



Corporate Headquarters  
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This report package contains 57 pages.

This package contains reports from the following laboratories:

- National Testing Laboratories, Ltd. (7 pages)
- Pace Analytical Services, Inc.- Minneapolis, MN (6 pages)
- Pace Analytical Services, Inc.-Greensburg, PA (11 pages)
- EMSL Analytical, Inc. (1 page)
- Eurofins Eaton Analytical, Inc. (8 pages)
- Alpha Analytical (23 pages)

NELAP accredited #E87753



**ANALYTICAL REPORTS**

**SAMPLE CODE: 458725**

**4/1/2024**

**Customer:** Berkshire Springs Inc  
Steve Keim  
772 Norfolk Rd  
Southfield, MA 01259-9799

**Source:** Spring

**Date/Time Received:** 2/28/2024 09:39

**Collected by:** M. Klimkosky

The results herein conform to TNI and ISO/IEC 17025:2017 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.

Additional water received 03/14/2024 at 09:30 AM, for 515.4 analysis.

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
<b>Inorganic Analytes - Metals</b>										
1002	Aluminum	200.7	0.2	mg/L	0.05	ND	1	2/27/2024 13:00		3/28/2024
1074	Antimony	200.8	0.006	mg/L	0.003	ND	1	2/27/2024 13:00		3/14/2024
1005	Arsenic	200.8	0.010	mg/L	0.002	ND	1	2/27/2024 13:00		3/14/2024
1010	Barium	200.7	2	mg/L	0.10	ND	1	2/27/2024 13:00		3/28/2024
1075	Beryllium	200.7	0.004	mg/L	0.001	ND	1	2/27/2024 13:00		3/28/2024
1079	Boron	200.7	--	mg/L	0.10	ND	1	2/27/2024 13:00		3/28/2024
1015	Cadmium	200.7	0.005	mg/L	0.001	ND	1	2/27/2024 13:00		3/28/2024
1016	Calcium	200.7	--	mg/L	2.0	14.0	1	2/27/2024 13:00		3/28/2024
1020	Chromium	200.7	0.100	mg/L	0.007	ND	1	2/27/2024 13:00		3/28/2024
1022	Copper	200.7	1.0	mg/L	0.002	0.024	1	2/27/2024 13:00		3/28/2024
1028	Iron	200.7	0.3	mg/L	0.020	ND	1	2/27/2024 13:00		3/28/2024
1030	Lead	200.8	0.015	mg/L	0.001	ND	1	2/27/2024 13:00		3/14/2024
1031	Magnesium	200.7	--	mg/L	0.10	5.10	1	2/27/2024 13:00		3/28/2024
1032	Manganese	200.7	0.05	mg/L	0.004	ND	1	2/27/2024 13:00		3/28/2024
1035	Mercury	200.8	0.002	mg/L	0.0002	ND	1	2/27/2024 13:00		3/14/2024
1036	Nickel	200.7	--	mg/L	0.005	ND	1	2/27/2024 13:00		3/28/2024
1042	Potassium	200.7	--	mg/L	1.0	1.9	1	2/27/2024 13:00		3/28/2024
1045	Selenium	200.8	0.05	mg/L	0.002	ND	1	2/27/2024 13:00		3/14/2024

# National Testing Laboratories, Ltd

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

## ANALYTICAL REPORTS

SAMPLE CODE: 458725

4/1/2024

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
1049	Silica	200.7	--	mg/L	0.05	13.00	1	2/27/2024 13:00		3/28/2024
1050	Silver	200.7	0.10	mg/L	0.002	ND	1	2/27/2024 13:00		3/28/2024
1052	Sodium	200.7	--	mg/L	1	2	1	2/27/2024 13:00		3/28/2024
1085	Thallium	200.8	0.002	mg/L	0.001	ND	1	2/27/2024 13:00		3/14/2024
4006	Uranium	200.8	0.030	mg/L	0.001	ND	1	2/27/2024 13:00		3/14/2024
1095	Zinc	200.7	5.000	mg/L	0.004	ND	1	2/27/2024 13:00		3/28/2024
<b>Physical Factors</b>										
1927	Alkalinity (Total as CaCO3)	2320B	--	mg/L	20	60	1	2/27/2024 13:00		2/29/2024
1905	Apparent Color	2120B	15	CU	3	ND	1	2/27/2024 13:00		2/28/2024 15:50
1928	Bicarbonate (as CaCO3)	2320B	--	mg/L	20	60	1	2/27/2024 13:00		2/29/2024
1929	Carbonate (as CaCO3)	2320B	--	mg/L	20	ND	1	2/27/2024 13:00		2/29/2024
1910	Corrosivity	2330B	--	SI		-1.65	R2 1	2/27/2024 13:00		3/28/2024
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	2/27/2024 13:00		2/29/2024 09:45
MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole										
1915	Hardness	2340B	--	mg/L	5.0	56	1	2/27/2024 13:00		3/28/2024
1021	Hydroxide (as CaCO3)	2320B	--	mg/L	20	ND	1	2/27/2024 13:00		2/29/2024
1920	Odor Threshold	2150B	3	ton	1	ND	1	2/27/2024 13:00		2/28/2024 12:55
1925	pH	150.1	6.5-8.5	pH Units		6.8	1	2/27/2024 13:00		2/28/2024 15:35
4254	pH Temperature	150.1	--	Deg, C		26	1	2/27/2024 13:00		2/28/2024 15:35
1064	Specific Cond. @ 25 deg. C	2510B	--	umhos/cm	1	130	1	2/27/2024 13:00		3/8/2024
1930	Total Dissolved Solids	2540C	500	mg/L	5	77	1	2/27/2024 13:00		3/2/2024
0100	Turbidity	2130B	1	NTU	0.1	ND	1	2/27/2024 13:00		2/28/2024 15:40
<b>Inorganic Analytes - Other</b>										
1004	Bromide	300.1	--	mg/L	0.005	0.006	1	2/27/2024 13:00		3/6/2024
1017	Chloride	300.0	250	mg/L	1.0	ND	1	2/27/2024 13:00		2/29/2024 09:50
1025	Fluoride	300.0	4.0	mg/L	0.10	ND	1	2/27/2024 13:00		2/29/2024 09:50
1040	Nitrate as N	300.0	10	mg/L	0.05	0.14	1	2/27/2024 13:00		2/29/2024 09:50
1041	Nitrite as N	300.0	1	mg/L	0.05	ND	1	2/27/2024 13:00		2/29/2024 09:50
1044	Ortho Phosphate	300.0	--	mg/L	2.0	ND	1	2/27/2024 13:00		2/29/2024 09:50
1055	Sulfate	300.0	250	mg/L	5.0	5.3	1	2/27/2024 13:00		2/29/2024 09:50
<b>Organic Analytes - Trihalomethanes</b>										
2943	Bromodichloromethane	524.2 THMs	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2942	Bromoform	524.2 THMs	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2941	Chloroform	524.2 THMs	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2944	Dibromochloromethane	524.2 THMs	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2950	Total THMs	524.2 THMs	0.080	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
<b>Organic Analytes - Volatiles</b>										
2986	1,1,1,2-Tetrachloroethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024

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# National Testing Laboratories, Ltd

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

## ANALYTICAL REPORTS

SAMPLE CODE: 458725

4/1/2024

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
2981	1,1,1-Trichloroethane	524.2	0.2	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2988	1,1,2,2-Tetrachloroethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2985	1,1,2-Trichloroethane	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2978	1,1-Dichloroethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2977	1,1-Dichloroethene	524.2	0.007	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2410	1,1-Dichloropropene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2420	1,2,3-Trichlorobenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2414	1,2,3-Trichloropropane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2378	1,2,4-Trichlorobenzene	524.2	0.07	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2418	1,2,4-Trimethylbenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2968	1,2-Dichlorobenzene	524.2	0.6	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2980	1,2-Dichloroethane	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2983	1,2-Dichloropropane	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2424	1,3,5-Trimethylbenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2967	1,3-Dichlorobenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2412	1,3-Dichloropropane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2969	1,4-Dichlorobenzene	524.2	0.075	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2416	2,2-Dichloropropane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2965	2-Chlorotoluene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2966	4-Chlorotoluene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2030	4-Isopropyltoluene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2990	Benzene	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2993	Bromobenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2430	Bromochloromethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2214	Bromomethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2982	Carbon Tetrachloride	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2989	Chlorobenzene	524.2	0.1	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2216	Chloroethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2210	Chloromethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2380	cis-1,2-Dichloroethene	524.2	0.07	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2228	cis-1,3-Dichloropropene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2408	Dibromomethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2212	Dichlorodifluoromethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2964	Dichloromethane	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2992	Ethylbenzene	524.2	0.7	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2246	Hexachlorobutadiene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2994	Isopropylbenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2251	Methyl Tert Butyl Ether	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2247	Methyl-Ethyl Ketone	524.2	--	mg/L	0.005	ND	R2 1	2/27/2024 13:00		2/28/2024
2248	Naphthalene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2422	n-Butylbenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024

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# National Testing Laboratories, Ltd

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

## ANALYTICAL REPORTS

SAMPLE CODE: 458725

4/1/2024

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
2997	o-Xylene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2963	p and m-Xylenes	524.2	--	mg/L	0.0010	ND	1	2/27/2024 13:00		2/28/2024
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	2/27/2024 13:00		2/28/2024
2428	sec-Butylbenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2996	Styrene	524.2	0.1	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2426	tert-Butylbenzene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2987	Tetrachloroethene	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2991	Toluene	524.2	1	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2979	trans-1,2-Dichloroethene	524.2	0.1	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2224	trans-1,3-Dichloropropene	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2984	Trichloroethene	524.2	0.005	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2218	Trichlorofluoromethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2904	Trichlorotrifluoroethane	524.2	--	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2976	Vinyl Chloride	524.2	0.002	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
2955	Xylenes (Total)	524.2	10	mg/L	0.0005	ND	1	2/27/2024 13:00		2/28/2024
<b>Organic Analytes - Others</b>										
2414	1,2,3-Trichloropropane	504.1	0.00003	mg/L	0.00001	ND	1	2/27/2024 13:00	3/4/2024	3/4/2024
2931	1,2-Dibromo-3-chloropropane	504.1	0.0002	mg/L	0.00001	ND	1	2/27/2024 13:00	3/4/2024	3/4/2024
2946	1,2-Dibromoethane	504.1	0.00005	mg/L	0.00001	ND	1	2/27/2024 13:00	3/4/2024	3/4/2024
2105	2,4-D	515.4	70	ug/L	0.1	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2066	3-Hydroxycarbofuran	531.2	--	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2051	Alachlor	525.2	2	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2047	Aldicarb	531.2	7	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2044	Aldicarb sulfone	531.2	7	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2043	Aldicarb sulfoxide	531.2	7	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2356	Aldrin	505	--	mg/L	0.00007	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2050	Atrazine	525.2	3	ug/L	0.1	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2625	Bentazon	515.4	--	ug/L	1	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2306	Benzo(A)pyrene	525.2	0.2	ug/L	0.02	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2076	Butachlor	525.2	--	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2021	Carbaryl	531.2	--	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2046	Carbofuran	531.2	40	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2959	Chlordane	505	0.002	mg/L	0.0001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2031	Dalapon	515.4	200	ug/L	1	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2035	Di(2-ethylhexyl) adipate	525.2	400	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2039	Di(2-ethylhexyl) phthalate	525.2	6	ug/L	0.6	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2440	Dicamba	515.4	--	ug/L	1	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2933	Dichloran	505	--	mg/L	0.001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2070	Dieldrin	505	--	mg/L	0.00002	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2041	Dinoseb	515.4	7	ug/L	0.2	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024

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# National Testing Laboratories, Ltd

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

## ANALYTICAL REPORTS

SAMPLE CODE: 458725

4/1/2024

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
2032	Diquat	549.2	20	ug/L	0.4	ND	1	2/27/2024 13:00	3/1/2024	3/11/2024
2033	Endothall	548.1	100	ug/L	9	ND	1	2/27/2024 13:00	3/4/2024	3/11/2024
2005	Endrin	505	0.002	mg/L	0.00001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2034	Glyphosate	547	700	ug/L	6	ND	1	2/27/2024 13:00		3/7/2024
2065	Heptachlor	505	0.0004	mg/L	0.00001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2067	Heptachlor Epoxide	505	0.0002	mg/L	0.00001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2274	Hexachlorobenzene	505	0.001	mg/L	0.0001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2042	Hexachlorocyclopentadiene	505	0.05	mg/L	0.0001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2010	Lindane	505	0.0002	mg/L	0.00002	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2022	Methomyl	531.2	--	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2015	Methoxychlor	505	0.04	mg/L	0.0001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2045	Metolachlor	525.2	--	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2595	Metribuzin	525.2	--	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2626	Molinate	525.2	--	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2036	Oxamyl	531.2	200	ug/L	1.0	ND	1	2/27/2024 13:00		3/6/2024
2934	Pentachloronitrobenzene	505	--	mg/L	0.0001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2326	Pentachlorophenol	515.4	1	ug/L	0.04	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2040	Picloram	515.4	500	ug/L	0.1	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2077	Propachlor	525.2	--	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2110	Silvex 2,4,5-TP	515.4	50	ug/L	0.2	ND	Y5 1	3/13/2024 12:30	3/22/2024	3/27/2024
2037	Simazine	525.2	4	ug/L	0.07	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2627	Thiobencarb	525.2	--	ug/L	0.2	ND	1	2/27/2024 13:00	3/12/2024	3/27/2024
2383	Total PCBs	505	0.0005	mg/L	0.0005	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2910	Total Phenols	420.4	--	mg/L	0.001	ND	R2 1	2/27/2024 13:00		2/29/2024
2020	Toxaphene	505	0.003	mg/L	0.001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024
2055	Trifluralin	505	--	mg/L	0.001	ND	1	2/27/2024 13:00	2/29/2024	2/29/2024

### Qualifiers:

R2: The laboratory is not licensed for this parameter. The reported result cannot be used for compliance purposes.

Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

**National Testing Laboratories, Ltd**

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

**ANALYTICAL REPORTS**

**SAMPLE CODE: 458725**

**4/1/2024**

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



Sarah Buchanan, Project Manager

Analyst	Tests
ZSC	200.7,2330B,2340B
DMJ	200.8
SP	2320B,2120B,5540C,2150B,150.1,2510B,2130B
CF	2540C
SG	300.1,300.0
SB	524.2 THMs,524.2,531.2,549.2,547
BNF	504.1,515.4,505
JLF	525.2,548.1
DHG	420.4

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Laboratory ID: NY:11467, MA:M-  
MI044

### National Testing Laboratories, Ltd

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

#### ANALYTICAL REPORTS

SAMPLE CODE: 458724

4/1/2024

**Customer:** Berkshire Springs Inc  
Steve Keim  
772 Norfolk Rd  
Southfield, MA 01259-9799

**Source:** Spring

**Date/Time Received:** 2/28/2024 09:34

**Collected by:** M. Klimkosky

The results herein conform to TNI and ISO/IEC 17025:2017 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
<b>Microbiologicals</b>										
3114	E. Coli	9223B	1	MPN/100 mL	1	ND	1	2/27/2024 13:00		2/28/2024 12:30
3001	Standard Plate Count	9215B	500	CFU/ml	1	<1	1	2/27/2024 13:00		2/28/2024 11:50
Pour Plate Method, 35°C/48hr, Plate Count Agar										
3000	Total Coliform	9223B	1	MPN/100 mL	1	ND	1	2/27/2024 13:00		2/28/2024 12:30

Analyst	Tests
GK	9223B,9215B



Christine MacMillan, Technical Director

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**Report Prepared for:**

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

**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.

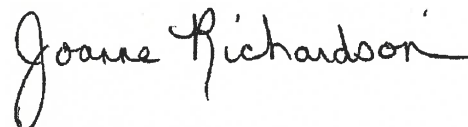
**Pace Project Number:**  
10685795

**Report Prepared Date:**  
March 13, 2024

**Product Source**

Sample ID: 458725  
Source Name: Spring  
Source Location: Southfield MA  
PWS ID: N/A  
Laboratory Sample ID: 10685795001  
Date Sampled: 02/27/2024 @ 13:00  
Date Received: 03/07/2024 @ 09:00

**This report has been reviewed by:**



March 13, 2024

Joanne Richardson,  
(612) 607-6453  
(612) 607-6444 (fax)



**Report of Laboratory Analysis**

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The results relate only to the samples included in this report.



## Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio-DW	41244
Georgia	959	Ohio-VAP (170	CL101
Hawaii	MN00064	Ohio-VAP (180	CL110
Idaho	MN00064	Oklahoma	9507
Illinois	200011	Oregon-Primary	MN300001
Indiana	C-MN-01	Oregon-Second	MN200001
Iowa	368	Pennsylvania	68-00563
Kansas	E-10167	Puerto Rico	MN00064
Kentucky-DW	90062	South Carolina	74003
Kentucky-WW	90062	Tennessee	TN02818
Louisiana-DEQ	AI-84596	Texas	T104704192
Louisiana-DW	MN00064	Utah	MN00064
Maine	MN00064	Vermont	VT-027053137
Maryland	322	Virginia	460163
Michigan	9909	Washington	C486
Minnesota	027-053-137	West Virginia-D	382
Minnesota-Ag	via MN 027-053	West Virginia-D	9952C
Minnesota-Petr	1240	Wisconsin	999407970
Mississippi	MN00064	Wyoming-UST	via A2LA 2926.

## REPORT OF LABORATORY ANALYSIS

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**Pace Analytical Services, LLC**  
1700 Elm Street, Suite 200  
Minneapolis, MN 55414  
Phone: 612.607.1700  
Fax: 612.607.6444  
www.pacelabs.com

## Reporting Flags

- A = Reporting Limit based on signal to noise (EDL)
- 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
- H2 = Extracted outside of holding time
- I = Isotope ratio out of specification
- J = Estimated value
- L = Suppressive interference, analyte may be biased low
- Nn = Value obtained from additional analysis
- P = PCDE Interference
- 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

## REPORT OF LABORATORY ANALYSIS

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1-800-458-3330

# Beverage - Source Water

Order Number: 2235175  
 Order Date: 1/29/2024  
 Sample Number: 458725  
 Product: 50 WODDBP  
 Paid: No Method: MasterCard P.O.:  
 TSR: SBW

Southfield

MA 01259-9799

Date Sampled: 2/27/24

Time Sampled: 13:00 Please Use Military Time, e.g. 3:00pm = 15:00

Check Time Zone:  EST  CST  MST  PST

## Source Water Information:

PWS ID# (if applicable): \_\_\_\_\_

Source Name: Spring

City & State: \_\_\_\_\_

Sample Collected By: *Matt Klimkosky* (Signature)

Sample Collected By: Matt Klimkosky (Please Print)

Sample Temperature: \_\_\_\_\_ Field pH: \_\_\_\_\_

Measured at Source By: \_\_\_\_\_

Form Completed By: Matt Klimkosky

Additional Comments:

For Laboratory Use ONLY	
Lab Accounting Information:	
Payment \$:	_____
Check #:	_____
Lab Comments/Special Instructions:	
Spring Source	
<i>Diagram</i>	
State Forms:	NY 62
Lab Sample Information:	
Date Received:	RECEIVED FEB 28 2024
Time Received:	09:34
Received By:	<i>AP</i>
<input type="checkbox"/> Sample receipt criteria checked & acceptable. <input checked="" type="checkbox"/> Deviations from acceptable sample receipt criteria noted on PSA form.	

Rev: SRT102120

INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS

**ENV-FRM-MIN4-0150 v15\_Sample Condition Upon Receipt**

CLIENT NAME: Natural Testing Laboratories

PROJECT #:

**WO#: 10685795**

COURIER:  Client  Commercial  FedEx  Pace  
 Speedee  UPS  USPS

PM: JMR Due Date: 03/18/24  
 CLIENT: NTL

TRACKING NUMBER: 12 ALU 93101 2573 2154  See Exceptions form ENV-FRM-MIN4-0142

Custody Seal on Coole/Box Present:  YES  NO Seals Intact:  YES  NO Biological Tissue Frozen:  YES  NO  N/A  
 Packing Material:  Bubble Bags  Bubble Wrap  None  Other Temp Blank:  YES  NO Type of Ice:  Blue  Dry  Wet  
 Thermometer:  T1 (0461)  T2 (0436)  T3 (0459)  T4 (0402)  T5 (0178)  T6 (0235)  T7 (0042)  T8 (0775)  T9 (0727)  01339252 (1710)  Melted  None

Did Samples Originate in West Virginia:  YES  NO Were All Container Temps taken:  YES  NO  N/A  
 Correction Factor: -0.2 Cooler Temp Read w/Temp Blank: 2.8 °C Average Corrected Temp (no Temp Blank Only): \_\_\_\_\_ °C  
 Cooler Temp Corrected w/Temp Blank: 2.6 °C  
 NOTE: Temp should be above freezing to 6°C.  See Exceptions Form ENV-FRM-MIN4-0142  1 Container

USDA Regulated Soil:  N/A - (Water) Sample/Other (describe): \_\_\_\_\_ Initials & Date of Person Examining Contents: 3-7-24 AGG  
 Did Samples Originate from one of the following states (check maps) - AL, AR, AZ, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA:  YES  NO Did samples originate from a foreign source (international, including Hawaii and Puerto Rico):  YES  NO  
 NOTE: If YES to either question, fill out a Regulated Soil Checklist (ENV-FRM-MIN4-0154) and include with SCUR/COC paperwork.

LOCATION (check one):	YES	NO	N/A	COMMENT(S)								
<input type="checkbox"/> DULUTH <input checked="" type="checkbox"/> MINNEAPOLIS <input type="checkbox"/> VIRGINIA												
Chain of Custody Present and Filled Out?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		1.								
Chain of Custody Relinquished?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		2.								
Sampler Name and/or Signature on COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.								
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		4. If Fecal: <input type="checkbox"/> <8 hrs <input type="checkbox"/> >8 hr, <24 hr <input type="checkbox"/> No								
Short Hold Time Analysis (<72 hr)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		5. <input type="checkbox"/> BOD / cBOD <input type="checkbox"/> Fecal coliform <input type="checkbox"/> Hex Chrom <input type="checkbox"/> HPC <input type="checkbox"/> Nitrate <input type="checkbox"/> Nitrite <input type="checkbox"/> Ortho Phos <input type="checkbox"/> Total coliform/E. coli <input type="checkbox"/> Other: _____								
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>		6.								
Sufficient Sample Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		7.								
Correct Containers Used? - Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.								
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>		9.								
Field Filtered Volume Received for Dissolved Tests?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10. Is sediment visible in the dissolved container: <input type="checkbox"/> YES <input type="checkbox"/> NO								
Is sufficient information available to reconcile the samples to the COC? NOTE: If ID/Date/Time don't match fill out section 11. Matrix: <input type="checkbox"/> Oil <input type="checkbox"/> Soil <input checked="" type="checkbox"/> Water <input type="checkbox"/> Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>		11. If NO, write ID/Date/Time of container below: <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142								
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO <sub>3</sub> , H <sub>2</sub> SO <sub>4</sub> , < 2 pH, NaOH > 9 Sulfide, NaOH > 10 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil & Grease, DRO/8015 (water) and Dioxins/PFAS	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12. Sample #: <input type="checkbox"/> HNO <sub>3</sub> <input type="checkbox"/> H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> NaOH <input type="checkbox"/> Zinc Acetate Positive for Residual Chlorine: <input type="checkbox"/> YES <input type="checkbox"/> NO <b>pH Paper Lot #</b> <table border="1"> <tr> <th>Residual Chlorine</th> <th>0-6 Roll</th> <th>0-6 Strip</th> <th>0-14 Strip</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> <input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142	Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip				
Residual Chlorine	0-6 Roll	0-6 Strip	0-14 Strip									
NOTE: If adding preservative to a container, it must be added to associated field and equipment blanks—verify with PM first.												
Headspace in Methyl Mercury Container?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.								
Extra labels present on soil VOA or WIDRO containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.								
Headspace in VOA Vials (greater than 6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/> See Exceptions form ENV-FRM-MIN4-0142								
Trip Blanks Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.								
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Pace Trip Blank Lot # (if purchased): _____								

CLIENT NOTIFICATION / RESOLUTION  
 Person Contacted: \_\_\_\_\_ Date & Time: \_\_\_\_\_  
 Comments / Resolution: \_\_\_\_\_  
 FIELD DATA REQUIRED:  YES  NO

Project Manager Review: Joanne Richardson Date: 3-7-24

NOTE: When 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).

Labeled By: AGG Line: 9



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

Te12-607-1700
Fax12-607-6444

Sample ID.....458725 Date Collected.....02/27/2024 Spike.....200 pg
Client..... National Testing Laborato Date Received.....03/07/2024 IS Spike.....2000 pg
Lab Sample ID..... 10685795001 Date Extracted.....03/08/2024 CS Spike.....200 pg

Table with 5 columns: Sample 458725, Method Blank, Lab Spike, Lab Spike Dup. Rows include [2,3,7,8-TCDD], LOQ, 2,3,7,8-TCDD Recovery, RPD, IS Recovery, CS Recovery, and a metadata section with Filename, Analysis Date, Time, Analyst, Volume, Dilution, ICAL Date, and CCAL Filename.

! = 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-13C12]
CS = Cleanup Standard [2,3,7,8-TCDD-37Cl4]

Analyst: [Signature]

Project No.....10685795



**ANALYTICAL RESULTS - RADIOCHEMISTRY**

Project: 2235175  
 Pace Project No.: 30664762

**Sample: 458725**      **Lab ID: 30664762001**      Collected: 02/27/24 13:00      Received: 02/29/24 09:45      Matrix: Drinking Water  
 PWS:      Site ID:      Sample Type:

- Comments:
- Sample collection dates and times were not present on the sample containers.
  - Upon receipt at the laboratory, 5 mls of nitric acid were added to the sample to meet the sample preservation requirement of pH <2 for radiochemistry analysis, where the method requires preservation, in drinking water. The samples were not preserved pH <2 within the required 5 days of collection (EPA 815-R-05-004).
  - SOURCE WATER, Spring, Southfield, MA
  - No brand type/product code listed, no container size listed, no production code/lot number listed.
  - No date/time/opened by listed.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radon	SM 7500RnB-1996	<b>181.7 ± 38.6 (52.9)</b> C:NA T:NA	pCi/L	03/01/24 11:01	10043-92-2	
Pace Analytical Services - Greensburg						
Gross Alpha	EPA 900.0	<b>-0.440 ± 0.894 (2.75)</b> C:NA T:NA	pCi/L	03/15/24 10:01	12587-46-1	
Gross Beta	EPA 900.0	<b>0.983 ± 0.866 (1.84)</b> C:NA T:NA	pCi/L	03/15/24 10:01	12587-47-2	
Pace Analytical Services - Greensburg						
Radium-226	EPA 903.1	<b>0.773 ± 0.626 (0.913)</b> C:NA T:89%	pCi/L	03/13/24 13:15	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 904.0	<b>-0.00457 ± 0.365 (0.854)</b> C:80% T:79%	pCi/L	03/13/24 11:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.773 ± 0.991 (1.77)</b>	pCi/L	03/18/24 15:47	7440-14-4	

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2235175  
 Pace Project No.: 30664762

---

QC Batch: 652137	Analysis Method: SM 7500RnB-1996
QC Batch Method: SM 7500RnB-1996	Analysis Description: 7500Rn B Radon
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30664762001

---

METHOD BLANK: 3176714 Matrix: Water

Associated Lab Samples: 30664762001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radon	-2.3 ± 17.7 (31.2) C:NA T:NA	pCi/L	03/01/24 08:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2235175  
 Pace Project No.: 30664762

---

QC Batch: 652569	Analysis Method: EPA 900.0
QC Batch Method: EPA 900.0	Analysis Description: 900.0 Gross Alpha/Beta
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30664762001

---

METHOD BLANK: 3178988 Matrix: Water

Associated Lab Samples: 30664762001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	-0.330 ± 0.566 (1.83) C:NA T:NA	pCi/L	03/15/24 08:18	
Gross Beta	0.564 ± 0.709 (1.56) C:NA T:NA	pCi/L	03/15/24 08:18	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2235175  
 Pace Project No.: 30664762

---

QC Batch: 652680	Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1	Analysis Description: 903.1 Radium-226, DW
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30664762001

---

METHOD BLANK: 3179472 Matrix: Drinking Water

Associated Lab Samples: 30664762001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.156 ± 0.306 (0.560) C:NA T:90%	pCi/L	03/13/24 13:00	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL - RADIOCHEMISTRY**

Project: 2235175  
 Pace Project No.: 30664762

---

QC Batch: 652681	Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0	Analysis Description: 904.0 Radium 228, DW
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30664762001

---

METHOD BLANK: 3179475 Matrix: Drinking Water

Associated Lab Samples: 30664762001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.960 ± 0.382 (0.683) C:90% T:82%	pCi/L	03/13/24 11:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

**REPORT OF LABORATORY ANALYSIS**

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## QUALIFIERS

Project: 2235175  
Pace Project No.: 30664762

### 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 - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.  
Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(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.

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



## CERTIFICATIONS

Project: 2235175  
Pace Project No.: 30664762

### Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

ANABISO/IEC 17025:2017 Rad Cert#: L24170

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 2950

Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221

KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA010

Louisiana DEQ/TNI Certification #: 04086

Maine Certification #: 2023021

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572023-03

New Hampshire/TNI Certification #: 297622

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-015

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN02867

Texas/TNI Certification #: T104704188-22-18

Utah/TNI Certification #: PA014572223-14

USDA Soil Permit #: 525-23-67-77263

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.



### SAMPLE SUMMARY

Project: 2235175  
Pace Project No.: 30664762

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30664762001	458725	Drinking Water	02/27/24 13:00	02/29/24 09:45

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



### SAMPLE ANALYTE COUNT

Project: 2235175  
Pace Project No.: 30664762

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30664762001	458725	SM 7500RnB-1996	KET	1	PASI-PA
		EPA 900.0	REH1	2	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

### REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
without the written consent of Pace Analytical Services, LLC.



1-800-458-3330

# Beverage - Source Water

Order Number: 2235175

Order Date: 1/29/2024

Sample Number: 458725

Product: 50 WODDBP

Paid: No Method: MasterCard P.O.:

TSR: SBW

Southfield

MA 01259-9799

Date Sampled: 2, 27, 24

Time Sampled: 13:00 Please Use Military Time, e.g. 3:00pm = 15:00

Check Time Zone:  EST  CST  MST  PST

**WO# : 30664762**

PM: CMC Due Date: 03/21/24  
CLIENT: NTL

## Source Water Information:

PWS ID# (if applicable): \_\_\_\_\_

Source Name: Spring

City & State: \_\_\_\_\_

Sample Collected By: Matt [Signature]  
(If Different than Above)  
(Signature)

Sample Collected By: Matt Klimkosky  
(Please Print)

Sample Temperature: \_\_\_\_\_ Field pH: \_\_\_\_\_

Measured at Source By: \_\_\_\_\_

Form Completed By: Matt Klimkosky

Additional Comments: \_\_\_\_\_

For Laboratory Use ONLY	
Lab Accounting Information:	
Payment \$:	_____
Check #:	_____
Lab Comments/Special Instructions:	
Spring Source	
<u>Radon, Lead</u>	
State Forms:	60
NY	
Lab Sample Information:	
Date Received:	<u>RECEIVED FEB 28 2024</u>
Time Received:	<u>09:34</u>
Received By:	<u>AP</u>
<input type="checkbox"/> Sample receipt criteria checked & acceptable. <input checked="" type="checkbox"/> Deviations from acceptable sample receipt criteria noted on PSA form.	

Rev: SRT102120 INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS



ENV-FRM-GBUR-0088 v07\_Sample Condition Upon Receipt-Greensburg

Effective Date: 01/04/2024

WO#: 30664762

PM: CMC

Due Date: 03/21/24

Client Name: **NTL**

CLIENT: NTL

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking Number: **1Z AIV 931 01 7581 6274**

Examined By: **PS 2/29/24**

Custody Seal on Cooler/Box Present:  Yes  No  
 Thermometer Used: \_\_\_\_\_ Type of Ice: Wet Blue None

Labeled By: **PS 2/29/24**  
 Temped By: \_\_\_\_\_

Cooler Temperature: Observed Temp \_\_\_\_\_ °C Correction Factor: \_\_\_\_\_ °C Final Temp: \_\_\_\_\_ °C  
 Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot# <b>1002931</b>	D.P.D. Residual Chlorine Lot # _____
Chain of Custody Present	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.	
Chain of Custody Filled Out: -Were client corrections present on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Chain of Custody Relinquished	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.	
Sampler Name & Signature on COC:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.	
Sample Labels match COC: -Includes date/time/ID Matrix: <b>DW</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	5.	<b>No dates (times on bottles/vials)</b>
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
Short Hold Time Analysis (<72hr remaining):	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Rush Turn Around Time Requested:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	8.	
Sufficient Volume:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
Correct Containers Used: -Pace Containers Used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.	
Containers Intact:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	
Orthophosphate field filtered:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	12.	
Hex Cr Aqueous samples field filtered:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	13.	
Organic Samples checked for dechlorination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	14.	
Filtered volume received for dissolved tests:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	15.	
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, <u>Radon</u> , non-aqueous matrix	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	16.	<b>added 5.0 ml HNO3 to bottles</b>   <b>Radon</b>
All containers meet method preservation requirements:	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <b>PS</b>	Date/Time of Preservation: <b>2/29/24 12:30</b>
8260C/D: Headspace in VOA Vials (> 6mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Lot# of added Preservative: <b>30194569</b>	
624.1: Headspace in VOA Vials (0mm)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	17.	
Radon: Headspace in RAD Vials (0mm)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18.	
Trip Blank Present:	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	19.	Trip blank custody seal present? YES or NO
Rad Samples Screened <.05 mrem/hr.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Initial when completed: <b>PS</b>	Date: <b>2/29/24</b> Survey Meter SN: <b>25014380</b>
Comments:					

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office. PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.



# 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](mailto:cinnasblab@EMSL.com)

EMSL Order ID: 042404230  
Customer ID: NTLI78  
Customer PO: 14630  
Project ID:

**Attn:** Subcontract  
National Testing Laboratories, Inc.  
6571 Wilson Mills Road  
Cleveland, OH 44143

**Phone:** (440) 449-2525  
**Fax:** (Ema) il -only  
**Received:** 03/01/2024  
**Analyzed:** 03/16/2024

**Proj:** 2235175

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

### ASBESTOS

Sample ID Client / EMSL	Sample Filtration Date/Time	Original Sample Vol. Filtered (ml)	Effective Filter Area (mm <sup>2</sup> )	Area Analyzed (mm <sup>2</sup> )	ASBESTOS				
					Asbestos Types	Fibers Detected	Analytical Sensitivity	Concentration	Confidence Limits
458725 042404230-0001	3/14/2024 12:17 AM	100	1339	0.0768	None Detected	ND	0.17	<0.17	0.00 - 0.64

MFL (million fibers per liter)

Collection Date/Time: 02/27/2024 13:00 PM

Sample ozonated prior to analysis due to lab receipt time exceeding 48hr method hold time.

Bottle supplied by client.

Analyst(s)  
Gregory Barry (1)

Samantha Rundstrom, Laboratory Manager  
or Other Approved Signatory

Any questions please contact Samantha Rundstrom-Cruz.

Initial report from: 03/16/2024 10:49:58

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above, and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. Results are generated from the field sampling data (sampling volumes and areas, locations, etc.) provided by the client on the Chain of Custody. Samples are within quality control criteria and met method specifications unless otherwise noted. Estimation of uncertainty is available on request. Sample collection performed by the client. Pre-cleaned sample containers are available for purchase from EMSL. Note if sample containers are provided by the client, acceptable bottle blank level is defined as  $\leq 0.01$  MFL for  $\geq 10$ um fibers. ND=None Detected. No Fibers Detected: the value will be reported as less than 369% of the concentration equivalent to one fiber. 1 to 4 fibers: The result will be reported as less than the corresponding upper 95% confidence limit (Poisson), 5 to 30 fibers: Mean and 95% confidence intervals will be reported on the basis of the Poisson assumption. When more than 30 fibers are counted, both the Gaussian 95% confidence interval and the Poisson 95% confidence interval will be calculated. The large of these two intervals will be selected for data reporting. When the Gaussian 95% confidence interval is selected for data reporting, the Poisson will also be noted.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAC NYS ELAP 10872, NJ DEP 03036, FL DOH E87975, PA ID# 68-00367



## Case Narrative

Client: National Testing Laboratories, Ltd  
Project: 458725/ 2235175

Job ID: 810-96039-1

**Job ID: 810-96039-1**

**Eurofins Eaton Analytical South Bend**

### Job Narrative 810-96039-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

#### Receipt

The sample was received on 3/5/2024 10:00 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.4°C.

#### GC/MS Semi VOA

Method 522\_PREC: The low level laboratory control sample (LLCS) for preparation batch 810-91968 and analytical batch 810-92068 recovered outside control limits (50-150%) for the following analytes: 1,4-Dioxane (183%). The LLCS was reanalyzed with similar results. These analytes were biased high in the LLCS and were not detected in the associated samples; therefore, the data have been reported.458725 (810-96039-1) and (LLCS 810-91968/2-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### LCMS

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

#### General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



# Client Sample Results

Client: National Testing Laboratories, Ltd  
 Project/Site: 458725/ 2235175

Job ID: 810-96039-1

**Client Sample ID: 458725**

**Lab Sample ID: 810-96039-1**

Date Collected: 02/27/24 13:00

Matrix: Drinking Water

Date Received: 03/05/24 10:00

### Method: EPA 522 - 1,4 Dioxane (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	<0.070	*+	0.070		ug/L		03/13/24 08:24	03/13/24 19:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	89		70 - 130				03/13/24 08:24	03/13/24 19:45	1

### Method: EPA 331.0 - Perchlorate (LC/MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.058		0.050		ug/L			03/07/24 23:26	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (EPA 335.4)	<0.0050		0.0050		mg/L		03/06/24 15:20	03/06/24 16:36	1



## Definitions/Glossary

Client: National Testing Laboratories, Ltd  
Project/Site: 458725/ 2235175

Job ID: 810-96039-1



### Qualifiers

#### GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.

### Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

# Lab Chronicle

Client: National Testing Laboratories, Ltd  
Project/Site: 458725/ 2235175

Job ID: 810-96039-1

**Client Sample ID: 458725**

**Lab Sample ID: 810-96039-1**

**Date Collected: 02/27/24 13:00**

**Matrix: Drinking Water**

**Date Received: 03/05/24 10:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	522			91968	HB	EA SB	03/13/24 08:24
Total/NA	Analysis	522		1	92068	TD	EA SB	03/13/24 19:45
Total/NA	Analysis	331.0		1	91297	GL	EA SB	03/07/24 23:26
Total/NA	Prep	Distill/CN			91173	GB	EA SB	03/06/24 15:20
Total/NA	Analysis	335.4		1	91244	GB	EA SB	03/06/24 16:36

**Laboratory References:**

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777



# Accreditation/Certification Summary

Client: National Testing Laboratories, Ltd  
Project/Site: 458725/ 2235175

Job ID: 810-96039-1

## Laboratory: Eurofins Eaton Analytical South Bend

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Ohio	State	87775	06-30-24

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
331.0		Drinking Water	Perchlorate
335.4	Distill/CN	Drinking Water	Cyanide, Total
522	522	Drinking Water	1,4-Dioxane



# Method Summary

Client: National Testing Laboratories, Ltd  
Project/Site: 458725/ 2235175

Job ID: 810-96039-1

Method	Method Description	Protocol	Laboratory
522	1,4 Dioxane (GC/MS SIM)	EPA	EA SB
331.0	Perchlorate (LC/MS/MS)	EPA	EA SB
335.4	Cyanide, Total	EPA	EA SB
522	Solid-Phase Extraction (SPE)	EPA	EA SB
Distill/CN	Distillation, Cyanide	None	EA SB

**Protocol References:**

EPA = US Environmental Protection Agency  
None = None

**Laboratory References:**

EA SB = Eurofins Eaton Analytical South Bend, 110 S Hill Street, South Bend, IN 46617, TEL (574)233-4777





# Sample Summary

Client: National Testing Laboratories, Ltd  
Project/Site: 458725/ 2235175

Job ID: 810-96039-1

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
810-96039-1	458725	Drinking Water	02/27/24 13:00	03/05/24 10:00

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11



1-800-458-3330

# Beverage - Source Water

Order Number: 2235175  
 Order Date: 1/29/2024  
 Sample Number: 458725  
 Product: 50 WODDBP  
 Paid: No Method: MasterCard P.O.:  
 TSR: SBW

Southfield

MA 01259-9799

Date Sampled: 2 / 27 / 24

Time Sampled: 13 : 00 Please Use Military Time, e.g. 3:00pm = 15:00

Check Time Zone:  EST  CST  MST  PST

## Source Water Information:

PWS ID# (if applicable): \_\_\_\_\_

Source Name: Spring

City & State: \_\_\_\_\_  
(If Different than Above)

Sample Collected By: *Matt Jy*  
(Signature)

Sample Collected By: Matt Klinkosky  
(Please Print)

Sample Temperature: \_\_\_\_\_ Field pH: \_\_\_\_\_

Measured at Source By: \_\_\_\_\_

Form Completed By: Matt Klinkosky

Additional Comments: \_\_\_\_\_

For Laboratory Use ONLY	
Lab Accounting Information:	
Payment \$:	_____
Check #:	_____
Lab Comments/Special Instructions:	
Spring Source	
Cn, perchlorate, 1, 4- Dioxane	
State Forms:	NY 60
Lab Sample Information:	
Date Received:	RECEIVED FEB 28 2024
Time Received:	09:39
Received By:	Ap
<input type="checkbox"/> Sample receipt criteria checked & acceptable. <input checked="" type="checkbox"/> Deviations from acceptable sample receipt criteria noted on PSA form.	
PSA <i>logn</i>	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11

Rev: SRT102120 INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS



## ANALYTICAL REPORT

Lab Number:	L2411034
Client:	National Testing Laboratories, LTD 6571 Wilson Mills Rd. Cleveland, OH 44143
ATTN:	Christine MacMillan
Phone:	(440) 449-2525
Project Name:	SPRING
Project Number:	Not Specified
Report Date:	03/11/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0825), DoD (L2474), FL (E87814), IL (200081), IN (C-MA-04), KY (KY98046), LA (85084), ME (MA00030), MD (350), MI (99110), NJ (MA015), NY (11627), NC (685), OH (CL106), OR (MA-0262), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #525-23-107-88708), USFWS (Permit #206964).

---

320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2411034-01	458725	DW	2235175	02/27/24 13:00	02/29/24
L2411034-02	458725- FIELD BLANK	DW	2235175	02/27/24 13:00	02/29/24



**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

**Case Narrative (continued)**

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Darian Dailey

Title: Technical Director/Representative

Date: 03/11/24

# ORGANICS

# SEMIVOLATILES



**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

**SAMPLE RESULTS**

**Lab ID:** L2411034-01  
**Client ID:** 458725  
**Sample Location:** 2235175

**Date Collected:** 02/27/24 13:00  
**Date Received:** 02/29/24  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Dw  
**Analytical Method:** 133,537.1  
**Analytical Date:** 03/08/24 18:50  
**Analyst:** RDB

**Extraction Method:** EPA 537.1  
**Extraction Date:** 03/07/24 16:39

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab</b>						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.621	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.621	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.621	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.621	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.621	1
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.621	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.621	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.621	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.621	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.621	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.621	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.621	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.621	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.621	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.621	1
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.621	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.621	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.621	1
PFAS, Total (6)	ND		ng/l	2.00	0.621	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	94		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	92		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	97		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	108		70-130

**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 133,537.1  
**Analytical Date:** 03/08/24 15:35  
**Analyst:** RDB

**Extraction Method:** EPA 537.1  
**Extraction Date:** 03/07/24 16:20

Parameter	Result	Qualifier	Units	RL	MDL
<b>Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab for sample(s): 01 Batch: WG1893516-1</b>					
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	0.668
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	0.668
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.00	0.668
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	0.668
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	0.668
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.00	0.668
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	0.668
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	0.668
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	0.668
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	0.668
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.00	0.668
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	0.668
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	0.668
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	0.668
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	0.668
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.00	0.668
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	0.668
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	0.668
PFAS, Total (6)	ND		ng/l	2.00	0.668

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	109		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	101		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	109		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	102		70-130

### Lab Control Sample Analysis Batch Quality Control

Lab Number: L2411034  
Report Date: 03/11/24

Project Name: SPRING  
Project Number: Not Specified

Parameter	LCS		LCSD		%Recovery		RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual	%Recovery	Limits			
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1893516-2									
Perfluorobutanesulfonic Acid (PFBS)	121	-	-	-	50-150	-	-	-	30
Perfluorohexanoic Acid (PFHxA)	131	-	-	-	50-150	-	-	-	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	111	-	-	-	50-150	-	-	-	30
Perfluoroheptanoic Acid (PFHpA)	145	-	-	-	50-150	-	-	-	30
Perfluorohexanesulfonic Acid (PFHxS)	118	-	-	-	50-150	-	-	-	30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	146	-	-	-	50-150	-	-	-	30
Perfluorooctanoic Acid (PFOA)	135	-	-	-	50-150	-	-	-	30
Perfluorononanoic Acid (PFNA)	150	-	-	-	50-150	-	-	-	30
Perfluorooctanesulfonic Acid (PFOS)	124	-	-	-	50-150	-	-	-	30
Perfluorodecanoic Acid (PFDA)	138	-	-	-	50-150	-	-	-	30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	114	-	-	-	50-150	-	-	-	30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	119	-	-	-	50-150	-	-	-	30
Perfluoroundecanoic Acid (PFUnA)	141	-	-	-	50-150	-	-	-	30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	122	-	-	-	50-150	-	-	-	30
Perfluorododecanoic Acid (PFDoA)	146	-	-	-	50-150	-	-	-	30
11-Chloroicosadecafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	109	-	-	-	50-150	-	-	-	30
Perfluorotridecanoic Acid (PFTriDA)	133	-	-	-	50-150	-	-	-	30
Perfluorotetradecanoic Acid (PFTTA)	141	-	-	-	50-150	-	-	-	30



### Lab Control Sample Analysis

Batch Quality Control

Project Name: SPRING  
 Project Number: Not Specified

Lab Number: L2411034  
 Report Date: 03/11/24

Parameter	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 Batch: WG1893516-2

Surrogate	LCS %Recovery	Qual	LCS %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	106							70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	99							70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	107							70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEFOSAA)	101							70-130



### Matrix Spike Analysis Batch Quality Control

**Lab Number:** L2411034  
**Report Date:** 03/11/24

**Project Name:** SPRING  
**Project Number:** Not Specified

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1893516-3 QC Sample: L2410784-02 Client ID: MS Sample									
Perfluorobutanesulfonic Acid (PFBS)	4.90	1.65	6.94	124	-	-	50-150	-	30
Perfluorohexanoic Acid (PFHxA)	7.72	1.86	9.67	105	-	-	50-150	-	30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid (HFPO-DA)	ND	1.86	1.78J	96	-	-	50-150	-	30
Perfluorohexanoic Acid (PFHxA)	3.66	1.86	5.82	116	-	-	50-150	-	30
Perfluorohexanesulfonic Acid (PFHxS)	1.65J	1.7	3.46	204	Q	-	50-150	-	30
4,8-Dioxa-3h-Perfluorononanoic Acid (ADONA)	ND	1.75	2.05	117	-	-	50-150	-	30
Perfluorooctanoic Acid (PFOA)	14.9	1.86	17.2	124	-	-	50-150	-	30
Perfluorononanoic Acid (PFNA)	1.87J	1.86	4.62	249	Q	-	50-150	-	30
Perfluorooctanesulfonic Acid (PFOS)	19.2	1.72	21.8	151	Q	-	50-150	-	30
Perfluorodecanoic Acid (PFDA)	1.45J	1.86	3.83	206	Q	-	50-150	-	30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND	1.73	1.94J	112	-	-	50-150	-	30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	1.86	2.36	127	-	-	50-150	-	30
Perfluoroundecanoic Acid (PFUnA)	ND	1.86	2.24	121	-	-	50-150	-	30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	1.86	2.56	138	-	-	50-150	-	30
Perfluorododecanoic Acid (PFDoA)	ND	1.86	2.37	128	-	-	50-150	-	30
11-Chloroicosafuoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND	1.75	1.78J	102	-	-	50-150	-	30
Perfluorotridecanoic Acid (PFTrDA)	ND	1.86	2.06	111	-	-	50-150	-	30
Perfluorotetradecanoic Acid (PFTrA)	ND	1.86	2.18	117	-	-	50-150	-	30



### Matrix Spike Analysis Batch Quality Control

**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD Qual	RPD Limits
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Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1893516-3 QC Sample: L2410784-02 Client ID: MS Sample

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	82				70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEFOSAA)	100				70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	102				70-130
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	84				70-130



### Lab Duplicate Analysis Batch Quality Control

**Project Name:** SPRING

**Lab Number:** L2411034

**Project Number:** Not Specified

**Report Date:** 03/11/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
<b>Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1893516-4 QC Sample: L2410784-04 Client ID: DUP Sample</b>						
Perfluorobutanesulfonic Acid (PFBS)	2.68	2.58	ng/l	4		30
Perfluorohexanoic Acid (PFHxA)	5.01	5.15	ng/l	3		30
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]propanoic Acid (HFPO-DA)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	2.18	2.28	ng/l	4		30
Perfluorohexanesulfonic Acid (PFHxS)	1.06J	1.06J	ng/l	NC		30
4,8-Dioxa-3H-Perfluorononanoic Acid (ADONA)	ND	ND	ng/l	NC		30
Perfluorooctanoic Acid (PFOA)	8.75	8.92	ng/l	2		30
Perfluorononanoic Acid (PFNA)	1.36J	1.40J	ng/l	NC		30
Perfluorooctanesulfonic Acid (PFOS)	11.3	11.3	ng/l	0		30
Perfluorodecanoic Acid (PFDA)	1.54J	1.56J	ng/l	NC		30
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl+PF3ONS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
11-Chloroicosafafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl+PF3OUdS)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30



### Lab Duplicate Analysis Batch Quality Control

**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
**Report Date:** 03/11/24

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab	Associated sample(s): 01	QC Batch ID: WG1893516-4		QC Sample: L2410784-04	Client ID: DUP	

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	90		95		70-130
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-13C3-Propanoic Acid (M3HFPO-DA)	88		93		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	97		102		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	106		103		70-130





Serial\_No:03112412:54  
 Lab Number: L2411034  
 Report Date: 03/11/24

Project Name: SPRING  
 Project Number: Not Specified

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**  
 Cooler A Custody Seal Absent

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2411034-01A	Plastic 250ml Trizma preserved	A	NA		2.1	Y	Absent		A2-MA-537.1(14)
L2411034-01B	Plastic 250ml Trizma preserved	A	NA		2.1	Y	Absent		A2-MA-537.1(14)
L2411034-02A	Plastic 250ml Trizma preserved	A	NA		2.1	Y	Absent		A2-L-EXT-537(14)

\*Values in parentheses indicate holding time in days



**Project Name:** SPRING  
**Project Number:**

**Serial\_No:**03112412:54  
**Lab Number:** L2411034  
**Report Date:** 03/11/24

### PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
<b>PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)</b>		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFOA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
<b>PERFLUOROALKYL SULFONIC ACIDS (PFSAAs)</b>		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
<b>FLUOROTELOMERS</b>		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
<b>PERFLUOROALKANE SULFONAMIDES (FASAs)</b>		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
<b>PERFLUOROALKANE SULFONYL SUBSTANCES</b>		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
<b>PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS</b>		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
<b>CHLORO-PERFLUOROALKYL SULFONIC ACIDS</b>		
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
<b>PERFLUOROETHER SULFONIC ACIDS (PFESAs)</b>		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEEA	113507-82-7
<b>PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)</b>		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

**Project Name:** SPRING  
**Project Number:**

Serial\_No:03112412:54  
**Lab Number:** L2411034  
**Report Date:** 03/11/24

### PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

**Project Name:** SPRING  
**Project Number:** Not Specified

**Lab Number:** L2411034  
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## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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#### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

#### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Chlordane:** The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Gasoline Range Organics (GRO):** Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

#### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively

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**Data Qualifiers**

Identified Compounds (TICs). For calculated parameters, this represents that one or more values used in the calculation were estimated.

- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

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### REFERENCES

- 133 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537.1, EPA/600/R-18/352. Version 1.0, November 2018.

### LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE,

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

#### Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1:

Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E,

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

### Mansfield Facility:

#### Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg.

EPA 522, EPA 537.1.

#### Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.





1-800-458-3330

# Beverage - Source Water

Order Number: 2235175  
Order Date: 1/29/2024  
Sample Number: 458725  
Product: 50 WODDBP

Paid: No Method: MasterCard P.O.:  
TSR: SBW

Southfield

MA 01259-9799

Date Sampled: 2 / 27 / 24

Time Sampled: 13 : 00 Please Use Military Time, e.g. 3:00pm = 15:00

Check Time Zone:  EST  CST  MST  PST

### Source Water Information:

PWS ID# (if applicable): \_\_\_\_\_

Source Name: Spring

City & State: \_\_\_\_\_

Sample Collected By: *Matt Ky* (If Different than Above)  
(Signature)

Sample Collected By: Matt Klimkusky  
(Please Print)

Sample Temperature: \_\_\_\_\_ Field pH: \_\_\_\_\_

Measured at Source By: \_\_\_\_\_

Form Completed By: Matt Klimkusky

Additional Comments: \_\_\_\_\_

For Laboratory Use ONLY	
Lab Accounting Information:	
Payment \$:	_____
Check #:	_____
Lab Comments/Special Instructions:	
Spring Source	
<i>PHS (18)</i>	
State Forms:	NY <span style="float: right;"><i>60</i></span>
Lab Sample Information:	
Date Received:	RECEIVED FEB 28 2024
Time Received:	09:34
Received By:	<i>Ap</i>
<input type="checkbox"/> Sample receipt criteria checked & acceptable. <input checked="" type="checkbox"/> Deviations from acceptable sample receipt criteria noted on PSA form.	
<b>PSA</b> <i>logn</i>	