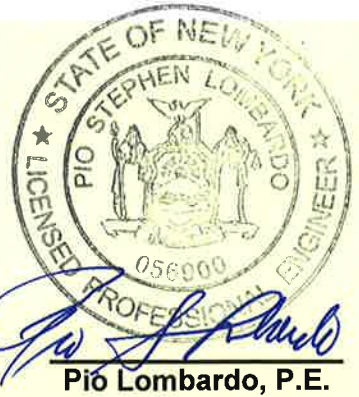


---

# Appendix D



Pio Lombardo, P.E.  
NYS PE # 056900

Little Fresh Pond

# Southampton Country Day Camp

## Water Quality Impact Evaluation

Southampton  
Country Day  
Camp

*Prepared by:*

**LOMBARDO ASSOCIATES, INC.**

188 Church Street  
Newton, Massachusetts 02458

January 12, 2016

## TABLE OF CONTENTS

1.	PROJECT PURPOSE & EXECUTIVE SUMMARY .....	3
2.	SITE - WATERSHED CHARACTERIZATION.....	5
	2.1 Site & Watershed Existing Background Information .....	5
	2.2 Groundwater & Pond Elevation & Quality Information .....	7
3.	DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS .....	13
	3.1 Discussion & Conclusions .....	13
	3.2 Recommendations .....	14
	APPENDIX A REFERENCES .....	15
	APPENDIX B WATER QUALITY LABORATORY RESULTS .....	16

### List of Figures

Figure 2-1	SCDC Site & Little Fresh Pond - Aerial Photographs .....	6
Figure 2-2	SCDC Site and Area Groundwater Time of Travel .....	7
Figure 2-3	Groundwater Elevations / Contours–Watershed Boundaries.....	8
Figure 2-4	SCDC Groundwater Monitoring Wells & Groundwater Elevations .....	9

### List of Tables

Table 2-1	SCDC Site Groundwater & Pond Water Elevations .....	10
Table 2-2	SCDC Site Groundwater & Pond Water Quality - August 7, 2015 .....	11
Table 2-3	SCDC Site Groundwater & Pond Water Quality - August 7, 2015 & Nov. 24, 2105 ...	12

## 1. PROJECT PURPOSE & EXECUTIVE SUMMARY

Lombardo Associates, Inc. (LAI) has been retained HARRIS BEACH PLLC and Jay Jacobs, owner of the Southampton Country Day Camp (SCDC) to provide a professional engineering opinion on the water quality impact of the Southampton Country Day Camp on Little Fresh Pond. This report presents the groundwater elevation and water quality data that LAI requested be collected to serve as the basis for impact determination and to identify any potential mitigation or Little Fresh Pond restoration measures. LAI also independently collected groundwater elevation data to determine groundwater flow patterns at the SCDC site.

Based upon United States Geological Survey (USGS) reports and SCDC site specific data as described herein, Little Fresh Pond is located at the edge of groundwater subwatersheds that drain to the Peconic Estuary. The northeastern groundwater subwatershed in the area of the SCDC site drains to North Sea Harbor while the northwestern subwatershed in the area of the SCDC site drains to Bullhead Bay. **However, groundwater subwatershed boundaries are not static and change seasonally and over time due to climatic and human induced (anthropogenic) factors.** While the USGS groundwater subwatershed map places the SCDC site within the subwatershed draining to North Sea Harbor, it is noted that the boundary line, while not only not being static, is a inferred location based upon limited USGS collected data.

It is noted that Suffolk County Department of Health Services (SCDHS) groundwater travel time maps are based upon numerous assumptions and judgements (i.e. therefore lower reliability) and are secondary information as compared to USGS data and the primacy of locally collected data of an intense well network. It appears that the SCDHS travel time map for the Little Fresh Pond areas was adjusted to represent surface watershed boundaries. For Suffolk County and all unconfined groundwater aquifers, groundwater subwatersheds do not match surface watersheds. Consequently the SCDHS groundwater travel map for the Little Fresh Pond watershed is suspected to be inaccurate for this reason as well as it is in conflict with the USGS data/map.

Consequently to address the uncertainty of groundwater flow patterns at the SCDC site, four groundwater wells were installed on the SCDC property in August 2015 and groundwater and Little Fresh Pond elevations surveyed through December 2015 to determine groundwater flow paths on the SCDC site. The objective was to have site specific data to determine if SCDC wastewater and infiltrated stormwater discharge to Little Fresh Pond, and if not, in which direction. Groundwater and Pond water quality data was also collected to characterize groundwater quality and to determine if SCDC site use groundwater impacts were discernible.

The results of the SCDC site – Little Fresh Pond groundwater elevation and water quality data investigations, as described in this Report, are:

1. **Groundwater at the SCDC site does not flow towards Little Fresh Pond.** Rather based upon the site data, SCDC groundwater flows to the west-northwest.
2. Groundwater at the four SCDC wells was of high quality and did not indicate any materially significant impact of wastewater and was indicative of relatively pristine water quality.

While we cannot say with certainty which properties around the pond are responsible for its degradation, we can say, for certain, that the SCDC property is not a contributor, as specific SCDC site testing has established that groundwater from the property flows in a different direction than towards Little Fresh Pond, the elevation of the Pond is higher than that of the groundwater flowing off the SCDC property, and the quality of the groundwater tested from the property was of a high quality. The SCDC site testing provides the basis for the finding that the SCDHS groundwater travel map for the Little Fresh Pond area are, in our opinion, inaccurate.

While SCDC groundwater does not flow to Little Fresh Pond, following are recommendations to restore the degraded quality of Little Fresh Pond. Pond water quality restoration efforts generally require in-Pond and watershed based remediation efforts. In-Pond efforts are usually associated with reducing the release of nutrients (predominately phosphorus) from Pond sediments – either by sediment removal and/or sediment sealing. Watershed based efforts focus on reducing phosphorus contributions to the Pond. These efforts typically are predominately focused on wastewater and stormwater and to a lesser extent fertilizers, as laws restricting fertilizers exist. Use of buffers along the Pond can potentially be of value to water quality restoration efforts.

However, for addressing wastewater improvements, understanding groundwater flow patterns to and from the Pond is essential to identify those properties that are causing Little Fresh Pond degradation and therefore would be candidates for upgrades that could achieve improvements to Little Fresh Pond.

There is insufficient data to state with the necessary degree of certainty which properties are discharging to Little Fresh Pond. Consequently, one cannot state with certainty which properties should receive wastewater remediation to improve Pond water quality.

Consequently, it is recommended that the Little Fresh Pond neighborhood implement the following data collection program to determine which properties/areas are discharging to Little Fresh Pond and therefore which properties should have improved wastewater systems:

- i. Installation of groundwater elevation and water quality monitoring wells surrounding the pond – 4 - 6 wells in addition to those installed on the SCDC property, which are described herein.
- ii. Prepare a water budget for the Pond that identifies and quantifies water sources and losses – which would describe groundwater flow direction.

To determine the appropriate corrective actions to restore the quality of Little Fresh Pond, the following additional Pond investigations should be performed:

- iii. Bathymetric and sediment thickness survey
- iv. Pond reconnaissance (on-pond and land) to identify and direct discharges (including stormwater runoff)

to estimate the influence of Pond muds and any obvious direct discharges to Little Fresh Pond.

Based upon the results of the above efforts, a holistic Little Fresh Pond Water Quality Restoration Plan could be developed.

## 2. SITE - WATERSHED CHARACTERIZATION

### 2.1 SITE & WATERSHED EXISTING BACKGROUND INFORMATION

The Southampton Country Day Camp (SCDC) site is located southeast of Little Fresh Pond as illustrated on Figure 2-1. To estimate groundwater/wastewater flow from the SCDC site, the following data sources were assembled and reviewed:

- ✓ Groundwater Time of Travel Maps as prepared by SCDHS – see Figure 2-2
- ✓ Groundwater elevations / contours as prepared by the USGS (Schubert, 1999) – see Figure 2-3

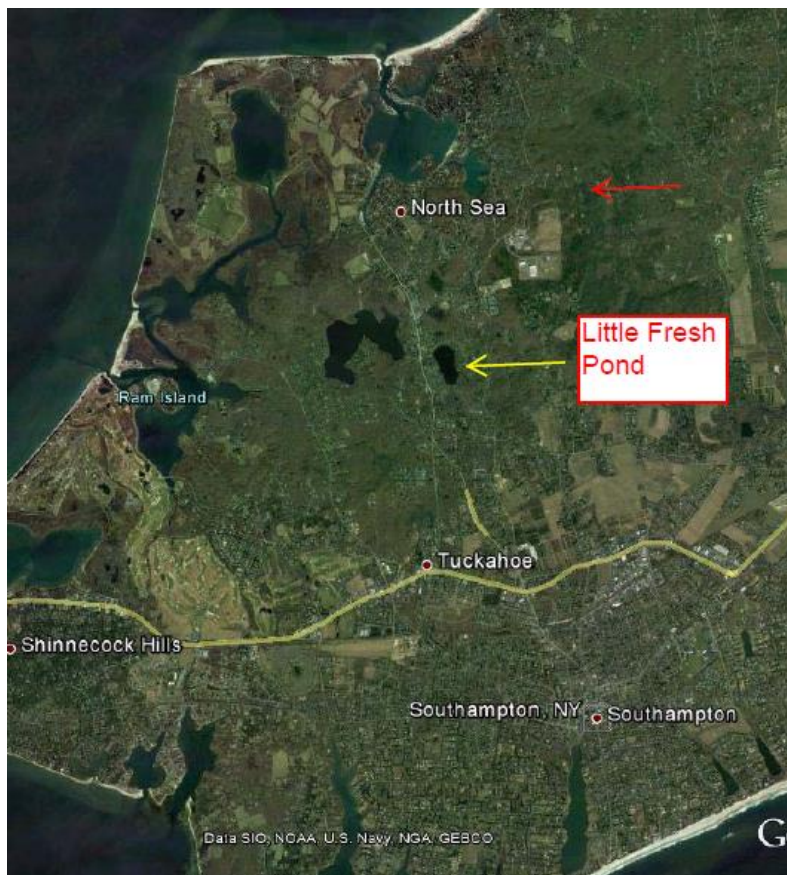
While the Figure 2-2 map suggests that groundwater on the SCDS property area flows towards Little Fresh Pond, it is recognized that the model results are affected by the model assumptions for the area – which are not available. The SCDHS groundwater flow travel times indicate that groundwater around the Pond flows toward the Pond and that wastewater discharges to the ground at the SCDC site would reach Little Fresh Pond within 2 – 5 years.

The USGS groundwater elevations and watershed boundaries map on Figure 2—3 suggest SCDC groundwater and wastewater discharges may flow to Little Fresh Pond or to the northeast and not through Little Fresh Pond. The USGS map identifies a groundwater watershed divide close to the SCDC property. However it is recognized that the groundwater elevations and boundaries are not fixed and vary seasonally and yearly based upon climatic and human induced groundwater impacts. It is noted that the subwatershed boundary line, while not only not being static, is a inferred location based upon limited USGS collected data.

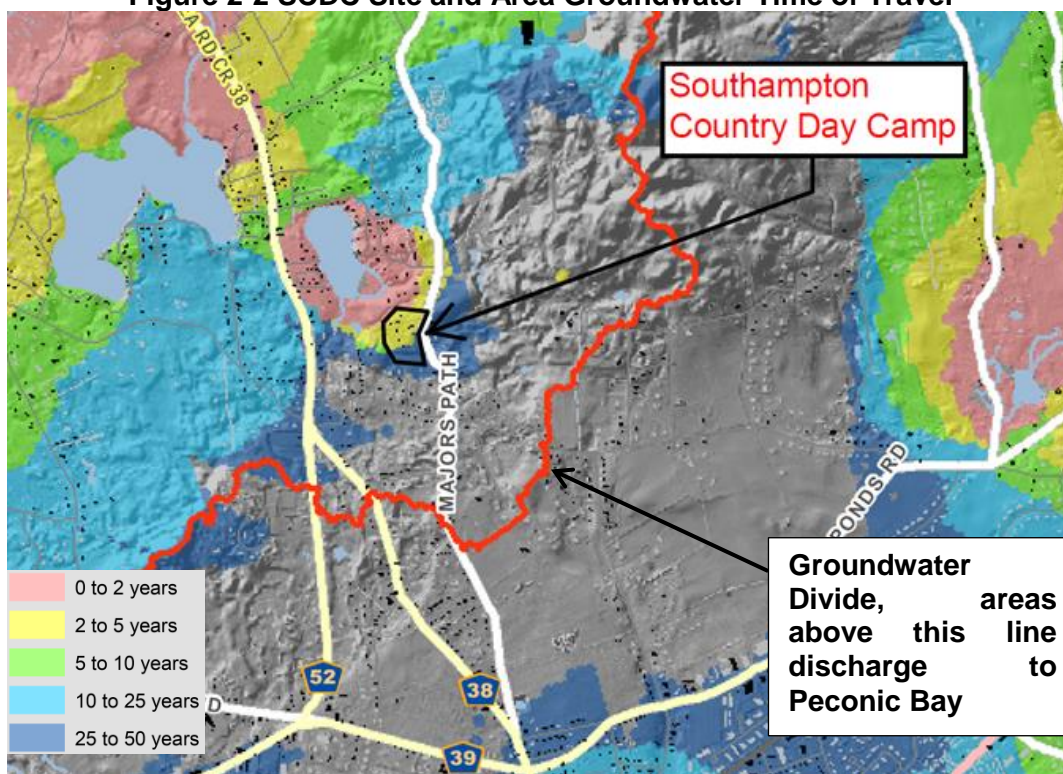
Consequently due to the above observations, Lombardo Associates, Inc. recommended the installation of groundwater wells for elevation monitoring to address the question on whether or under what conditions that SCDC site groundwater and wastewater are being discharged to Little Fresh Pond.

While others have based watershed delineations based upon surface topography, in LAI's opinion, as collaborated by USGS (Schubert personal communication, 2015), groundwater watershed boundaries in sandy soil aquifers do not necessarily, and generally do not, match surface watershed boundaries.

**Figure 2-1 SCDC Site & Little Fresh Pond - Aerial Photographs**



**Figure 2-2 SCDC Site and Area Groundwater Time of Travel**



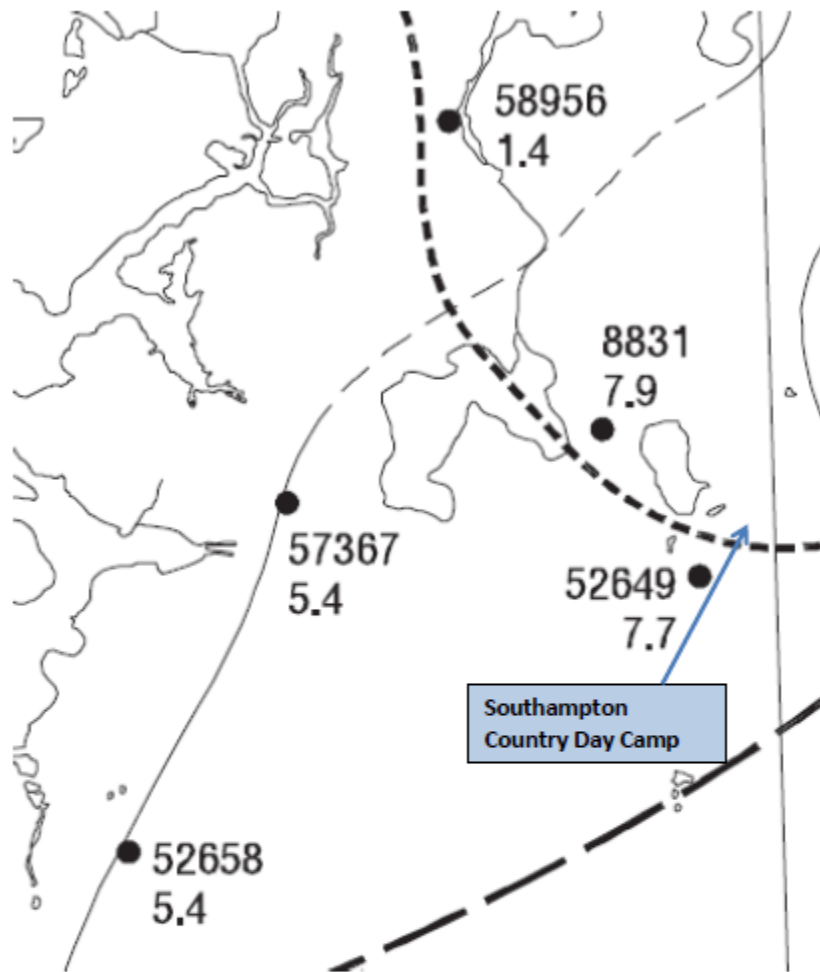
## 2.2 GROUNDWATER & POND ELEVATION & QUALITY INFORMATION

Per Lombardo Associates, Inc.'s recommendation, SCDC had groundwater monitoring wells installed in locations on SCDC property in August 2015 as shown on Figure 2-4. Table 2-1 presents the understood surveyed groundwater elevations at each well. Table 2-1 also presents the November 10, 17 & 24, 2015 and August 7, 2015 groundwater and Little Fresh Pond elevations data. The data indicates that while groundwater is very flat, groundwater flow direction is westerly across the SCDC site and not towards Little Fresh Pond.

Tables 2-2 and 2-3 present the groundwater and Pond water quality data for samples collected on August 7, 2015 and November 24, 2015.

To provide another level of certainty, LAI also independently had the wells surveyed and measured depths to groundwater. LAI's results are consistent with the Grosser data.

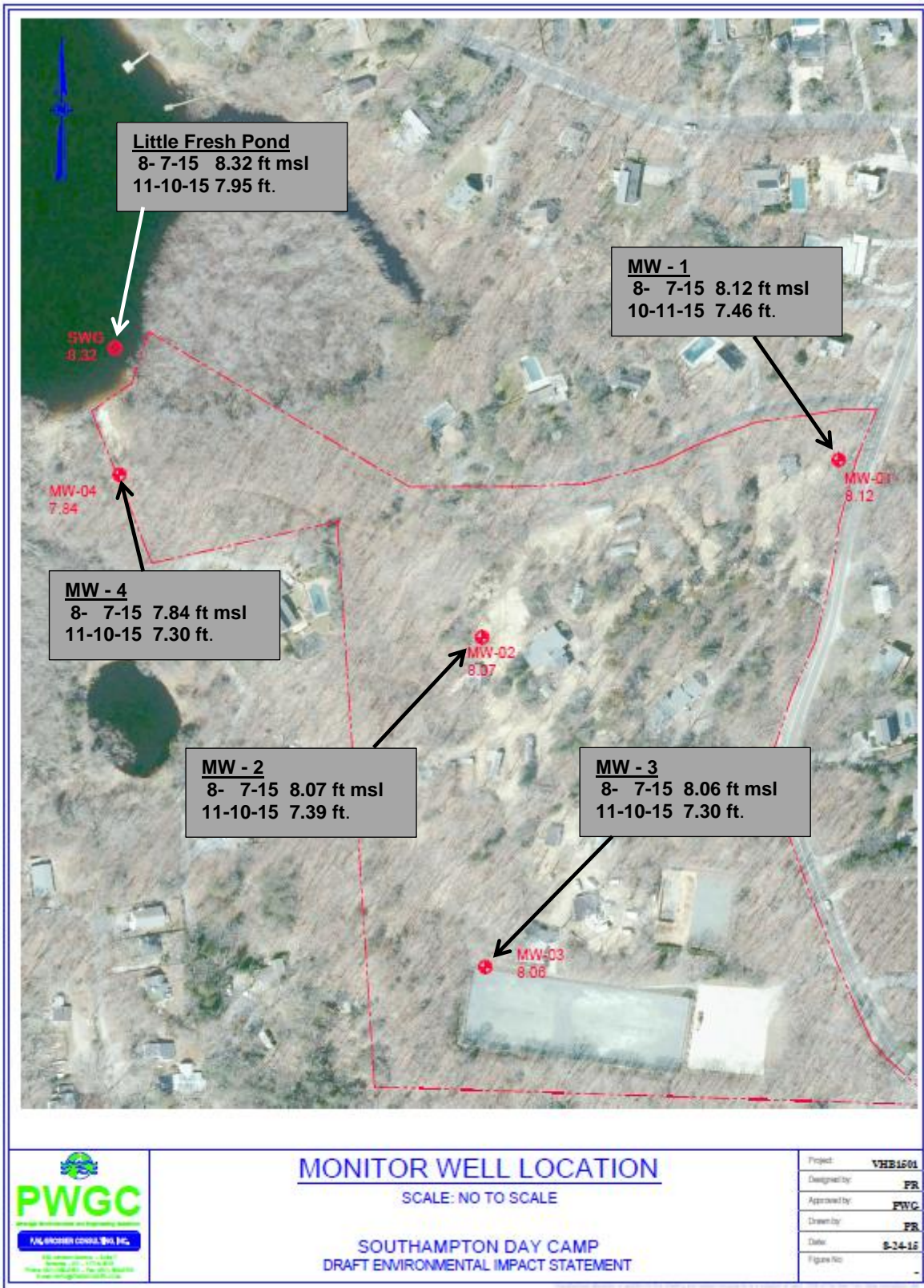
**Figure 2-3 Groundwater Elevations / Contours–Watershed Boundaries** (Schubert, 1999)



### EXPLANATION

- A. LOCAL STUDY AREA -- Indicates location of areas depicted in figures 3 and 6.
- APPROXIMATE BOUNDARY OF REGIONAL GROUND – WATER CONTRIBUTING AREA
- APPROXIMATE BOUNDARIES OF SELECTED LOCAL GROUND – WATER CONTRIBUTING AREAS
- WATER – TABLE CONTOUR -- Shows altitude of water table in March– April 1994. Dashed where approximately located. Contour interval, in feet, is variable. Datum is sea level.

**Figure 2-4 SDC Groundwater Monitoring Wells & Groundwater Elevations**



As provided by PW Grosser, 2015

**Table 2-1 SCDC Site Groundwater & Pond Water Elevations**

SCDC Groundwater & Little Fresh Pond Elevation Monitoring (feet above msl)						Screen Interval Elev.		Screen Length (feet)
Groundwater Monitoring Well #	7-Aug-15	10-Nov-15	17-Nov-15	24-Nov-15	Top of Well Elev.	From	To	
MW-1	8.12	7.46	6.93	7.04	55.72	10.29	0.29	10.00
MW-2	8.07	7.39	6.97	7.06	41.26	10.74	0.74	10.00
MW-3	8.06	7.30	6.81	6.89	26.46	16.76	6.76	10.00
MW-4	7.84	7.30	6.71	6.84	20.95	11.61	1.61	10.00
Little Fresh Pond Surface Elevation	8.32	7.95	7.3	7.37	10.29			10.00

As provided by PW Grosser, 2015

**Table 2-2 SCDC Site Groundwater & Pond Water Quality - August 7, 2015**

SCDC Groundwater Quality Monitoring - August 7, 2015						
Groundwater Monitoring Well #	MW-1	MW-2	MW-3	MW-4	Ave. of Well data	Little Fresh Pond Surface
Groundwater Elevation Feet (above msl)	8.12	8.07	8.06	7.84		8.32
Date of Observation	Aug. 7, 2015					
Well Location Description on SCDC property	NE corner	Center	Southern boundary	NW corner		at Pond shore
Total Coliform	>20,000	12,000	12,000	40		>20,000
Fecal Coliform	10	10	150	10		>20,000
PCBs	ND	ND	ND	ND		ND
Pesticides		Heptachlor = 0.031 ug/L				
Iron (mg/l)	0.638	0.352	3.07	0.663	1.18	0.167
Mangan. (mg/l)	0.2354	0.4054	0.1927	1.14	0.49	0.0057
Pot. (mg/l)	1.09	0.992	0.685	0.872	0.91	0.745
Sodium (mg/l)	20.6	8.15	5.87	8.82	10.86	7.23
Alkalinity (mg/l)	20.7	13	36.9	5.3	18.98	4
Chloride (mg/l)	35	16	33	14	24.50	11
Ammonia-N (mg/l)	ND	0.398	ND	0.119	0.26	0.049
Nitrite-N (mg/l)	0.032	0.028	0.033	0.027	0.03	0.024
Nitrate-N (mg/l)	0.598	0.253	ND	ND	0.43	ND
TIN (mg/l)	0.63	0.679	0.033	0.146	0.37	

As collected by PW Grosser August 7, 2015 data for TKN and phosphorus not valid due to sediment in sample

**Table 2-3 SCDC Site Groundwater & Pond Water Quality - August 7, 2015 & Nov. 24, 2105**

MW-1	7-Aug-15	24-Nov-15	MW-2	7-Aug-15	24-Nov-15	MW-3	7-Aug-15	24-Nov-15
Ammonia-N (mg/l)	ND	0.45	Ammonia-N (mg/l)	0.398	0.03	Ammonia-N (mg/l)	ND	0.026
Nitrite-N (mg/l)	0.032	0.019	Nitrite-N (mg/l)	0.028	0.012	Nitrite-N (mg/l)	0.033	0.012
Nitrate-N (mg/l)	0.598	0.625	Nitrate-N (mg/l)	0.253	0.526	Nitrate-N (mg/l)	ND	0.098
TKN-N (mg/l)		0.162	TKN-N (mg/l)		0.176	TKN-N (mg/l)		
TIN (mg/l)	0.63	1.094	TIN (mg/l)	0.679	0.568	TIN (mg/l)	0.033	0.136
Total N (mg/l)		0.806	Total N (mg/l)		0.714	Total N (mg/l)		
Total P (mg/l)		ND	Total P (mg/l)		0.004	Total P (mg/l)		ND
Phos P (mg/l)		ND	Phos P (mg/l)		0.013	Phos P (mg/l)		0.009
MW-4	7-Aug-15	24-Nov-15	Pond	7-Aug-15				
Nitrite-N (mg/l)	0.027	ND	Nitrite-N (mg/l)	0.024				
Nitrate-N (mg/l)	ND	0.044	Nitrate-N (mg/l)	ND				
TKN-N (mg/l)		0.116	TKN-N (mg/l)	0.645				
TIN (mg/l)	0.146	0.044	TIN (mg/l)					
Total N (mg/l)		0.16	Total N (mg/l)	0.64				
Total P (mg/l)		ND	Total P (mg/l)	0.044				
Phos P (mg/l)		ND	Phos P (mg/l)	0.05				

As collected by PW Grosser August 7, 2015 data for TKN and phosphorus not valid due to sediment in sample

### 3. DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

#### 3.1 DISCUSSION & CONCLUSIONS

USGS groundwater elevation maps indicate that Little Fresh Pond is at / near a groundwater divide. However the groundwater boundary line, while not only not being static, is an inferred location based upon limited USGS data. The USGS map suggests that SCDC site groundwater would likely flow in a northerly-easterly direction and may flow towards or northeast of Little Fresh Pond. In particular, as the SCDC site is near the inferred, non-static groundwater boundary, the USGS map is not intended to have the level of accuracy needed for determining conclusively whether SCDC site discharges to Little Fresh Pond. This would be applicable for any property that is near a groundwater boundary.

SCDHS groundwater travel time maps, while helpful, have limitations in that they include many assumptions and are a reference information source. USGS data / maps have higher reliability / primacy than SCDHS groundwater travel time maps. While the SCDHS groundwater travel time maps suggest that SCDC groundwater flows northwest towards Little Fresh Pond, we are not aware of any published data that supports this position on SCDC local area groundwater flow. It is suspected that the SCDHS groundwater travel time maps for the SCDC area made assumptions that produced that result. It appears that the SCDHS travel time map for the Little Fresh Pond areas was adjusted to represent surface watershed boundaries. For Suffolk County and all unconfined groundwater aquifers, groundwater subwatersheds do not match surface watersheds. Consequently the SCDHS groundwater travel map for the Little Fresh Pond watershed is suspected to be inaccurate for this reason as well as it is in conflict with the USGS data/map.

It is noted that the scale of analysis for the USGS maps was eastern Suffolk County and the SCDHS groundwater travel time maps covered Suffolk and Nassau Counties. To address the uncertainties due to the SCDC site location and to determine groundwater flow direction on the SCDC site, four groundwater wells were installed at the SCDC site and groundwater and Little Fresh Pond elevations measured during the period of August 2015 through December 2015 by Grosser and independently by LAI.

As locally collected data has primacy, the SCDC well and Little Fresh Pond elevation data indicates that SCDC site groundwater:

- Has a relatively flat gradient, i.e. moves slowly. **Groundwater at the SCDC site does not flow towards Little Fresh Pond.** Rather SCDC groundwater flows to the west-northwest.
- Groundwater at the four SCDC wells was of high quality and did not indicate any materially significant impact of wastewater and was indicative of relatively pristine water quality.
- Little Fresh Pond is at a higher elevation than SCDC. Insufficient data exists to determine the groundwater flow patterns into and out of Little Fresh Pond.

While we cannot say with certainty which properties around the pond are responsible for its degradation, we can say, for certain, that the SCDC property is not a contributor, as specific SCDC site testing has established that groundwater from the property flows in a different

direction than towards Little Fresh Pond, the elevation of the Pond is higher than that of the groundwater flowing off the property, and the quality of the groundwater tested from the property was of a high quality. The SCDC site testing validates the finding that the SCDHS groundwater travel map for the Little Fresh Pond area are, in our opinion, inaccurate.

### 3.2 RECOMMENDATIONS

While SCDC groundwater does not flow to Little Fresh Pond, following are recommendations to restore the degraded quality of Little Fresh Pond. Pond water quality restoration efforts generally require in-Pond and watershed based remediation efforts. In-Pond efforts are usually associated with reducing the release of nutrients (predominately phosphorus) from Pond sediments – either by sediment removal and/or sediment sealing. Watershed based efforts focus on reducing phosphorus contributions to the Pond. These efforts typically are predominately focused on wastewater and stormwater and to a lesser extent fertilizers, as laws restricting fertilizers exist. Use of buffers along the Pond can potentially be of value to water quality restoration efforts.

However, for addressing wastewater improvements, understanding groundwater flow patterns to and from the Pond is essential to identify those properties that are causing Little Fresh Pond degradation and therefore would be candidates for upgrades that could achieve improvements to Little Fresh Pond.

There is insufficient data to state with the necessary degree of certainty which properties are discharging to Little Fresh Pond. Consequently, one cannot state with certainty which properties should receive wastewater remediation to improve Pond water quality.

Consequently, it is recommended that the Little Fresh Pond neighborhood implement the following data collection program to determine which properties/areas are discharging to Little Fresh Pond and therefore which properties should have improved wastewater systems:

- a. Installation of groundwater elevation and water quality monitoring wells surrounding the pond – 4 - 6 wells in addition to those installed on the SCDC property, which are described herein.
- b. Prepare a water budget for the Pond that identifies and quantifies water sources and losses – which would describe groundwater flow direction.

To determine the appropriate corrective actions to restore the quality of Little Fresh Pond, the following additional Pond investigations should be performed:

- c. Bathymetric and sediment thickness survey
- d. Pond reconnaissance (on-pond and land) to identify and direct discharges (including stormwater runoff)

to estimate the influence of Pond muds and any obvious direct discharges to Little Fresh Pond.

Based upon the results of the above efforts, a holistic Little Fresh Pond Water Quality Restoration Plan could be developed.

## APPENDIX A REFERENCES

1. Schubert, C., 1998, Areas Contributing Ground Water to the Peconic Estuary, and Ground-Water Budgets for the North and South Forks and Shelter Island, Eastern Suffolk County, New York, U.S. Geological Survey Water Resources Investigations Report 97-4136, Coram, NY.

## APPENDIX B WATER QUALITY LABORATORY RESULTS

With respect to the laboratory analysis, the values flagged with a “J” qualifier are considered estimates (below the quantitation limit RL, but above the Method Detection Limit MDL) and total concentration values do not include estimated values for reporting purposes.



## ANALYTICAL REPORT

Lab Number:	L1518891
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Pablo Rodriguez
Phone:	(631) 589-6353
Project Name:	SOUTHAMPTON DAY CAMP
Project Number:	VHB1501
Report Date:	08/14/15

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-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

---

Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1518891-01	MW-01	WATER	SOUTHAMPTON, NY	08/07/15 01:10	08/07/15
L1518891-02	MW-02	WATER	SOUTHAMPTON, NY	08/07/15 00:00	08/07/15
L1518891-03	MW-03	WATER	SOUTHAMPTON, NY	08/07/15 12:45	08/07/15
L1518891-04	MW-04	WATER	SOUTHAMPTON, NY	08/07/15 00:00	08/07/15
L1518891-05	LAKE	WATER	SOUTHAMPTON, NY	08/07/15 01:40	08/07/15

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

### 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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### 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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

---

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

### Case Narrative (continued)

#### Report Submission

This is a partial report. A final report will be issued as soon as the results of all requested analyses become available.

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

#### Sample Receipt

All analyses performed were specified by the project manager.

L1518891-01 and -05: Headspace was noted in the sample containers submitted for Alkalinity.

#### Dissolved Metals

The WG810618-4 MS recovery, performed on L1518891-01, is outside the acceptance criteria for manganese (132%). A post digestion spike was performed and yielded an unacceptable recovery of 25%. This has been attributed to sample matrix.


The WG810618-3 Laboratory Duplicate RPD, performed on L1518891-01, is outside the acceptance criteria for potassium (29%). The elevated RPD has been attributed to the non-homogeneous nature of the sample utilized for the laboratory duplicate.

#### Nitrogen, Ammonia

L1518891-01 through -04: The sample has elevated detection limits due to the dilution required by the sample matrix.

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:

 Kelly Stenstrom

Title: Technical Director/Representative

Date: 08/14/15

# ORGANICS

# PCBS

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-01  
**Client ID:** MW-01  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/12/15 17:40  
**Analyst:** JW

**Date Collected:** 08/07/15 01:10  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 06:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/12/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	B
Decachlorobiphenyl	66		30-150	B
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	60		30-150	A

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-02  
**Client ID:** MW-02  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/12/15 17:52  
**Analyst:** JW

**Date Collected:** 08/07/15 00:00  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 06:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/12/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	42		30-150	B
2,4,5,6-Tetrachloro-m-xylene	70		30-150	A
Decachlorobiphenyl	39		30-150	A

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-03  
**Client ID:** MW-03  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/12/15 18:04  
**Analyst:** JW

**Date Collected:** 08/07/15 12:45  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 06:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/12/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	46		30-150	B
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	44		30-150	A

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-04  
**Client ID:** MW-04  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/12/15 18:17  
**Analyst:** JW

**Date Collected:** 08/07/15 00:00  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 06:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/12/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	47		30-150	B
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	44		30-150	A

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-05  
**Client ID:** LAKE  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/12/15 18:29  
**Analyst:** JW

**Date Collected:** 08/07/15 01:40  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 06:32  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/12/15  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Polychlorinated Biphenyls by GC - Westborough Lab</b>							
Aroclor 1016	ND		ug/l	0.083	0.055	1	A
Aroclor 1221	ND		ug/l	0.083	0.053	1	A
Aroclor 1232	ND		ug/l	0.083	0.031	1	A
Aroclor 1242	ND		ug/l	0.083	0.060	1	A
Aroclor 1248	ND		ug/l	0.083	0.051	1	A
Aroclor 1254	ND		ug/l	0.083	0.034	1	A
Aroclor 1260	ND		ug/l	0.083	0.032	1	A
Aroclor 1262	ND		ug/l	0.083	0.029	1	A
Aroclor 1268	ND		ug/l	0.083	0.038	1	A
PCBs, Total	ND		ug/l	0.083	0.029	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	48		30-150	B
Decachlorobiphenyl	58		30-150	B
2,4,5,6-Tetrachloro-m-xylene	49		30-150	A
Decachlorobiphenyl	54		30-150	A

**Project Name:** SOUTHAMPTON DAY CAMP**Lab Number:** L1518891**Project Number:** VHB1501**Report Date:** 08/14/15

**Method Blank Analysis  
Batch Quality Control**

Analytical Method: 1,8082A  
 Analytical Date: 08/12/15 17:02  
 Analyst: JW

Extraction Method: EPA 3510C  
 Extraction Date: 08/12/15 06:32  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 08/12/15  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-05 Batch: WG811286-1						
Aroclor 1016	ND		ug/l	0.083	0.055	A
Aroclor 1221	ND		ug/l	0.083	0.053	A
Aroclor 1232	ND		ug/l	0.083	0.031	A
Aroclor 1242	ND		ug/l	0.083	0.060	A
Aroclor 1248	ND		ug/l	0.083	0.051	A
Aroclor 1254	ND		ug/l	0.083	0.034	A
Aroclor 1260	ND		ug/l	0.083	0.032	A
Aroclor 1262	ND		ug/l	0.083	0.029	A
Aroclor 1268	ND		ug/l	0.083	0.038	A
PCBs, Total	ND		ug/l	0.083	0.029	A

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	B
Decachlorobiphenyl	95		30-150	B
2,4,5,6-Tetrachloro-m-xylene	60		30-150	A
Decachlorobiphenyl	82		30-150	A

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: SOUTHAMPTON DAY CAMP

Project Number: VHB1501

Lab Number: L1518891

Report Date: 08/14/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG811286-2 WG811286-3									
Aroclor 1016	95		99		40-140	4		50	A
Aroclor 1260	103		103		40-140	0		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		67		30-150	B
Decachlorobiphenyl	105		104		30-150	B
2,4,5,6-Tetrachloro-m-xylene	67		72		30-150	A
Decachlorobiphenyl	95		97		30-150	A

# PESTICIDES

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-01  
 Client ID: MW-01  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water  
 Analytical Method: 1,8081B  
 Analytical Date: 08/13/15 14:57  
 Analyst: SS

Date Collected: 08/07/15 01:10  
 Date Received: 08/07/15  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 08/12/15 09:58  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	0.007	J	ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	54		30-150	A
Decachlorobiphenyl	43		30-150	A
2,4,5,6-Tetrachloro-m-xylene	68		30-150	B
Decachlorobiphenyl	65		30-150	B

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-02  
**Client ID:** MW-02  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/13/15 15:12  
**Analyst:** SS

**Date Collected:** 08/07/15 00:00  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 09:58  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	0.031		ug/l	0.020	0.003	1	B
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	0.033		ug/l	0.020	0.007	1	B
trans-Chlordane	0.047		ug/l	0.020	0.006	1	B
Chlordane	0.572		ug/l	0.200	0.046	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	58		30-150	A
Decachlorobiphenyl	31		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		30-150	B
Decachlorobiphenyl	49		30-150	B

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-03  
 Client ID: MW-03  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water  
 Analytical Method: 1,8081B  
 Analytical Date: 08/13/15 15:28  
 Analyst: SS

Date Collected: 08/07/15 12:45  
 Date Received: 08/07/15  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 08/12/15 09:58  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	0.022		ug/l	0.020	0.007	1	A
trans-Chlordane	0.020	PI	ug/l	0.020	0.006	1	A
Chlordane	0.148	JPI	ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	57		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	74		30-150	B

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-04  
**Client ID:** MW-04  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/13/15 15:59  
**Analyst:** SS

**Date Collected:** 08/07/15 00:00  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 09:58  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	0.008	J	ug/l	0.020	0.006	1	B
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	55		30-150	A
Decachlorobiphenyl	46		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	69		30-150	B

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-05  
 Client ID: LAKE  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water  
 Analytical Method: 1,8081B  
 Analytical Date: 08/13/15 16:15  
 Analyst: SS

Date Collected: 08/07/15 01:40  
 Date Received: 08/07/15  
 Field Prep: Not Specified  
 Extraction Method: EPA 3510C  
 Extraction Date: 08/12/15 09:58  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
<b>Organochlorine Pesticides by GC - Westborough Lab</b>							
Delta-BHC	ND		ug/l	0.020	0.005	1	A
Lindane	ND		ug/l	0.020	0.004	1	A
Alpha-BHC	ND		ug/l	0.020	0.004	1	A
Beta-BHC	ND		ug/l	0.020	0.006	1	A
Heptachlor	ND		ug/l	0.020	0.003	1	A
Aldrin	ND		ug/l	0.020	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	1	A
Endrin	ND		ug/l	0.040	0.004	1	A
Endrin ketone	ND		ug/l	0.040	0.005	1	A
Dieldrin	ND		ug/l	0.040	0.004	1	A
4,4'-DDE	ND		ug/l	0.040	0.004	1	A
4,4'-DDD	ND		ug/l	0.040	0.005	1	A
4,4'-DDT	ND		ug/l	0.040	0.004	1	A
Endosulfan I	ND		ug/l	0.020	0.003	1	A
Endosulfan II	ND		ug/l	0.040	0.005	1	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	1	A
Methoxychlor	ND		ug/l	0.200	0.007	1	A
Toxaphene	ND		ug/l	0.200	0.063	1	A
cis-Chlordane	ND		ug/l	0.020	0.007	1	A
trans-Chlordane	ND		ug/l	0.020	0.006	1	A
Chlordane	ND		ug/l	0.200	0.046	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	52		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	65		30-150	B
Decachlorobiphenyl	95		30-150	B

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

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

**Analytical Method:** 1,8081B  
**Analytical Date:** 08/13/15 14:10  
**Analyst:** SS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/12/15 09:58  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/12/15

Parameter	Result	Qualifier	Units	RL	MDL	Column
Organochlorine Pesticides by GC - Westborough Lab for sample(s): 01-05 Batch: WG811383-1						
Delta-BHC	ND		ug/l	0.020	0.005	A
Lindane	ND		ug/l	0.020	0.004	A
Alpha-BHC	ND		ug/l	0.020	0.004	A
Beta-BHC	ND		ug/l	0.020	0.006	A
Heptachlor	ND		ug/l	0.020	0.003	A
Aldrin	ND		ug/l	0.020	0.002	A
Heptachlor epoxide	ND		ug/l	0.020	0.004	A
Endrin	ND		ug/l	0.040	0.004	A
Endrin ketone	ND		ug/l	0.040	0.005	A
Dieldrin	ND		ug/l	0.040	0.004	A
4,4'-DDE	ND		ug/l	0.040	0.004	A
4,4'-DDD	ND		ug/l	0.040	0.005	A
4,4'-DDT	ND		ug/l	0.040	0.004	A
Endosulfan I	ND		ug/l	0.020	0.003	A
Endosulfan II	ND		ug/l	0.040	0.005	A
Endosulfan sulfate	ND		ug/l	0.040	0.005	A
Methoxychlor	ND		ug/l	0.200	0.007	A
Toxaphene	ND		ug/l	0.200	0.063	A
cis-Chlordane	ND		ug/l	0.020	0.007	A
trans-Chlordane	ND		ug/l	0.020	0.006	A
Chlordane	ND		ug/l	0.200	0.046	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	49		30-150	A
Decachlorobiphenyl	66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	95		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG811383-2 WG811383-3									
Delta-BHC	61		58		30-150	5		20	A
Lindane	93		87		30-150	7		20	A
Alpha-BHC	95		89		30-150	6		20	A
Beta-BHC	86		81		30-150	5		20	A
Heptachlor	99		89		30-150	11		20	A
Aldrin	89		82		30-150	9		20	A
Heptachlor epoxide	94		83		30-150	13		20	A
Endrin	112		104		30-150	7		20	A
Endrin ketone	98		93		30-150	5		20	A
Dieldrin	102		95		30-150	7		20	A
4,4'-DDE	93		84		30-150	10		20	A
4,4'-DDD	125		114		30-150	9		20	A
4,4'-DDT	114		104		30-150	9		20	A
Endosulfan I	94		86		30-150	9		20	A
Endosulfan II	94		88		30-150	7		20	A
Endosulfan sulfate	73		66		30-150	10		20	A
Methoxychlor	103		96		30-150	7		20	A
cis-Chlordane	93		86		30-150	9		20	A
trans-Chlordane	102		92		30-150	10		20	A

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
-----------	-------------------------	-------------	--------------------------	-------------	----------------------------	------------	-------------	----------------------

Organochlorine Pesticides by GC - Westborough Lab Associated sample(s): 01-05 Batch: WG811383-2 WG811383-3

<u>Surrogate</u>	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>Acceptance</i> Criteria	<i>Column</i>
2,4,5,6-Tetrachloro-m-xylene	54		50		30-150	A
Decachlorobiphenyl	78		72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		68		30-150	B
Decachlorobiphenyl	120		109		30-150	B

## METALS

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-01  
**Client ID:** MW-01  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water

**Date Collected:** 08/07/15 01:10  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
-----------	--------	-----------	-------	----	-----	-----------------	---------------	---------------	-------------	-------------------	---------

**Total Hardness by SM 2340B - Westborough Lab**

Hardness	130		mg/l	0.66	NA	1	08/10/15 12:25	08/12/15 19:49	EPA 3005A	1,6010C	MC
----------	-----	--	------	------	----	---	----------------	----------------	-----------	---------	----

**Dissolved Metals - Westborough Lab**

Iron, Dissolved	0.638		mg/l	0.050	0.012	1	08/10/15 14:12	08/11/15 19:33	EPA 3005A	1,6020A	BM
-----------------	-------	--	------	-------	-------	---	----------------	----------------	-----------	---------	----

Manganese, Dissolved	0.2354		mg/l	0.0010	0.0003	1	08/10/15 14:12	08/11/15 19:33	EPA 3005A	1,6020A	BM
----------------------	--------	--	------	--------	--------	---	----------------	----------------	-----------	---------	----

Potassium, Dissolved	1.09		mg/l	0.100	0.019	1	08/10/15 14:12	08/11/15 19:33	EPA 3005A	1,6020A	BM
----------------------	------	--	------	-------	-------	---	----------------	----------------	-----------	---------	----

Sodium, Dissolved	20.6		mg/l	0.100	0.016	1	08/10/15 14:12	08/11/15 19:33	EPA 3005A	1,6020A	BM
-------------------	------	--	------	-------	-------	---	----------------	----------------	-----------	---------	----



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-02  
 Client ID: MW-02  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water

Date Collected: 08/07/15 00:00  
 Date Received: 08/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
-----------	--------	-----------	-------	----	-----	-----------------	---------------	---------------	-------------	-------------------	---------

**Total Hardness by SM 2340B - Westborough Lab**

Hardness	130		mg/l	0.66	NA	1	08/10/15 12:25	08/12/15 19:52	EPA 3005A	1,6010C	MC
----------	-----	--	------	------	----	---	----------------	----------------	-----------	---------	----

**Dissolved Metals - Westborough Lab**

Iron, Dissolved	0.352		mg/l	0.050	0.012	1	08/10/15 14:12	08/11/15 20:07	EPA 3005A	1,6020A	BM
Manganese, Dissolved	0.4054		mg/l	0.0010	0.0003	1	08/10/15 14:12	08/11/15 20:07	EPA 3005A	1,6020A	BM
Potassium, Dissolved	0.992		mg/l	0.100	0.019	1	08/10/15 14:12	08/11/15 20:07	EPA 3005A	1,6020A	BM
Sodium, Dissolved	8.15		mg/l	0.100	0.016	1	08/10/15 14:12	08/11/15 20:07	EPA 3005A	1,6020A	BM



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-03  
 Client ID: MW-03  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water

Date Collected: 08/07/15 12:45  
 Date Received: 08/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
-----------	--------	-----------	-------	----	-----	-----------------	---------------	---------------	-------------	-------------------	---------

**Total Hardness by SM 2340B - Westborough Lab**

Hardness	180		mg/l	0.66	NA	1	08/10/15 12:25	08/12/15 19:56	EPA 3005A	1,6010C	MC
----------	-----	--	------	------	----	---	----------------	----------------	-----------	---------	----

**Dissolved Metals - Westborough Lab**

Iron, Dissolved	3.07		mg/l	0.050	0.012	1	08/10/15 14:12	08/11/15 20:13	EPA 3005A	1,6020A	BM
Manganese, Dissolved	0.1927		mg/l	0.0010	0.0003	1	08/10/15 14:12	08/11/15 20:13	EPA 3005A	1,6020A	BM
Potassium, Dissolved	0.685		mg/l	0.100	0.019	1	08/10/15 14:12	08/11/15 20:13	EPA 3005A	1,6020A	BM
Sodium, Dissolved	5.87		mg/l	0.100	0.016	1	08/10/15 14:12	08/11/15 20:13	EPA 3005A	1,6020A	BM



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-04  
 Client ID: MW-04  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water

Date Collected: 08/07/15 00:00  
 Date Received: 08/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
-----------	--------	-----------	-------	----	-----	-----------------	---------------	---------------	-------------	-------------------	---------

**Total Hardness by SM 2340B - Westborough Lab**

Hardness	73.		mg/l	0.66	NA	1	08/10/15 12:25	08/12/15 20:00	EPA 3005A	1,6010C	MC
----------	-----	--	------	------	----	---	----------------	----------------	-----------	---------	----

**Dissolved Metals - Westborough Lab**

Iron, Dissolved	0.663		mg/l	0.050	0.012	1	08/10/15 14:12	08/11/15 20:19	EPA 3005A	1,6020A	BM
-----------------	-------	--	------	-------	-------	---	----------------	----------------	-----------	---------	----

Manganese, Dissolved	1.140		mg/l	0.0400	0.0121	40	08/10/15 14:12	08/11/15 20:22	EPA 3005A	1,6020A	BM
----------------------	-------	--	------	--------	--------	----	----------------	----------------	-----------	---------	----

Potassium, Dissolved	0.872		mg/l	0.100	0.019	1	08/10/15 14:12	08/11/15 20:19	EPA 3005A	1,6020A	BM
----------------------	-------	--	------	-------	-------	---	----------------	----------------	-----------	---------	----

Sodium, Dissolved	8.82		mg/l	0.100	0.016	1	08/10/15 14:12	08/11/15 20:19	EPA 3005A	1,6020A	BM
-------------------	------	--	------	-------	-------	---	----------------	----------------	-----------	---------	----



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

Lab ID: L1518891-05  
 Client ID: LAKE  
 Sample Location: SOUTHAMPTON, NY  
 Matrix: Water

Date Collected: 08/07/15 01:40  
 Date Received: 08/07/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
-----------	--------	-----------	-------	----	-----	-----------------	---------------	---------------	-------------	-------------------	---------

**Total Hardness by SM 2340B - Westborough Lab**

Hardness	8.6		mg/l	0.66	NA	1	08/10/15 12:25	08/12/15 20:04	EPA 3005A	1,6010C	MC
----------	-----	--	------	------	----	---	----------------	----------------	-----------	---------	----

**Dissolved Metals - Westborough Lab**

Iron, Dissolved	0.167		mg/l	0.050	0.012	1	08/10/15 14:12	08/11/15 20:25	EPA 3005A	1,6020A	BM
Manganese, Dissolved	0.0057		mg/l	0.0010	0.0003	1	08/10/15 14:12	08/11/15 20:25	EPA 3005A	1,6020A	BM
Potassium, Dissolved	0.745		mg/l	0.100	0.019	1	08/10/15 14:12	08/11/15 20:25	EPA 3005A	1,6020A	BM
Sodium, Dissolved	7.23		mg/l	0.100	0.016	1	08/10/15 14:12	08/11/15 20:25	EPA 3005A	1,6020A	BM



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Westborough Lab for sample(s): 01-05 Batch: WG810556-1										
Hardness	ND		mg/l	0.66	NA	1	08/10/15 12:25	08/12/15 18:51	1,6010C	MC

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Westborough Lab for sample(s): 01-05 Batch: WG810618-1										
Iron, Dissolved	ND		mg/l	0.050	0.012	1	08/10/15 14:12	08/11/15 19:26	1,6020A	BM
Manganese, Dissolved	0.0004	J	mg/l	0.0010	0.0003	1	08/10/15 14:12	08/11/15 19:26	1,6020A	BM
Potassium, Dissolved	ND		mg/l	0.100	0.019	1	08/10/15 14:12	08/11/15 19:26	1,6020A	BM
Sodium, Dissolved	0.066	J	mg/l	0.100	0.016	1	08/10/15 14:12	08/11/15 19:26	1,6020A	BM

### Prep Information

Digestion Method: EPA 3005A

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 01-05 Batch: WG810556-2								
Hardness	98		-		80-120	-		
Dissolved Metals - Westborough Lab Associated sample(s): 01-05 Batch: WG810618-2								
Iron, Dissolved	98		-		80-120	-		
Manganese, Dissolved	102		-		80-120	-		
Potassium, Dissolved	96		-		80-120	-		
Sodium, Dissolved	101		-		80-120	-		

**Matrix Spike Analysis**  
Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810556-4 QC Sample: L1518688-01 Client ID: MS Sample												
Hardness	ND	66.2	69	104		-	-		75-125	-		20
Dissolved Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810618-4 QC Sample: L1518891-01 Client ID: MW-01												
Iron, Dissolved	0.638	1	1.77	113		-	-		75-125	-		20
Manganese, Dissolved	0.2354	0.5	0.8952	132	Q	-	-		75-125	-		20
Potassium, Dissolved	1.09	10	13.0	119		-	-		75-125	-		20
Sodium, Dissolved	20.6	10	32.6	120		-	-		75-125	-		20

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810618-3 QC Sample: L1518891-01 Client ID: MW-01						
Iron, Dissolved	0.638	0.653	mg/l	2		20
Manganese, Dissolved	0.2354	0.2423	mg/l	3		20
Potassium, Dissolved	1.09	1.46	mg/l	29	Q	20
Sodium, Dissolved	20.6	20.6	mg/l	0		20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-01  
**Client ID:** MW-01  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water

**Date Collected:** 08/07/15 01:10  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	20.7		mg CaCO3/L	2.00	NA	1	-	08/11/15 08:23	30,2320B	SG
Chloride	35.		mg/l	1.0	0.20	1	-	08/08/15 09:26	1,9251	LA
Nitrogen, Ammonia	ND		mg/l	0.375	0.105	5	08/08/15 10:13	08/10/15 14:47	30,4500NH3-BH	JO
Nitrogen, Nitrite	0.032	J	mg/l	0.050	0.010	1	-	08/08/15 08:46	30,4500NO3-F	MR
Nitrogen, Nitrate	0.598		mg/l	0.100	0.018	1	-	08/08/15 08:46	30,4500NO3-F	MR
Total Nitrogen	2.8		mg/l	1.5	1.5	5	-	08/13/15 10:29	41,-	JO
Nitrogen, Total Kjeldahl	2.14		mg/l	1.50	0.232	5	08/08/15 08:20	08/10/15 13:17	30,4500N-C	JO
Phosphorus, Total	6.68		mg/l	1.00	0.360	100	08/12/15 09:45	08/12/15 15:30	30,4500P-E	SD
Phosphate, Total	20.		mg/l	3.0	0.51	100	-	08/12/15 09:45	30,4500P-E(M)	SD



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-02  
**Client ID:** MW-02  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water

**Date Collected:** 08/07/15 00:00  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	13.0		mg CaCO3/L	2.00	NA	1	-	08/11/15 08:23	30,2320B	SG
Chloride	16.		mg/l	1.0	0.20	1	-	08/08/15 09:26	1,9251	LA
Nitrogen, Ammonia	0.398	J	mg/l	0.750	0.210	10	08/08/15 10:13	08/10/15 14:48	30,4500NH3-BH	JO
Nitrogen, Nitrite	0.028	J	mg/l	0.050	0.010	1	-	08/08/15 08:48	30,4500NO3-F	MR
Nitrogen, Nitrate	0.253		mg/l	0.100	0.018	1	-	08/08/15 08:48	30,4500NO3-F	MR
Total Nitrogen	2.7		mg/l	1.5	1.5	5	-	08/13/15 10:29	41,-	JO
Nitrogen, Total Kjeldahl	2.43		mg/l	1.50	0.232	5	08/08/15 08:20	08/10/15 13:18	30,4500N-C	JO
Phosphorus, Total	9.12		mg/l	1.00	0.360	100	08/12/15 09:45	08/12/15 15:30	30,4500P-E	SD
Phosphate, Total	28.		mg/l	3.0	0.51	100	-	08/12/15 09:45	30,4500P-E(M)	SD



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-03  
**Client ID:** MW-03  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water

**Date Collected:** 08/07/15 12:45  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	36.9		mg CaCO3/L	2.00	NA	1	-	08/11/15 08:23	30,2320B	SG
Chloride	33.		mg/l	1.0	0.20	1	-	08/08/15 09:27	1,9251	LA
Nitrogen, Ammonia	ND		mg/l	0.375	0.105	5	08/08/15 10:13	08/10/15 14:49	30,4500NH3-BH	JO
Nitrogen, Nitrite	0.033	J	mg/l	0.050	0.010	1	-	08/08/15 08:49	30,4500NO3-F	MR
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/08/15 08:49	30,4500NO3-F	MR
Total Nitrogen	6.6		mg/l	1.5	1.5	5	-	08/13/15 10:29	41,-	JO
Nitrogen, Total Kjeldahl	6.56		mg/l	1.50	0.232	5	08/08/15 08:20	08/10/15 13:19	30,4500N-C	JO
Phosphorus, Total	23.9		mg/l	1.25	0.450	125	08/12/15 09:45	08/12/15 15:30	30,4500P-E	SD
Phosphate, Total	73.		mg/l	3.8	0.64	125	-	08/12/15 09:45	30,4500P-E(M)	SD



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-04  
**Client ID:** MW-04  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water

**Date Collected:** 08/07/15 00:00  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	5.30		mg CaCO3/L	2.00	NA	1	-	08/11/15 08:23	30,2320B	SG
Chloride	14.		mg/l	1.0	0.20	1	-	08/08/15 09:28	1,9251	LA
Nitrogen, Ammonia	0.119	J	mg/l	0.375	0.105	5	08/08/15 10:13	08/10/15 14:50	30,4500NH3-BH	JO
Nitrogen, Nitrite	0.027	J	mg/l	0.050	0.010	1	-	08/08/15 08:50	30,4500NO3-F	MR
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/08/15 08:50	30,4500NO3-F	MR
Total Nitrogen	2.7		mg/l	1.5	1.5	5	-	08/13/15 10:29	41,-	JO
Nitrogen, Total Kjeldahl	2.71		mg/l	1.50	0.232	5	08/08/15 08:20	08/10/15 13:20	30,4500N-C	JO
Phosphorus, Total	7.96		mg/l	0.500	0.180	50	08/12/15 09:45	08/12/15 15:30	30,4500P-E	SD
Phosphate, Total	24.		mg/l	1.5	0.26	50	-	08/12/15 09:45	30,4500P-E(M)	SD



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

**SAMPLE RESULTS**

**Lab ID:** L1518891-05  
**Client ID:** LAKE  
**Sample Location:** SOUTHAMPTON, NY  
**Matrix:** Water

**Date Collected:** 08/07/15 01:40  
**Date Received:** 08/07/15  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Alkalinity, Total	4.00		mg CaCO3/L	2.00	NA	1	-	08/11/15 08:23	30,2320B	SG
Chloride	11.		mg/l	1.0	0.20	1	-	08/08/15 09:29	1,9251	LA
Nitrogen, Ammonia	0.049	J	mg/l	0.075	0.021	1	08/08/15 10:13	08/10/15 14:50	30,4500NH3-BH	JO
Nitrogen, Nitrite	0.024	J	mg/l	0.050	0.010	1	-	08/08/15 08:52	30,4500NO3-F	MR
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/08/15 08:52	30,4500NO3-F	MR
Total Nitrogen	0.64		mg/l	0.30	0.30	1	-	08/13/15 10:29	41,-	JO
Nitrogen, Total Kjeldahl	0.645		mg/l	0.300	0.093	1	08/08/15 08:20	08/10/15 13:21	30,4500N-C	JO
Phosphorus, Total	0.044		mg/l	0.010	0.003	1	08/12/15 09:45	08/12/15 15:30	30,4500P-E	SD
Phosphate, Total	0.14		mg/l	0.030	0.005	1	-	08/12/15 09:45	30,4500P-E(M)	SD



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG810314-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	08/08/15 08:32	30,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG810315-1										
Nitrogen, Nitrite	0.016	J	mg/l	0.050	0.010	1	-	08/08/15 08:35	30,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG810320-1										
Chloride	0.36	J	mg/l	1.0	0.20	1	-	08/08/15 09:01	1,9251	LA
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG810324-1										
Nitrogen, Total Kjeldahl	0.116	J	mg/l	0.300	0.031	1	08/08/15 08:20	08/10/15 12:49	30,4500N-C	JO
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG810340-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.014	1	08/08/15 10:13	08/10/15 14:21	30,4500NH3-BH	JO
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG810957-1										
Alkalinity, Total	ND		mg CaCO3/L	2.00	NA	1	-	08/11/15 08:23	30,2320B	SG
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG811485-1										
Phosphorus, Total	ND		mg/l	0.010	0.003	1	08/12/15 09:45	08/12/15 15:30	30,4500P-E	SD
General Chemistry - Westborough Lab for sample(s): 01-05 Batch: WG811776-1										
Phosphate, Total	ND		mg/l	0.030	0.005	1	-	08/12/15 09:45	30,4500P-E(M)	SD

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG810314-2								
Nitrogen, Nitrate	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG810315-2								
Nitrogen, Nitrite	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG810320-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG810324-2								
Nitrogen, Total Kjeldahl	94		-		78-122	-		
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG810340-2								
Nitrogen, Ammonia	101		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG810957-3								
Alkalinity, Total	104		-		90-110	-		10
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG811485-2								
Phosphorus, Total	98		-		80-120	-		

## Lab Control Sample Analysis

Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP

**Lab Number:** L1518891

**Project Number:** VHB1501

**Report Date:** 08/14/15

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 Batch: WG811776-2					
Phosphate, Total	98	-	84-118	-	

### Matrix Spike Analysis Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810314-4 QC Sample: L1518891-05 Client ID: LAKE												
Nitrogen, Nitrate	ND	4	3.90	98	-	-	-	-	83-113	-	-	17
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810315-4 QC Sample: L1518891-05 Client ID: LAKE												
Nitrogen, Nitrite	0.024J	4	4.21	105	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810320-4 QC Sample: L1518634-02 Client ID: MS Sample												
Chloride	2.5	20	22	98	-	-	-	-	58-140	-	-	7
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810324-4 QC Sample: L1518813-03 Client ID: MS Sample												
Nitrogen, Total Kjeldahl	43.0	8	48.5	69	Q	-	-	-	77-111	-	-	24
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810340-4 QC Sample: L1518819-03 Client ID: MS Sample												
Nitrogen, Ammonia	7.41	4	11.2	95	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810957-4 QC Sample: L1518831-03 Client ID: MS Sample												
Alkalinity, Total	63.0	100	162	99	-	-	-	-	86-116	-	-	10
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG811485-3 QC Sample: L1518891-05 Client ID: LAKE												
Phosphorus, Total	0.044	0.5	0.545	100	-	-	-	-	75-125	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG811776-3 QC Sample: L1518891-05 Client ID: LAKE												
Phosphate, Total	0.14	1.54	1.7	100	-	-	-	-	80-120	-	-	15

## Lab Duplicate Analysis

### Batch Quality Control

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810314-3 QC Sample: L1518891-05 Client ID: LAKE						
Nitrogen, Nitrate	ND	ND	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810315-3 QC Sample: L1518891-05 Client ID: LAKE						
Nitrogen, Nitrite	0.024J	0.027J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810320-3 QC Sample: L1518634-02 Client ID: DUP Sample						
Chloride	2.5	2.5	mg/l	0		7
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810324-3 QC Sample: L1518813-03 Client ID: DUP Sample						
Nitrogen, Total Kjeldahl	43.0	41.0	mg/l	5		24
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810340-3 QC Sample: L1518819-03 Client ID: DUP Sample						
Nitrogen, Ammonia	7.41	7.54	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG810957-2 QC Sample: L1519005-12 Client ID: DUP Sample						
Alkalinity, Total	70.1	71.4	mg CaCO3/L	2		10
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG811485-4 QC Sample: L1518891-05 Client ID: LAKE						
Phosphorus, Total	0.044	0.046	mg/l	4		20
General Chemistry - Westborough Lab Associated sample(s): 01-05 QC Batch ID: WG811776-4 QC Sample: L1518891-05 Client ID: LAKE						
Phosphate, Total	0.14	0.14	mg/l	0		15

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

### Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

#### Cooler Information Custody Seal

##### Cooler

A Absent  
 B Absent  
 C Absent

#### Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1518891-01A	Plastic 250ml HNO3 preserved	A	<2	4.2	Y	Absent	HARDT(180)
L1518891-01B	Plastic 120ml HNO3 preserved spl	A	<2	4.2	Y	Absent	K-6020S(180),MN-6020S(180),FE-6020S(180),NA-6020S(180)
L1518891-01C	Plastic 250ml unpreserved w/No H	A	N/A	4.2	Y	Absent	ALK-T-2320(14)
L1518891-01D	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-01E	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-01F	Amber 500ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8081(7)
L1518891-01G	Amber 500ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8081(7)
L1518891-01H	Amber 1000ml H2SO4 preserved	A	<2	4.2	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),TNITROGEN(28),NH3-4500(28)
L1518891-01I	Plastic 250ml unpreserved	A	7	4.2	Y	Absent	CL-9251(28),NO3-4500(2),NO2-4500NO3(2)
L1518891-01J	Plastic 250ml unpreserved	A	7	4.2	Y	Absent	-
L1518891-02A	Plastic 250ml HNO3 preserved	A	<2	4.2	Y	Absent	HARDT(180)
L1518891-02B	Plastic 120ml HNO3 preserved spl	A	<2	4.2	Y	Absent	K-6020S(180),MN-6020S(180),FE-6020S(180),NA-6020S(180)
L1518891-02C	Plastic 250ml unpreserved w/No H	A	N/A	4.2	Y	Absent	ALK-T-2320(14)
L1518891-02D	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-02E	Amber 1000ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-02F	Amber 500ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8081(7)
L1518891-02G	Amber 500ml unpreserved	A	7	4.2	Y	Absent	NYTCL-8081(7)
L1518891-02H	Amber 1000ml H2SO4 preserved	A	<2	4.2	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),TNITROGEN(28),NH3-4500(28)

\*Values in parentheses indicate holding time in days

Project Name: SOUTHAMPTON DAY CAMP

Project Number: VHB1501

Lab Number: L1518891

Report Date: 08/14/15

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1518891-02I	Plastic 250ml unpreserved	A	7	4.2	Y	Absent	CL-9251(28),NO3-4500(2),NO2-4500NO3(2)
L1518891-02J	Plastic 250ml unpreserved	A	7	4.2	Y	Absent	-
L1518891-03A	Plastic 250ml HNO3 preserved	B	<2	3.9	Y	Absent	HARDT(180)
L1518891-03B	Plastic 120ml HNO3 preserved spl	B	<2	3.9	Y	Absent	K-6020S(180),MN-6020S(180),FE-6020S(180),NA-6020S(180)
L1518891-03C	Plastic 250ml unpreserved w/No H	B	N/A	3.9	Y	Absent	ALK-T-2320(14)
L1518891-03D	Amber 1000ml unpreserved	B	7	3.9	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-03E	Amber 1000ml unpreserved	B	7	3.9	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-03F	Amber 500ml unpreserved	B	7	3.9	Y	Absent	NYTCL-8081(7)
L1518891-03G	Amber 500ml unpreserved	B	7	3.9	Y	Absent	NYTCL-8081(7)
L1518891-03H	Amber 1000ml H2SO4 preserved	B	<2	3.9	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),TNITROGEN(28),NH3-4500(28)
L1518891-03I	Plastic 250ml unpreserved	B	7	3.9	Y	Absent	CL-9251(28),NO3-4500(2),NO2-4500NO3(2)
L1518891-03J	Plastic 250ml unpreserved	B	7	3.9	Y	Absent	-
L1518891-04A	Plastic 250ml HNO3 preserved	C	<2	3.1	Y	Absent	HARDT(180)
L1518891-04B	Plastic 120ml HNO3 preserved spl	C	<2	3.1	Y	Absent	K-6020S(180),MN-6020S(180),FE-6020S(180),NA-6020S(180)
L1518891-04C	Plastic 250ml unpreserved w/No H	C	N/A	3.1	Y	Absent	ALK-T-2320(14)
L1518891-04D	Amber 1000ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-04E	Amber 1000ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-04F	Amber 500ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8081(7)
L1518891-04G	Amber 500ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8081(7)
L1518891-04H	Amber 1000ml H2SO4 preserved	C	<2	3.1	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),TNITROGEN(28),NH3-4500(28)
L1518891-04I	Plastic 250ml unpreserved	C	7	3.1	Y	Absent	CL-9251(28),NO3-4500(2),NO2-4500NO3(2)
L1518891-04J	Plastic 250ml unpreserved	C	7	3.1	Y	Absent	-
L1518891-05A	Plastic 250ml HNO3 preserved	C	<2	3.1	Y	Absent	HARDT(180)
L1518891-05B	Plastic 120ml HNO3 preserved spl	C	<2	3.1	Y	Absent	K-6020S(180),MN-6020S(180),FE-6020S(180),NA-6020S(180)
L1518891-05C	Plastic 250ml unpreserved w/No H	C	N/A	3.1	Y	Absent	ALK-T-2320(14)
L1518891-05D	Amber 1000ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-05E	Amber 1000ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8082-1200ML(7)
L1518891-05F	Amber 500ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8081(7)

\*Values in parentheses indicate holding time in days

**Project Name:** SOUTHAMPTON DAY CAMP**Project Number:** VHB1501**Lab Number:** L1518891**Report Date:** 08/14/15**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1518891-05G	Amber 500ml unpreserved	C	7	3.1	Y	Absent	NYTCL-8081(7)
L1518891-05H	Amber 1000ml H2SO4 preserved	C	<2	3.1	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),TNITROGEN(28),NH3-4500(28)
L1518891-05I	Plastic 250ml unpreserved	C	7	3.1	Y	Absent	CL-9251(28),NO3-4500(2),NO2-4500NO3(2)
L1518891-05J	Plastic 250ml unpreserved	C	7	3.1	Y	Absent	-

**Container Comments**

L1518891-01B

L1518891-02B

L1518891-03B

L1518891-04B

L1518891-05B

\*Values in parentheses indicate holding time in days

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

## GLOSSARY

### Acronyms

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).
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.
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.
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.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
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.

### 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

**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.

**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.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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.

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

#### Data Qualifiers

- 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.
- 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.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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.
- 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 Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** SOUTHAMPTON DAY CAMP  
**Project Number:** VHB1501

**Lab Number:** L1518891  
**Report Date:** 08/14/15

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 41 Alpha Analytical Labs Internally-developed Performance-based Method.

## 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

Last revised December 16, 2014

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

#### Westborough Facility

**EPA 524.2:** Acetone, 2-Butanone (Methyl ethyl ketone (MEK)), Tert-butyl alcohol, 2-Hexanone, Tetrahydrofuran, 1,3,5-Trichlorobenzene, 4-Methyl-2-pentanone (MIBK), Carbon disulfide, Diethyl ether.

**EPA 8260C:** 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene, Iodomethane (methyl iodide), Methyl methacrylate, Azobenzene.

**EPA 8270D:** 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**EPA 9071:** Total Petroleum Hydrocarbons, Oil & Grease.

#### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 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.

### The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

#### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** 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**

**EPA 332:** Perchlorate.

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

#### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

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

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** 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:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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



## **ANALYTICAL REPORT**

Job Number: 420-94017-1

SDG Number: L1518891

Job Description: Alpha Analytical, Inc.

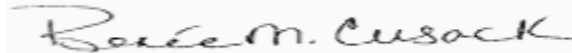
For:

Alpha Analytical

8 Walkup Drive

Westborough, MA 01581

Attention: Subcontract Reports



---

Renee Cusack

Lab Director

[rcusack@envirotestlaboratories.com](mailto:rcusack@envirotestlaboratories.com)

08/17/2015

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

**Envirotest Laboratories, Inc.**

315 Fullerton Avenue, Newburgh, NY 12550

Tel (845) 562-0890 Fax (845) 562-0841 [www.envirotestlaboratories.com](http://www.envirotestlaboratories.com)

## METHOD SUMMARY

Client: Alpha Analytical

Job Number: 420-94017-1

SDG Number: L1518891

<b>Description</b>	<b>Lab Location</b>	<b>Method</b>	<b>Preparation Method</b>
<b>Matrix: Water</b>			
Membrane Filter Technique - Standard Total Coliform Procedure	EnvTest	SM18 SM 9222B-97	
Membrane Filter Technique - Fecal Coliform Procedure	EnvTest	SM18 SM 9222D-97	

### Lab References:

EnvTest = EnviroTest

### Method References:

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

## METHOD / ANALYST SUMMARY

Client: Alpha Analytical

Job Number: 420-94017-1

SDG Number: L1518891

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
SM18 SM 9222B-97	Travis, Lyndsey	LT
SM18 SM 9222D-97	Travis, Lyndsey	LT

## SAMPLE SUMMARY

Client: Alpha Analytical

Job Number: 420-94017-1

SDG Number: L1518891

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
420-94017-1	MW-01	Water	08/07/2015 1310	08/07/2015 1900
420-94017-2	MW-02	Water	08/07/2015 0000	08/07/2015 1900
420-94017-3	MW-03	Water	08/07/2015 1245	08/07/2015 1900
420-94017-4	MW-04	Water	08/07/2015 0000	08/07/2015 1900
420-94017-5	Lake	Water	08/07/2015 1340	08/07/2015 1900

# **SAMPLE RESULTS**

Subcontract Reports  
Alpha Analytical  
8 Walkup Drive  
Westborough, MA 01581

Job Number: 420-94017-1  
Sdg Number: L1518891

**Client Sample ID:** MW-01  
**Lab Sample ID:** 420-94017-1

Date Sampled: 08/07/2015 1310  
Date Received: 08/07/2015 1900  
Client Matrix: Water

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
<b>Method: SM 9222B-97</b> Coliform, Total	>20000	CFU/100mL	100	100	100
<b>Method: SM 9222D-97</b> Coliform, Fecal	10 U	CFU/100mL	10	10	10

Subcontract Reports  
 Alpha Analytical  
 8 Walkup Drive  
 Westborough, MA 01581

Job Number: 420-94017-1  
 Sdg Number: L1518891

**Client Sample ID:** MW-02  
**Lab Sample ID:** 420-94017-2

Date Sampled: 08/07/2015 0000  
 Date Received: 08/07/2015 1900  
 Client Matrix: Water

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
<b>Method: SM 9222B-97</b> Coliform, Total	12000	CFU/100mL	100	100	100
<b>Method: SM 9222D-97</b> Coliform, Fecal	10 U	CFU/100mL	10	10	10

Subcontract Reports  
Alpha Analytical  
8 Walkup Drive  
Westborough, MA 01581

Job Number: 420-94017-1  
Sdg Number: L1518891

**Client Sample ID:** MW-03  
**Lab Sample ID:** 420-94017-3

Date Sampled: 08/07/2015 1245  
Date Received: 08/07/2015 1900  
Client Matrix: Water

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
<b>Method: SM 9222B-97</b> Coliform, Total	12000	CFU/100mL	100	100	100
<b>Method: SM 9222D-97</b> Coliform, Fecal	150	CFU/100mL	10	10	10

Subcontract Reports  
Alpha Analytical  
8 Walkup Drive  
Westborough, MA 01581

Job Number: 420-94017-1  
Sdg Number: L1518891

**Client Sample ID:** MW-04  
**Lab Sample ID:** 420-94017-4

Date Sampled: 08/07/2015 0000  
Date Received: 08/07/2015 1900  
Client Matrix: Water

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
<b>Method: SM 9222B-97</b> Coliform, Total	40	CFU/100mL	10	10	10
<b>Method: SM 9222D-97</b> Coliform, Fecal	10 U	CFU/100mL	10	10	10

Subcontract Reports  
Alpha Analytical  
8 Walkup Drive  
Westborough, MA 01581

Job Number: 420-94017-1  
Sdg Number: L1518891

**Client Sample ID:** Lake  
**Lab Sample ID:** 420-94017-5

Date Sampled: 08/07/2015 1340  
Date Received: 08/07/2015 1900  
Client Matrix: Water

Analyte	Result/Qualifier	Unit	RL	RL	Dilution
<b>Method: SM 9222B-97</b> Coliform, Total	>20000	CFU/100mL	100	100	100
<b>Method: SM 9222D-97</b> Coliform, Fecal	>20000	CFU/100mL	100	100	100

## DATA REPORTING QUALIFIERS

Client: Alpha Analytical

Job Number: 420-94017-1

Sdg Number: L1518891

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
Biology	U	The analyte was analyzed for but not detected at or above the lowest stated limit.

# QUALITY CONTROL RESULTS

## Quality Control Results

Client: Alpha Analytical

Job Number: 420-94017-1  
Sdg Number: L1518891

### Method Blank - Batch: 420-89846

Lab Sample ID: MB 420-89846/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/07/2015 1915  
Date Prepared: N/A

Analysis Batch: 420-89846  
Prep Batch: N/A  
Units: CFU/100mL

### Method: SM 9222B-97 Preparation: N/A

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:  
Injection Volume:

Analyte	Result	Qual	RL	RL
Coliform, Total	1.0	U	1.0	1.0

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Quality Control Results**

Client: Alpha Analytical

Job Number: 420-94017-1  
Sdg Number: L1518891

**Method Blank - Batch: 420-89845**

**Method: SM 9222D-97**  
**Preparation: N/A**

Lab Sample ID: MB 420-89845/1  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 08/07/2015 1915  
Date Prepared: N/A

Analysis Batch: 420-89845  
Prep Batch: N/A  
Units: CFU/100mL

Instrument ID: No Equipment Assigned  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:  
Injection Volume:

Analyte	Result	Qual	RL	RL
Coliform, Fecal	1.0	U	1.0	1.0

Calculations are performed before rounding to avoid round-off errors in calculated results.



NEW YORK CHAIN OF CUSTODY

Westborough, MA 01581
8 Walkup Dr.
TEL: 508-898-9220
FAX: 508-899-9193

Service Centers
Mahwah, NJ 07430-35 Whitney Rd, Suite 5
Albany, NY 12205-14 Walker Way
Tonawanda, NY 14150-275 Cooper Ave, Suite 105

Page of

Date Rec'd In Lab

ALPHA Job # 1518891

94017

Client Information

Client: Paul Grosser Consulting
Address: 630 Johnson Ave
Beverly, NY 11716
Phone: (631) 589-6353
Fax: (631) 589-8705
Email: mscaven@paulgrosser.com

Project Name: Southampton Bay Camp
Project Location: Southampton, NY
Project # VFB 1501

Deliverables
ASP-A
EQUIS (1 File)
Other

Billing Information
Same as Client Info

Project Manager: Pablo Rodriguez
ALPHAQuote #
Turn-Around Time
Standard
Rush (only if pre approved)
Due Date:
# of Days:

Regulatory Requirement
NY TOGS
AWQ Standards
NY Restricted Use
NY Unrestricted Use
NYC Sewer Discharge

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
NJ
NY
Other:

Other project specific requirements/comments:
Please specify Metals or TAL.

ALPHA Lab ID (Use Only)

Table with columns: Sample ID, Collection Date, Time, Sample Matrix, Sampler's Initials

See Attached

Sample Filtration
Done
Lab to do
Preservation
Lab to do
Sample Specific Comments

Preservative Code:
A = None
B = HCl
C = HNO3
D = H2SO4
E = NaOH
F = MeOH
G = NaHSO4
H = Na2S2O3
KIE = Zn Ac/NaOH
O = Other

Container Code
P = Plastic
A = Amber Glass
V = Vial
G = Glass
B = Bacteria Cup
C = Cube
O = Other
E = Encore
D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Relinquished By: Michael Scaven
Date/Time: 8/17/15 14:50

Received By: [Signature]
Date/Time: 8/17/15 14:55

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS. (See reverse side.)

## LOGIN SAMPLE RECEIPT CHECK LIST

Client: Alpha Analytical

Job Number: 420-94017-1

SDG Number: L1518891

**Login Number: 94017**

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	False	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	No sample times
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	False	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	NA	
Samples do not require splitting or compositing.	True	



## ANALYTICAL REPORT

Lab Number:	L1531026
Client:	P. W. Grosser 630 Johnson Avenue Suite 7 Bohemia, NY 11716
ATTN:	Pablo Rodriguez
Phone:	(631) 589-6353
Project Name:	VHB1501
Project Number:	VHB1501
Report Date:	12/03/15

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-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

---

Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1531026-01	MW-01	WATER	SOUTHHAMPTON DAY CAMP	11/24/15 11:30	11/24/15
L1531026-02	MW-02	WATER	SOUTHHAMPTON DAY CAMP	11/24/15 12:30	11/24/15
L1531026-03	MW-03	WATER	SOUTHHAMPTON DAY CAMP	11/24/15 13:30	11/24/15
L1531026-04	MW-04	WATER	SOUTHHAMPTON DAY CAMP	11/24/15 14:00	11/24/15

**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

### 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 all of the requirements of NELAC, for all NELAC accredited parameters. 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### 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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

---

**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

**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:



Lura L Troy

Title: Technical Director/Representative

Date: 12/03/15

# **INORGANICS & MISCELLANEOUS**

Project Name: VHB1501

Lab Number: L1531026

Project Number: VHB1501

Report Date: 12/03/15

## SAMPLE RESULTS

Lab ID: L1531026-01  
 Client ID: MW-01  
 Sample Location: SOUTHHAMPTON DAY CAMP  
 Matrix: Water

Date Collected: 11/24/15 11:30  
 Date Received: 11/24/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.045	J	mg/l	0.075	0.021	1	11/28/15 07:33	11/30/15 21:55	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.019	J	mg/l	0.050	0.010	1	-	11/25/15 19:14	30,4500NO3-F	MR
Nitrogen, Nitrate	0.625		mg/l	0.100	0.018	1	-	11/25/15 19:14	30,4500NO3-F	MR
Nitrogen, Nitrate/Nitrite	0.62		mg/l	0.10	0.019	1	-	11/25/15 19:14	30,4500NO3-F	MR
Total Nitrogen	0.62		mg/l	0.30	0.30	1	-	12/03/15 09:20	41,-	JO
Nitrogen, Total Kjeldahl	0.162	J	mg/l	0.300	0.093	1	11/25/15 15:30	12/01/15 23:48	30,4500N-C	AT
Phosphorus, Total	ND		mg/l	0.010	0.003	1	11/30/15 12:00	12/01/15 08:40	30,4500P-E	SD
Phosphate, Total	ND		mg/l	0.030	0.005	1	-	11/30/15 12:00	30,4500P-E(M)	SD



Project Name: VHB1501

Lab Number: L1531026

Project Number: VHB1501

Report Date: 12/03/15

## SAMPLE RESULTS

Lab ID: L1531026-02  
 Client ID: MW-02  
 Sample Location: SOUTHHAMPTON DAY CAMP  
 Matrix: Water

Date Collected: 11/24/15 12:30  
 Date Received: 11/24/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.030	J	mg/l	0.075	0.021	1	11/28/15 07:33	11/30/15 21:55	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.012	J	mg/l	0.050	0.010	1	-	11/25/15 19:15	30,4500NO3-F	MR
Nitrogen, Nitrate	0.526		mg/l	0.100	0.018	1	-	11/25/15 19:15	30,4500NO3-F	MR
Nitrogen, Nitrate/Nitrite	0.53		mg/l	0.10	0.019	1	-	11/25/15 19:15	30,4500NO3-F	MR
Total Nitrogen	0.53		mg/l	0.30	0.30	1	-	12/03/15 09:20	41,-	JO
Nitrogen, Total Kjeldahl	0.176	J	mg/l	0.300	0.093	1	11/25/15 15:30	12/01/15 23:49	30,4500N-C	AT
Phosphorus, Total	0.004	J	mg/l	0.010	0.003	1	11/30/15 12:00	12/01/15 08:40	30,4500P-E	SD
Phosphate, Total	0.013	J	mg/l	0.030	0.005	1	-	11/30/15 12:00	30,4500P-E(M)	SD



Project Name: VHB1501

Lab Number: L1531026

Project Number: VHB1501

Report Date: 12/03/15

## SAMPLE RESULTS

Lab ID: L1531026-03  
 Client ID: MW-03  
 Sample Location: SOUTHHAMPTON DAY CAMP  
 Matrix: Water

Date Collected: 11/24/15 13:30  
 Date Received: 11/24/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.026	J	mg/l	0.075	0.021	1	11/28/15 07:33	11/30/15 21:56	30,4500NH3-BH	AT
Nitrogen, Nitrite	0.012	J	mg/l	0.050	0.010	1	-	11/25/15 19:16	30,4500NO3-F	MR
Nitrogen, Nitrate	0.098	J	mg/l	0.100	0.018	1	-	11/25/15 19:16	30,4500NO3-F	MR
Nitrogen, Nitrate/Nitrite	0.098	J	mg/l	0.10	0.019	1	-	11/25/15 19:16	30,4500NO3-F	MR
Total Nitrogen	ND		mg/l	0.30	0.30	1	-	12/03/15 09:20	41,-	JO
Nitrogen, Total Kjeldahl	ND		mg/l	0.300	0.093	1	11/25/15 15:30	12/01/15 23:52	30,4500N-C	AT
Phosphorus, Total	ND		mg/l	0.010	0.003	1	11/30/15 12:00	12/01/15 08:40	30,4500P-E	SD
Phosphate, Total	0.009	J	mg/l	0.030	0.005	1	-	11/30/15 12:00	30,4500P-E(M)	SD



Project Name: VHB1501

Lab Number: L1531026

Project Number: VHB1501

Report Date: 12/03/15

## SAMPLE RESULTS

Lab ID: L1531026-04  
 Client ID: MW-04  
 Sample Location: SOUTHHAMPTON DAY CAMP  
 Matrix: Water

Date Collected: 11/24/15 14:00  
 Date Received: 11/24/15  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	ND		mg/l	0.075	0.021	1	11/28/15 07:33	11/30/15 21:57	30,4500NH3-BH	AT
Nitrogen, Nitrite	ND		mg/l	0.050	0.010	1	-	11/25/15 19:18	30,4500NO3-F	MR
Nitrogen, Nitrate	0.044	J	mg/l	0.100	0.018	1	-	11/25/15 19:18	30,4500NO3-F	MR
Nitrogen, Nitrate/Nitrite	0.044	J	mg/l	0.10	0.019	1	-	11/25/15 19:18	30,4500NO3-F	MR
Total Nitrogen	ND		mg/l	0.30	0.30	1	-	12/03/15 09:20	41,-	JO
Nitrogen, Total Kjeldahl	0.116	J	mg/l	0.300	0.093	1	11/25/15 15:30	12/01/15 23:53	30,4500N-C	AT
Phosphorus, Total	ND		mg/l	0.010	0.003	1	11/30/15 12:00	12/01/15 08:40	30,4500P-E	SD
Phosphate, Total	ND		mg/l	0.030	0.005	1	-	11/30/15 12:00	30,4500P-E(M)	SD



**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG844446-1										
Nitrogen, Total Kjeldahl	ND		mg/l	0.300	0.031	1	11/25/15 15:30	12/01/15 23:33	30,4500N-C	AT
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG844486-1										
Nitrogen, Nitrate	ND		mg/l	0.100	0.018	1	-	11/25/15 18:54	30,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG844487-1										
Nitrogen, Nitrite	ND		mg/l	0.050	0.010	1	-	11/25/15 18:57	30,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG844488-1										
Nitrogen, Nitrate/Nitrite	0.028	J	mg/l	0.10	0.019	1	-	11/25/15 18:59	30,4500NO3-F	MR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG844729-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.021	1	11/28/15 07:33	11/30/15 22:01	30,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG845072-1										
Phosphate, Total	ND		mg/l	0.030	0.005	1	-	11/30/15 12:00	30,4500P-E(M)	SD
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG845080-1										
Phosphorus, Total	ND		mg/l	0.010	0.003	1	11/30/15 12:00	12/01/15 08:40	30,4500P-E	SD

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

Parameter	LCS		LCSD		%Recovery Limits	RPD	Qual	RPD Limits
	%Recovery	Qual	%Recovery	Qual				
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG844446-2								
Nitrogen, Total Kjeldahl	105		-		78-122	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG844486-2								
Nitrogen, Nitrate	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG844487-2								
Nitrogen, Nitrite	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG844488-2								
Nitrogen, Nitrate/Nitrite	98		-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG844729-2								
Nitrogen, Ammonia	96		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG845072-2								
Phosphate, Total	95		-		84-118	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG845080-2								
Phosphorus, Total	95		-		80-120	-		



### Matrix Spike Analysis Batch Quality Control

Project Name: VHB1501

Lab Number: L1531026

Project Number: VHB1501

Report Date: 12/03/15

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Qual	MSD Found	MSD %Recovery	MSD Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844446-4 QC Sample: L1531027-01 Client ID: MS Sample												
Nitrogen, Total Kjeldahl	ND	8	5.70	71	Q	-	-	-	77-111	-	-	24
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844486-4 QC Sample: L1531026-04 Client ID: MW-04												
Nitrogen, Nitrate	0.044J	4	3.90	98	-	-	-	-	83-113	-	-	17
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844487-4 QC Sample: L1531026-04 Client ID: MW-04												
Nitrogen, Nitrite	ND	4	4.00	100	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844488-4 QC Sample: L1531026-04 Client ID: MW-04												
Nitrogen, Nitrate/Nitrite	0.044J	4	3.9	98	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844729-4 QC Sample: L1530935-05 Client ID: MS Sample												
Nitrogen, Ammonia	0.150	4	3.97	96	-	-	-	-	80-120	-	-	20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG845072-3 QC Sample: L1530995-03 Client ID: MS Sample												
Phosphate, Total	0.033	1.54	1.5	96	-	-	-	-	80-120	-	-	15
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG845080-3 QC Sample: L1528212-71 Client ID: MS Sample												
Phosphorus, Total	0.011	0.5	0.494	97	-	-	-	-	75-125	-	-	20

## Lab Duplicate Analysis

Batch Quality Control

Project Name: VHB1501

Project Number: VHB1501

Lab Number: L1531026

Report Date: 12/03/15

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844446-3 QC Sample: L1531027-01 Client ID: DUP Sample						
Nitrogen, Total Kjeldahl	ND	ND	mg/l	NC		24
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844486-3 QC Sample: L1531026-04 Client ID: MW-04						
Nitrogen, Nitrate	0.044J	0.046J	mg/l	NC		17
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844487-3 QC Sample: L1531026-04 Client ID: MW-04						
Nitrogen, Nitrite	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844488-3 QC Sample: L1531026-04 Client ID: MW-04						
Nitrogen, Nitrate/Nitrite	0.044J	0.046J	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG844729-3 QC Sample: L1530935-05 Client ID: DUP Sample						
Nitrogen, Ammonia	0.150	0.170	mg/l	13		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG845072-4 QC Sample: L1530995-03 Client ID: DUP Sample						
Phosphate, Total	0.033	0.039	mg/l	17	Q	15
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG845080-4 QC Sample: L1528212-71 Client ID: DUP Sample						
Phosphorus, Total	0.011	0.013	mg/l	17		20

Project Name: VHB1501

Lab Number: L1531026

Project Number: VHB1501

Report Date: 12/03/15

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information Custody Seal****Cooler**

A Absent

**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1531026-01A	Amber 1000ml H2SO4 preserved	A	<2	3.5	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L1531026-01B	Plastic 120ml unpreserved	A	7	3.5	Y	Absent	NO3-4500(2),NO2-4500NO3(2)
L1531026-02A	Amber 1000ml H2SO4 preserved	A	<2	3.5	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L1531026-02B	Plastic 120ml unpreserved	A	7	3.5	Y	Absent	NO3-4500(2),NO2-4500NO3(2)
L1531026-03A	Amber 1000ml H2SO4 preserved	A	<2	3.5	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L1531026-03B	Plastic 120ml unpreserved	A	7	3.5	Y	Absent	NO3-4500(2),NO2-4500NO3(2)
L1531026-04A	Amber 1000ml H2SO4 preserved	A	<2	3.5	Y	Absent	TKN-4500(28),TPO4-4500(28),TPHOS-4500(28),NO3/NO2-4500(28),TNITROGEN(28),NH3-4500(28)
L1531026-04B	Plastic 120ml unpreserved	A	7	3.5	Y	Absent	NO3-4500(2),NO2-4500NO3(2)

\*Values in parentheses indicate holding time in days



**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

## GLOSSARY

### Acronyms

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).
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.
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.
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.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
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.

### 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

**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.

**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.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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).

**Report Format:** DU Report with 'J' Qualifiers



**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

#### Data Qualifiers

- 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.
- 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.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- 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.
- 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 Identified Compounds (TICs).
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

**Project Name:** VHB1501  
**Project Number:** VHB1501

**Lab Number:** L1531026  
**Report Date:** 12/03/15

## REFERENCES

- 30 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WPCF. 18th Edition. 1992.
- 41 Alpha Analytical Labs Internally-developed Performance-based Method.

## 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 8260C:** 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene; Iodomethane (methyl iodide) (soil); Methyl methacrylate (soil); Azobenzene.

**EPA 8270D:** Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 625:** 4-Chloroaniline, 4-Methylphenol.

**SM4500:** Soil: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

**EPA 8270D:** Biphenyl.

**EPA 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.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

### Drinking Water

**EPA 200.8:** Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7:** Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;

**EPA 300.0:** 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**

**EPA 332:** Perchlorate.

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

### Non-Potable Water

**EPA 200.8:** Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;

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

**EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** 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:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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

