from the following laboratories:

- National Testing Laboratories, Ltd. (7 pages)
- Pace Analytical Services, Inc.- Minneapolis, MN (7 pages)
- Pace Analytical Services, Inc.-Greensburg, PA (3 pages)
- EMSL Analytical, Inc. (1 page)
- Eurofins Eaton Analytical, Inc. (3 pages)

If you have any questions, please contact Susan Henderson at 1-800-458-3330.

NELAP ACCREDITED TNI LABORATORY

Laboratory ID: 11467

National Testing Laboratories, Ltd
556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 381555

6/5/2018

Customer: Harford Glen Water Inc.
Daniel Correll
PO Box 214
Harford , NY 13784-0214

Source: HGW PW
Sample Temperature: 9.5 C
Field pH: 7.9

Date/Time Received: 5/10/2018 09:55
Collected by: S. Theal

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

pH analysis has a 15 minute hold time from sampling to analysis. Analysis of pH past the 15 minute hold time should be considered an estimate.

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled		Date Prepped	Date/Time Analyzed
				Inorganic Analytes - Metals							
1002	Aluminum	200.7	0.2	mg/L	0.05	ND	1	5/9/2018	13:40		5/14/2018
1074	Antimony	200.8	0.006	mg/L	0.003	ND	1	5/9/2018	13:40		5/16/2018
1005	Arsenic	200.8	0.010	mg/L	0.002	ND	1	5/9/2018	13:40		5/16/2018
1010	Barium	200.7	2	mg/L	0.10	ND	1	5/9/2018	13:40		5/14/2018
1075	Beryllium	200.7	0.004	mg/L	0.001	ND	1	5/9/2018	13:40		5/14/2018
1079	Boron	200.7	--	mg/L	0.10	ND	1	5/9/2018	13:40		5/14/2018
1015	Cadmium	200.7	0.005	mg/L	0.001	ND	1	5/9/2018	13:40		5/14/2018
1016	Calcium	200.7	--	mg/L	2.0	43.0	1	5/9/2018	13:40		5/14/2018
1020	Chromium	200.7	0.100	mg/L	0.007	ND	1	5/9/2018	13:40		5/14/2018
1022	Copper	200.7	1.0	mg/L	0.002	ND	1	5/9/2018	13:40		5/14/2018
1028	Iron	200.7	0.3	mg/L	0.020	0.021	1	5/9/2018	13:40		5/14/2018
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	5/9/2018	13:40		5/16/2018
1031	Magnesium	200.7	--	mg/L	0.10	8.60	1	5/9/2018	13:40		5/14/2018
1032	Manganese	200.7	0.05	mg/L	0.004	0.005	1	5/9/2018	13:40		5/14/2018
1035	Mercury	200.8	0.002	mg/L	0.0002	ND	1	5/9/2018	13:40		5/16/2018
1036	Nickel	200.7	--	mg/L	0.005	ND	1	5/9/2018	13:40		5/14/2018
1042	Potassium	200.7	--	mg/L	1.0	ND	1	5/9/2018	13:40		5/14/2018
1045	Selenium	200.8	0.05	mg/L	0.002	ND	1	5/9/2018	13:40		5/16/2018
1049	Silica	200.7	--	mg/L	0.05	7.40	1	5/9/2018	13:40		5/14/2018

Date Printed: 6/5/2018 12:15:42 PM

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Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled		Date Prepped	Date/Time Analyzed	
1050	Silver	200.7	0.10	mg/L	0.002	ND		1	5/9/2018	13:40		5/14/2018	
1052	Sodium	200.7	--	mg/L	1	5		1	5/9/2018	13:40		5/14/2018	
1085	Thallium	200.8	0.002	mg/L	0.001	ND		1	5/9/2018	13:40		5/16/2018	
4009	Uranium	200.8	0.030	mg/L	0.001	ND		1	5/9/2018	13:40		5/16/2018	
1095	Zinc	200.7	5.000	mg/L	0.004	0.027		1	5/9/2018	13:40		5/14/2018	
						Physical Factors							
1927	Alkalinity (Total as CaCO3)	2320B	--	mg/L	20	110		1	5/9/2018	13:40		5/16/2018	
1905	Apparent Color	2120B	15	CU	3	ND		1	5/9/2018	13:40		5/10/2018	13:50
1928	Bicarbonate (as CaCO3)	2320B	--	mg/L	20	110		1	5/9/2018	13:40		5/16/2018	
1929	Carbonate (as CaCO3)	2320B	--	mg/L	20	ND		1	5/9/2018	13:40		5/16/2018	
1910	Corrosivity	2330B	--	SI		-0.33	R2	1	5/9/2018	13:40		5/16/2018	
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND		1	5/9/2018	13:40		5/11/2018	12:40
						MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1915	Hardness (as CaCO3)	2340C	--	mg/L	10	130		1	5/9/2018	13:40		5/22/2018	
1021	Hydroxide (as CaCO3)	2320B	--	mg/L	20	ND		1	5/9/2018	13:40		5/16/2018	
1920	Odor Threshold	2150B	3	ton	1	ND		1	5/9/2018	13:40		5/10/2018	13:05
1925	pH	150.1	6.5-8.5	pH Units		7.4		1	5/9/2018	13:40		5/10/2018	13:15
4254	pH Temperature	150.1	--	Deg, C		21		1	5/9/2018	13:40		5/10/2018	13:15
1064	Specific Cond. @ 25 deg. C	2510B	--	umhos/cm	1	310		1	5/9/2018	13:40		5/14/2018	
1930	Total Dissolved Solids	2540C	500	mg/L	5	170		1	5/9/2018	13:40		5/14/2018	
0100	Turbidity	2130B	1	NTU	0.1	ND		1	5/9/2018	13:40		5/10/2018	13:35
						Inorganic Analytes - Other							
1004	Bromide	300.1	--	mg/L	0.005	0.012		1	5/9/2018	13:40		5/23/2018	
1017	Chloride	300.0	250	mg/L	1.0	9.9		1	5/9/2018	13:40		5/10/2018	11:53
1025	Fluoride	300.0	4.0	mg/L	0.10	ND		1	5/9/2018	13:40		5/10/2018	11:53
1040	Nitrate as N	300.0	10	mg/L	0.05	2.60		1	5/9/2018	13:40		5/10/2018	11:53
1041	Nitrite as N	300.0	1	mg/L	0.05	ND		1	5/9/2018	13:40		5/10/2018	11:53
1044	Ortho Phosphate	300.0	--	mg/L	2.0	ND		1	5/9/2018	13:40		5/10/2018	11:53
1055	Sulfate	300.0	250	mg/L	5.0	12.0		1	5/9/2018	13:40		5/10/2018	11:53
						Organic Analytes - Trihalomethanes							
2943	Bromodichloromethane	524.2 THMs	--	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	
2942	Bromoform	524.2 THMs	--	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	
2941	Chloroform	524.2 THMs	--	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	
2944	Dibromochloromethane	524.2 THMs	--	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	
2950	Total THMs	524.2 THMs	0.080	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	
						Organic Analytes - Volatiles							
2986	1,1,1,2-Tetrachloroethane	524.2	--	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	
2981	1,1,1-Trichloroethane	524.2	0.2	mg/L	0.0005	ND		1	5/9/2018	13:40		5/15/2018	

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2988	1,1,2,2-Tetrachloroethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2985	1,1,2-Trichloroethane	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2978	1,1-Dichloroethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2977	1,1-Dichloroethene	524.2	0.007	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2410	1,1-Dichloropropene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2420	1,2,3-Trichlorobenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2414	1,2,3-Trichloropropane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2378	1,2,4-Trichlorobenzene	524.2	0.07	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2418	1,2,4-Trimethylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2968	1,2-Dichlorobenzene	524.2	0.6	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2980	1,2-Dichloroethane	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2983	1,2-Dichloropropane	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2424	1,3,5-Trimethylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2967	1,3-Dichlorobenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2412	1,3-Dichloropropane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2969	1,4-Dichlorobenzene	524.2	0.075	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2416	2,2-Dichloropropane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2965	2-Chlorotoluene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2966	4-Chlorotoluene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2030	4-Isopropyltoluene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2990	Benzene	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2993	Bromobenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2430	Bromochloromethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2214	Bromomethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2982	Carbon Tetrachloride	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2989	Chlorobenzene	524.2	0.1	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2216	Chloroethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2210	Chloromethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2380	cis-1,2-Dichloroethene	524.2	0.07	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2228	cis-1,3-Dichloropropene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2408	Dibromomethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2212	Dichlorodifluoromethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2964	Dichloromethane	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2992	Ethylbenzene	524.2	0.7	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2246	Hexachlorobutadiene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2994	Isopropylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2251	Methyl Tert Butyl Ether	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2247	Methyl-Ethyl Ketone	524.2	--	mg/L	0.005	ND	1	5/9/2018	13:40		5/15/2018
2248	Naphthalene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2422	n-Butylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2997	o-Xylene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018

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6/5/2018

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled		Date Prepped	Date/Time Analyzed
2963	p and m-Xylenes	524.2	--	mg/L	0.0010	ND	1	5/9/2018	13:40		5/15/2018
	Due to the limitation of EPA Method 524.2, p and m isomers of Xylene are reported as aggregate.										
2998	Propylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2428	sec-Butylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2996	Styrene	524.2	0.1	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2426	tert-Butylbenzene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2987	Tetrachloroethene	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2991	Toluene	524.2	1	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2979	trans-1,2-Dichloroethene	524.2	0.1	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2224	trans-1,3-Dichloropropene	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2984	Trichloroethene	524.2	0.005	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2218	Trichlorofluoromethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2904	Trichlorotrifluoroethane	524.2	--	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2976	Vinyl Chloride	524.2	0.002	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
2955	Xylenes (Total)	524.2	10	mg/L	0.0005	ND	1	5/9/2018	13:40		5/15/2018
	Organic Analytes - Others										
2931	1,2-Dibromo-3-chloropropane	504.1	0.0002	mg/L	0.00001	ND	1	5/9/2018	13:40	5/16/2018	5/16/2018
2946	1,2-Dibromoethane	504.1	0.00005	mg/L	0.00001	ND	1	5/9/2018	13:40	5/16/2018	5/16/2018
2105	2,4-D	515.4	70	ug/L	0.1	ND	1	5/9/2018	13:40	5/22/2018	5/24/2018
2066	3-Hydroxycarbofuran	531.2	--	ug/L	1.0	ND	1	5/9/2018	13:40		5/21/2019
2051	Alachlor	525.2	2	ug/L	0.2	ND	1	5/9/2018	13:40	5/17/2018	5/24/2018
2047	Aldicarb	531.2	7	ug/L	1.0	ND	1	5/9/2018	13:40		5/21/2019
2044	Aldicarb sulfone	531.2	7	ug/L	1.0	ND	1	5/9/2018	13:40		5/21/2019
2043	Aldicarb sulfoxide	531.2	7	ug/L	1.0	ND	1	5/9/2018	13:40		5/21/2019
2356	Aldrin	505	--	mg/L	0.00007	ND	1	5/9/2018	13:40	5/15/2018	5/15/2018
2050	Atrazine	525.2	3	ug/L	0.1	ND	1	5/9/2018	13:40	5/17/2018	5/24/2018
2625	Bentazon	515.4	--	ug/L	1	ND	1	5/9/2018	13:40	5/22/2018	5/24/2018
2306	Benzo(A)pyrene	525.2	0.2	ug/L	0.1	ND	1	5/9/2018	13:40	5/17/2018	5/24/2018
2076	Butachlor	525.2	--	ug/L	0.2	ND	1	5/9/2018	13:40	5/17/2018	5/24/2018
2021	Carbaryl	531.2	--	ug/L	1.0	ND	1	5/9/2018	13:40		5/21/2019
2046	Carbofuran	531.2	40	ug/L	1.0	ND	1	5/9/2018	13:40		5/21/2019
2959	Chlordane	505	0.002	mg/L	0.0001	ND	1	5/9/2018	13:40	5/15/2018	5/15/2018
2031	Dalapon	515.4	200	ug/L	1	ND	1	5/9/2018	13:40	5/22/2018	5/24/2018
2035	Di(2-ethylhexyl) adipate	525.2	400	ug/L	0.2	ND	1	5/9/2018	13:40	5/17/2018	5/24/2018
2039	Di(2-ethylhexyl) phthalate	525.2	6	ug/L	0.6	ND	1	5/9/2018	13:40	5/17/2018	5/24/2018
2440	Dicamba	515.4	--	ug/L	1	ND	1	5/9/2018	13:40	5/22/2018	5/24/2018
2933	Dichloran	505	--	mg/L	0.001	ND	1	5/9/2018	13:40	5/15/2018	5/15/2018
2070	Dieldrin	505	--	mg/L	0.00002	ND	1	5/9/2018	13:40	5/15/2018	5/15/2018
2041	Dinoseb	515.4	7	ug/L	0.2	ND	1	5/9/2018	13:40	5/22/2018	5/24/2018
2032	Diquat	549.2	20	ug/L	0.4	ND	1	5/9/2018	13:40	5/16/2018	5/31/2018
2033	Endothall	548.1	100	ug/L	9	ND	1	5/9/2018	13:40	5/14/2018	5/22/2018

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2005	Endrin	505	0.002	mg/L	0.00001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2034	Glyphosate	547	700	ug/L	6	ND		1	5/9/2018	13:40		5/23/2018
2065	Heptachlor	505	0.0004	mg/L	0.00001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2067	Heptachlor Epoxide	505	0.0002	mg/L	0.00001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2274	Hexachlorobenzene	505	0.001	mg/L	0.0001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2042	Hexachlorocyclopentadiene	505	0.05	mg/L	0.0001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2010	Lindane	505	0.0002	mg/L	0.00002	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2022	Methomyl	531.2	--	ug/L	1.0	ND		1	5/9/2018	13:40		5/21/2019
2015	Methoxychlor	505	0.04	mg/L	0.0001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2045	Metolachlor	525.2	--	ug/L	0.2	ND		1	5/9/2018	13:40	5/17/2018	5/24/2018
2595	Metribuzin	525.2	--	ug/L	0.2	ND		1	5/9/2018	13:40	5/17/2018	5/24/2018
2626	Molinate	525.2	--	ug/L	0.2	ND		1	5/9/2018	13:40	5/17/2018	5/24/2018
2036	Oxamyl	531.2	200	ug/L	1.0	ND		1	5/9/2018	13:40		5/21/2019
2934	Pentachloronitrobenzene	505	--	mg/L	0.0001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2326	Pentachlorophenol	515.4	1	ug/L	0.04	ND		1	5/9/2018	13:40	5/22/2018	5/24/2018
2040	Picloram	515.4	500	ug/L	0.1	ND		1	5/9/2018	13:40	5/22/2018	5/24/2018
2077	Propachlor	525.2	--	ug/L	0.2	ND		1	5/9/2018	13:40	5/17/2018	5/24/2018
2110	Silvex 2,4,5-TP	515.4	50	ug/L	0.2	ND		1	5/9/2018	13:40	5/22/2018	5/24/2018
2037	Simazine	525.2	4	ug/L	0.1	ND		1	5/9/2018	13:40	5/17/2018	5/24/2018
2627	Thiobencarb	525.2	--	ug/L	0.2	ND		1	5/9/2018	13:40	5/17/2018	5/24/2018
2383	Total PCBs	505	0.0005	mg/L	0.0005	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2910	Total Phenols	420.4	--	mg/L	0.001	0.001	R2,Y1	1	5/9/2018	13:40		5/11/2018
2020	Toxaphene	505	0.003	mg/L	0.001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018
2055	Trifluralin	505	--	mg/L	0.001	ND		1	5/9/2018	13:40	5/15/2018	5/15/2018

Qualifiers:

R2: The laboratory is not accredited for this analyte. The resulting value should be used for informational purposes only.
Y1: The laboratory analysis was from an improperly preserved sample. The data may not be accurate.

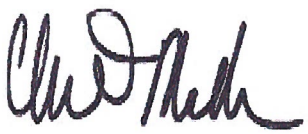
National Testing Laboratories, Ltd
556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 381555

6/5/2018

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed



Christine MacMillan, Technical Director

Analyst	Tests
DD	200.7
SMG	200.8
PC	2320B,2120B,2330B,5540C,2340C,2150B,150.1,2510B,2130B
CF	2540C
SG	300.1,300.0
SB	524.2 THMs,524.2,531.2,549.2,547
JPT	504.1,515.4,505
JF	525.2,548.1
DHG	420.4

Date Printed: 6/5/2018 12:15:45 PM

Laboratory ID: 11467

National Testing Laboratories, Ltd
556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 381554

5/15/2018

Customer: Harford Glen Water Inc.
Daniel Correll
PO Box 214
Harford , NY 13784-0214

Source: HGW PW
Sample Temperature: 9.6 C
Field pH: 7.9

Date/Time Received: 5/10/2018 09:55
Collected by: S. Theal

The results herein conform to TNI and ISO/IEC 17025:2005 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Microbiologicals						
3114	E. Coli	9223B	1	MPN/100 mL	1	ND	1	5/9/2018 13:40		5/10/2018 13:27
3001	Standard Plate Count	9215B	500	CFU/ml	1	<1	1	5/9/2018 13:40		5/10/2018 13:05
				Pour Plate Method, 35°C/48hr, Plate Count Agar						
3000	Total Coliform	9223B	1	MPN/100 mL	1	ND	1	5/9/2018 13:40		5/10/2018 13:27

Analyst	Tests
GK	9223B,9215B

Christine MacMillan, Technical Director

Date Printed: 5/15/2018 12:25:38 PM

Pace Analytical™
www.pacelabs.com

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Report Prepared for:

Susan Henderson
National Testing Laboratories
6571 Wilson Mills Road
Cleveland OH 44143

Product Source

Sample ID: 381555
Source Name: HGW PW
Source Location: Harford NY
PWS ID: N/A
Laboratory Sample ID: 10430865001
Date Sampled: 05/09/2018 @ 13:40
Date Received: 05/11/2018 @ 09:15

REPORT OF LABORATORY ANALYSIS FOR 2,3,7,8-TCDD

Report Summary:

Enclosed are analytical results of one drinking water sample analyzed for 2,3,7,8-TCDD content. This sample was analyzed according to Method 1613B by High Resolution Gas Chromatography/High Resolution Mass Spectrometry.

The results reported for this sample and the associated quality control samples were all within the criteria described in Method 1613B. If you have any questions or concerns regarding these results, please contact Joanne Richardson, your Pace Project Manager.

Pace Project Number:
10430865

Report Prepared Date:
May 22, 2018

This report has been reviewed by:

Joanne Richardson

May 22, 2018
Joanne Richardson,
(612) 607-6453
(612) 607-6444 (fax)

Report of Laboratory Analysis

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Mississippi	MN00064
Alabama	40770	Montana	CERT0092
Alaska	MN00064	Nebraska	NE-OS-18-06
Alaska	UST-078	Nevada	MN00064
Arizona	AZ0014	New Jersey (NE	MN002
Arkansas	88-0680	New York (NEL	11647
CNMI Saipan	MP0003	New hampshire	2081
California	MN00064	North Carolina	27700
Colorado	MN00064	North Carolina	530
Connecticut	PH-0256	North Dakota	R-036
EPA Region 8	8TMS-L	Ohio	41244
Florida (NELAP	E87605	Ohio VAP	CL101
Georgia (EDP)	959	Oklahoma	9507
Guam EPA	959	Oregon (ELAP)	MN200001
Hawaii	MN00064	Oregon (OREL	MN300001
Idaho	MN00064	Pennsylvania	68-00563
Illinois	200011	Puerto Rico	MN00064
Indiana	C-MN-01	South Carolina	74003001
Iowa	368	Tennessee	TN02818
Kansas	E-10167	Texas	T104704192
Kentucky	90062	Utah (NELAP)	MN00064
Louisiana	03086	Virginia	460163
Louisiana	MN00064	Washington	C486
Maine	MN00064	West Virginia #	9952C
Maryland	322	West Virginia D	382
Michigan	9909	Wisconsin	999407970
Minnesota	027-053-137	Wyoming	8TMS-L

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612-607-6444

Reporting Flags

A = Reporting Limit based on signal to noise

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interferencepresent

J = Estimated value

Nn = Value obtained from additional analysis

P = PCDEInterference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = SeeDiscussion

Report No.....10430865_1613DW_DFR

National Testing Laboratories, Ltd.
Quality Water Analysis

CHAIN OF CUSTODY

Initiated by: ☐ Client ☒ National Testing Laboratories, Ltd. ☐ Other

CLIENT/COMPANY NAME:

CLIENT COMMENTS:

TYPES OF SAMPLES:

DRINKING WATER = D SOIL SAMPLE = S
GROUND WATER = G SLUDGE/WASTE = W
POOL WATER = P OTHER TYPE = O

WO# : 10430865

10430865

SAMPLE #	COLLECTION DATE	COLLECTION TIME	SAMPLE SITE DESCRIPTION	SAMPLE TYPE	# OF CONTAINERS	TEST(S) REQUESTED PER SAMPLE (X): Dioxin	LAB #
381555	5/9/18	1340	2110824	D	2	X	001
381560	5/9/18	1400	2104214	D	2	X	

RECEIVER SIGNATURE CONFIRMS THAT THE BOTTLES RECEIVED ARE CONSISTENT WITH THE REQUIRED TESTING PROTOCOL.

SAMPLED BY: (Signature) (1)	DATE	TIME	RELINQUISHED BY: (Signature) (4)	DATE	TIME
SHIPPED BY: (Signature) (2)	DATE 5/10/18	TIME 1600	RECEIVED BY: (Signature) (5)	DATE 5/11/18	TIME 915
RECEIVED BY: (Signature) (3)	DATE	TIME	RELINQUISHED BY: (Signature) (6)	DATE	TIME
			RECEIVED BY: (Signature) (7)	DATE	TIME

LABORATORY COMMENTS:

COC-001 2/22/11

See instructions on reverse side →

National Testing Laboratories, Ltd.

Quality Water Analysis

1-800-458-3330

Beverage - Source Water

Order Number: 2110824
Order Date: 5/4/2018
Sample Number: 381555
Product: 50 WODDBP
Paid: No Method: Purchase Order P.O.:
TSR: SBW

Sold To:

Harford NY 13784-0214

Date Sampled: 5/9/18
Time Sampled: 13:40 Please Use Military Time, e.g. 3:00pm = 15:00
Check Time Zone: ☒ EST ☐ CST ☐ MST ☐ PST

Client Name:
Phone Number:
~~Fax~~ Number:

Source Water Information:

PWS ID# (if applicable):
Source Name: HGW PW
City & State: (If Different than Above)
Sample Collected By: Scott M Theal (Signature)
Sample Collected By: Scott M. Theal (Please Print)
Sample Temperature: 9.5°C Field pH: 7.9
Measured at Source By: SmT using HI9811-5
Form Completed By: Scott M. Theal

Additional Comments: need broken phenols

For Laboratory Use ONLY

Lab Accounting Information:
Payment $:
Check #:

Lab Comments/Special Instructions:
2018 Source Water Annual
Date and time provided by client via: 1340 container
3°C Droxm

State Forms:
NY

Lab Sample Information:
Date Received: 5/10/18
Time Received: 09:55
Received By: TD
☐ Sample receipt criteria checked & acceptable.
☒ Deviations from acceptable sample receipt criteria noted on PSA form.

PSA login

INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 02May2018 Page 1 of 2
	Document No.: F-MN-L-213-rev.23	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: National Testing Lab

Project #: WO#: 10430865

PM: JMR Due Date: 05/22/18

CLIENT: NTL

Courier: ☐ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

Tracking Number: 1Z A11 937 07 6903 8753

Custody Seal on Cooler/Box Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☒ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☒ Other: Styrofoam Temp Blank? ☐ Yes ☒ No

Thermometer Used: ☐ G87A9170600254 ☒ G87A9155100842

Type of Ice: ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Cooler Temp Read (°C): 1.1 Cooler Temp Corrected (°C): 1.1

Temp should be above freezing to 6°C Correction Factor: true

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Date and Initials of Person Examining Contents: KN 5/11/18

USDA Regulated Soil (☒ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present?	☒ Yes ☐ No	1.
Chain of Custody Filled Out?	☒ Yes ☐ No	2.
Chain of Custody Relinquished?	☐ Yes ☒ No	3.
Sampler Name and/or Signature on COC?	☐ Yes ☒ No ☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes ☐ No	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes ☒ No	6.
Rush Turn Around Time Requested?	☐ Yes ☒ No	7.
Sufficient Volume?	☒ Yes ☐ No	8.
Correct Containers Used?	☒ Yes ☐ No	9.
-Pace Containers Used?	☐ Yes ☒ No	
Containers Intact?	☒ Yes ☐ No	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes ☐ No ☒ N/A	11. Note if sediment is visible in the dissolved container
Is sufficient information available to reconcile the samples to the COC? Matrix: √	☒ Yes ☐ No	12.
All containers needing acid/base preservation have been checked?	☐ Yes ☐ No ☒ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes ☐ No ☒ N/A	Sample #
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☒ Yes ☐ No ☐ N/A	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes ☐ No ☒ N/A	14.
Trip Blank Present?	☐ Yes ☐ No ☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Joanne Richardson Date: 5-11-18

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Pace Analytical™

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel 612-607-1700
Fax 612-607-6444

Drinking Water Analysis Results
2,3,7,8-TCDD -- USEPA Method 1613B

Sample ID.....381555
Client..... National Testing Laborato
Lab Sample ID..... 10430865001

Date Collected.....05/09/2018
Date Received.....05/11/2018
Date Extracted.....05/14/2018

Spike.....200 pg
IS Spike.....2000 pg
CS Spike.....200 pg

	Sample 381555	Method Blank	Lab Spike	Lab Spike Dup
[2,3,7,8-TCDD]	**ND**	ND	--	--
LOQ	5.0 pg/L	5.0 pg/L	--	--
2,3,7,8-TCDD Recovery	--	--	100%	94%
pg Recovered	--	--	199pg/L	189pg/L
Spike Recovery Limit	--	--	73-146%	73-146%
RPD				5.3%
IS Recovery	**68%**	78%	71%	71%
pg Recovered	1355 pg/L	1556 pg/L	1423 pg/L	1410 pg/L
IS Recovery Limits	31-137%	31-137%	25-141%	25-141%
CS Recovery	**80%**	82%	76%	74%
pg Recovered	159 pg/L	165 pg/L	151 pg/L	148 pg/L
CS Recovery Limits	42-164%	42-164%	37-158%	37-158%
Filename	F180518D_07	F180516B_05	F180516B_03	F180516B_04
Analysis Date	05/19/2018	05/16/2018	05/16/2018	05/16/2018
Analysis Time	07:29	18:38	17:33	18:05
Analyst	SMT	SMT	SMT	SMT
Volume	1.000L	1.007L	1.042L	1.000L
Dilution	NA	NA	NA	NA
ICAL Date	04/26/2018	04/26/2018	04/26/2018	04/26/2018
CCAL Filename	F180518D_02	F180516B_02	F180516B_02	F180516B_02

! = Outside the Control Limits
ND = Not Detected
LOQ = Limit of Quantitation
Limits = Control Limits from Method 1613 (10/94 Revision), Tables 6A and 7A
RPD = Relative Percent Difference of Lab Spike Recoveries
IS = Internal Standard [2,3,7,8-TCDD- $^{13}C_{12}$]
CS = Cleanup Standard [2,3,7,8-TCDD- $^{37}Cl_4$]

Analyst: _____

Project No.....10430865

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2110824
Pace Project No.: 30252635

Sample: 381555 **Lab ID: 30252635001** Collected: 05/09/18 13:40 Received: 05/11/18 09:55 Matrix: Drinking Water
PWS: Site ID: Sample Type:

Comments:
- Radon vials not received.
- SOURCE WATER, HGW PW, Harford NY
- sample number: 381555
- sample collected 5/9/18 @13:40 by Scott Theal
- Sample collection dates and times were not present on the sample containers.
- Upon receipt at the laboratory, 2.5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	**-0.128 ± 0.764 (2.47) C:NA T:NA**	pCi/L	05/30/18 09:15	12587-46-1	
Gross Beta	EPA 900.0	**0.596 ± 0.936 (2.12) C:NA T:NA**	pCi/L	05/30/18 09:15	12587-47-2	
Radium-226	EPA 903.1	**0.168 ± 0.246 (0.413) C:NA T:87%**	pCi/L	05/31/18 20:31	13982-63-3	
Radium-228	EPA 904.0	**-0.127 ± 0.288 (0.699) C:81% T:86%**	pCi/L	05/30/18 14:37	15262-20-1	
Total Radium	Total Radium Calculation	**0.168 ± 0.534 (1.11)**	pCi/L	06/04/18 14:06	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 2110824
Pace Project No.: 30253775

Sample: 381555 **Lab ID: 30253775001** Collected: 05/09/18 13:40 Received: 05/23/18 09:15 Matrix: Drinking Water
PWS: Site ID: Sample Type:

Comments:
- Sample collection dates and times were not present on the sample containers.
- The sample was received outside the recommended holding time for radon.
- SOURCE WATER: HGW PW, Harford, NY
- sample number: 381555
- sample collected on 5/9/18 @ 13:40 by Scott M. Theal

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radon	SM7500RnB-07	**0 ± 269 (453)** **C:NA T:NA**	pCi/L	05/24/18 04:33	10043-92-2	H3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1638 Roseytown Road - Suites 2,3,4
Greensburg, PA 15601
(724)850-5600

QUALIFIERS

Project: 2110824
Pace Project No.: 30253775

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H3 Sample was received or analysis requested beyond the recognized method holding time.

EMSL Analytical, Inc.
200 Route 130 North Cinnaminson, NJ 08077
Phone/Fax: (800) 220-3675 / (856) 786-5974
http://www.EMSL.com / cinnasblab@EMSL.com

EMSL Order ID:	041814157
Customer ID:	NTLI78
Customer PO:	14630
Project ID:	

Attn: Susan Henderson
National Testing Laboratories, Inc.
6571 Wilson Mills Road
Cleveland, OH 44143

Proj: 2110824

Phone:	(440) 449-2525
Fax:	(Ema) il -only
Collected:	05/09/2018
Received:	05/11/2018
Analyzed:	05/24/2018

Test Report: Determination of Asbestos Structures >10µm in Drinking Water Performed by the 100.2 Method (EPA 600/R-94/134)

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm^2)	Area Analyzed (mm^2)	ASBESTOS Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
							MFL (million fibers per liter)		
381555 041814157-0001	5/11/2018 11:15 AM	100	1387	0.0768	None Detected	ND	0.18	<0.18	0.00 - 0.67

Analyst(s)
Debbie Little (1)

Any questions please contact Benjamin Ellis.

Benjamin Ellis, Laboratory Manager
or Other Approved Signatory

Initial report from: 05/24/2018 22:27:40

eurofins | Eaton Analytical

110 South Hill Street
South Bend, IN 46617
Tel: (574) 233-4777
Fax: (574) 233-8207
1 800 332 4345

Laboratory Report

Client: National Testing Laboratories

Attn: Susan Henderson
6571 Wilson Mills Road
Cleveland, OH 44143

Report: 416394
Priority: Standard Written
Status: Final
PWS ID: Not Supplied

Sample Information

EEA ID #	Client ID	Method	Collected Date / Time	Collected By:	Received Date / Time
3934280	381555 Order #2110824	335.4	05/09/18 13:40	Client	05/11/18 09:45
3934283	381555 Order #2110824	331.0	05/09/18 13:40	Client	05/11/18 09:45

Report Summary

Note: Sample container for Method 331.0 was provided by the client.

Detailed quantitative results are presented on the following pages. The results presented relate only to the samples provided for analysis.

We appreciate the opportunity to provide you with this analysis. If you have any questions concerning this report, please do not hesitate to call Traci Chlebowski at (574) 233-4777.

Note: This report may not be reproduced, except in full, without written approval from EEA.

Traci Chlebowski ASM

Authorized Signature | Title | 05/24/2018 Date

Client Name: National Testing Laboratories
Report #: 416394

Client Name: National Testing Laboratories

Report #: 416394

Sampling Point: 381555 Order #2110824

PWS ID: Not Supplied

General Chemistry									
Analyte ID #	Analyte	Method	Reg Limit	MRL†	Result	Units	Preparation Date	Analyzed Date	EEA ID #
14797-73-0	Perchlorate	331.0	---	0.05	**0.10**	ug/L	---	05/15/18 03:50	3934283
57-12-5	Cyanide, Total	335.4	0.1 &	0.02	< 0.02	mg/L	05/15/18 16:35	05/15/18 18:22	3934280

† EEA has demonstrated it can achieve these report limits in reagent water, but can not document them in all sample matrices.

Reg Limit Type:	MCL	SMCL	AL	SOQ
Symbol:	*	^	!	&

Lab Definitions

Continuing Calibration Check Standard (CCC) / Continuing Calibration Verification (CCV) / Initial Calibration Verification Standard (ICV) / Initial Performance Check (IPC) - is a standard containing one or more of the target analytes that is prepared from the same standards used to calibrate the instrument. This standard is used to verify the calibration curve at the beginning of each analytical sequence, and may also be analyzed throughout and at the end of the sequence. The concentration of continuing standards may be varied, when prescribed by the reference method, so that the range of the calibration curve is verified on a regular basis. CCL, CCM, and CCH are the CCC standards at low, mid, and high concentration levels, respectively.

Internal Standards (IS) - are pure compounds with properties similar to the analytes of interest, which are added to field samples or extracts, calibration standards, and quality control standards at a known concentration. They are used to measure the relative responses of the analytes of interest and surrogates in the sample, calibration standard or quality control standard.

Laboratory Duplicate (LD) - is a field sample aliquot taken from the same sample container in the laboratory and analyzed separately using identical procedures. Analysis of laboratory duplicates provides a measure of the precision of the laboratory procedures.

Laboratory Fortified Blank (LFB) / Laboratory Control Sample (LCS) - is an aliquot of reagent water to which known concentrations of the analytes of interest are added. The LFB is analyzed exactly the same as the field samples. LFBs are used to determine whether the method is in control. FBL, FBM, and FBH are the LFB samples at low, mid, and high concentration levels, respectively.

Laboratory Method Blank (LMB) / Laboratory Reagent Blank (LRB) - is a sample of reagent water included in the sample batch analyzed in the same way as the associated field samples. The LMB is used to determine if method analytes or other background contamination have been introduced during the preparation or analytical procedure. The LMB is analyzed exactly the same as the field samples.

Laboratory Trip Blank (LTB) / Field Reagent Blank (FRB) - is a sample of laboratory reagent water placed in a sample container in the laboratory and treated as a field sample, including storage, preservation, and all analytical procedures. The FRB/LTB container follows the collection bottles to and from the collection site, but the FRB/LTB is not opened at any time during the trip. The FRB/LTB is primarily a travel blank used to verify that the samples were not contaminated during shipment.

Matrix Spike Duplicate Sample (MSD) / Laboratory Fortified Sample Matrix Duplicate (LFSMD) - is a sample aliquot taken from the same field sample source as the Matrix Spike Sample to which known quantities of the analytes of interest are added in the laboratory. The MSD is analyzed exactly the same as the field samples. Analysis of the MSD provides a measure of the precision of the laboratory procedures in a specific matrix. SDL, SDM, and SDH / LFSMDL, LFSMDM, and LFSMDH are the MSD or LFSMD at low, mid, and high concentration levels, respectively.

Matrix Spike Sample (MS) / Laboratory Fortified Sample Matrix (LFSM) - is a sample aliquot taken from field sample source to which known quantities of the analytes of interest are added in the laboratory. The MS is analyzed exactly the same as the field samples. The purpose is to demonstrate recovery of the analytes from a sample matrix to determine if the specific matrix contributes bias to the analytical results. MSL, MSM, and MSH / LFSML, LFSMM, and LFSMH are the MS or LFSM at low, mid, and high concentration levels, respectively.

Quality Control Standard (QCS) / Second Source Calibration Verification (SSCV) - is a solution containing known concentrations of the analytes of interest prepared from a source different from the source of the calibration standards. The solution is obtained from a second manufacturer or lot if the lot can be demonstrated by the manufacturer as prepared independently from other lots. The QCS sample is analyzed using the same procedures as field samples. The QCS is used as a check on the calibration standards used in the method on a routine basis.

Reporting Limit Check (RLC) / Initial Calibration Check Standard (ICCS) - is a procedural standard that is analyzed each day to evaluate instrument performance at or below the minimum reporting limit (MRL).

Surrogate Standard (SS) / Surrogate Analyte (SUR) - is a pure compound with properties similar to the analytes of interest, which is highly unlikely to be found in any field sample, that is added to the field samples, calibration standards, blanks and quality control standards before sample preparation. The SS is used to evaluate the efficiency of the sample preparation process.