

December 29, 2023

Central Plymouth County Water District Commission  
44 Obery Street  
Plymouth, Massachusetts 02360

**Re: Silver Lake Water Quality Monitoring Program  
Technical Memorandum Addendum – 2023 Monitoring Results  
TRC Project No. 016120**

Dear Commissioners,

In September 2023, the Central Plymouth County Water District Commission (CPCWDC) approved TRC Environmental Corporation (TRC) to collect additional water quality monitoring data as a supplement the 2021-2022 Silver Lake Water Quality Monitoring Program (WQMP).

This report serves as an addendum to the 2021-2022 Silver Lake Water Quality Monitoring Program Technical Memorandum and describes the supplemental monitoring completed in 2023, including the following elements:

- Description of the locations, dates, and parameters monitoring in 2023.
- Presentation of the results from 2023.
- Conclusions and recommendations, as informed by these results.

## 2023 Silver Lake Water Quality Monitoring Program – Approach

The sample locations for the 2023 Silver Lake WQMP primarily consisted of a subset of locations previously monitored in the 2021-2022 period (**Figure 1**). These locations were selected to focus on the largest inputs and outputs of nutrients identified by the 2021-2022 Silver Lake WQMP. Additionally, a new surface monitoring location (SLIL-P) was added in response to observations by the Jones River Watershed Association of a plume of discolored water emerging into Silver Lake from the diversion inlet pipe during an emergency water diversion from East Monponsett Pond. This emergency water diversion lasted from September 13 to September 17, 2023.

The first 2023 monitoring event took place on September 20, 2023. This event included a total of seven sample locations: four in-lake surface locations, one tributary location (Tubbs Meadow Brook at Route 27), one outlet location (Jones River at Lake Street), and one diversion source surface water location (East Monponsett Pond near the City of Brockton diversion intake). Although the East Monponsett Pond diversion pipe was no longer flowing at the time of this visit, sampling was conducted at SLIL-P to help measure any lingering differential in Silver Lake's water quality between this new monitoring station and the previously established deep hole monitoring stations (SLIL-S, SLIL-M, and SLIL-B).



*Silver Lake near the deep in-lake sampling locations (SLIL-S/M/B), October 24, 2023.*

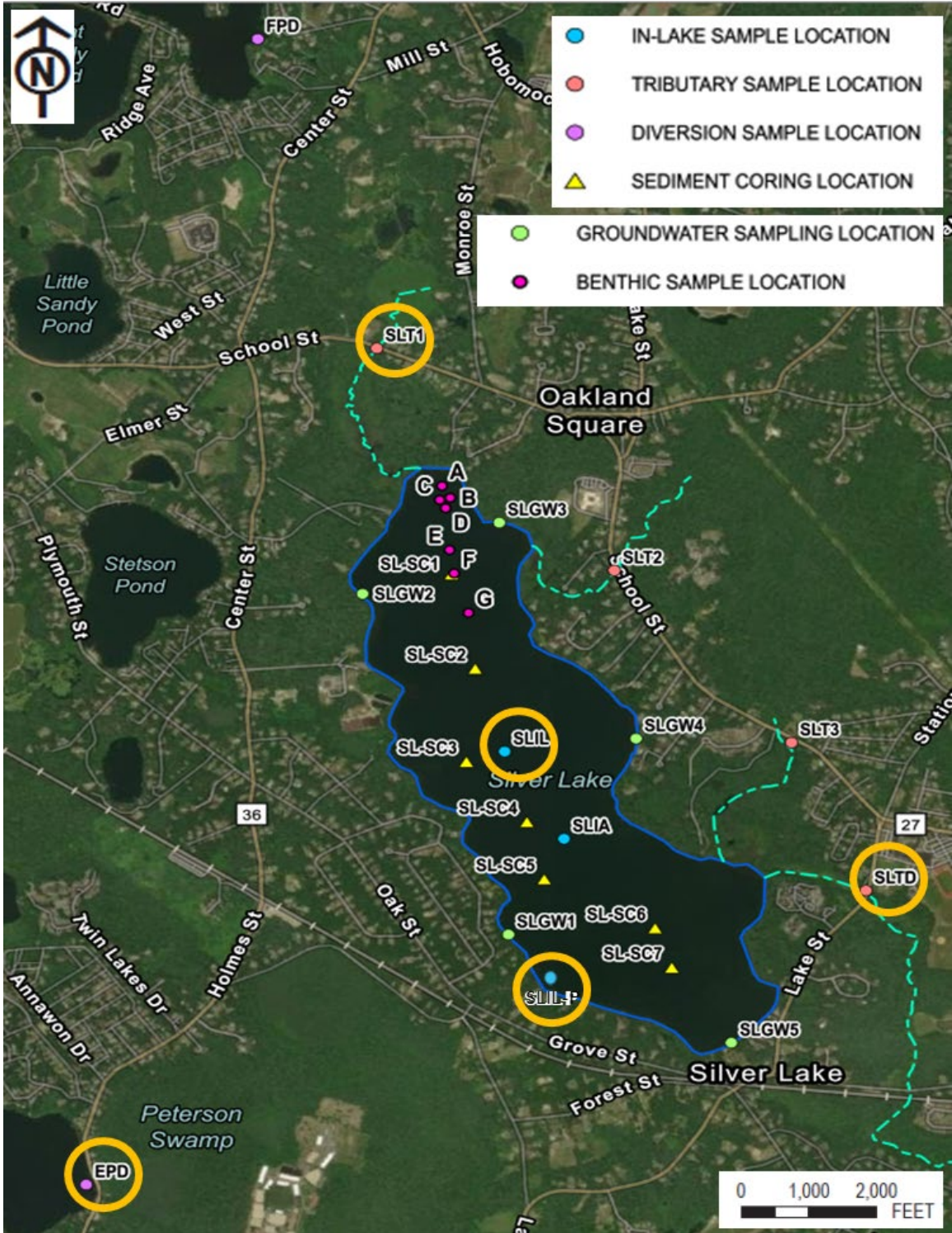


Figure 1. 2023 Monitoring Locations

All sampling locations for the 2021-2023 period shown for reference. Locations sampled in 2023 are circled in gold.



*The new monitoring location at Silver Lake (SLIL-P), which was sampled on September 20, 2023, in response to observations of discolored water flowing into the lake the week before.*

The second monitoring event took place on October 24, 2023, and included a total of six sample locations: three in-lake surface locations, one tributary location, one outlet location, and one diversion source surface water location. Given the lack of active diversion for more than a month and the unremarkable visual appearance at the time of the visit, the area adjacent to the East Monponsett Pond diversion inlet (SLIL-P) was excluded from the October monitoring event.

Samples collected during the September and October monitoring events were submitted to the same commercial laboratories used for the 2021-2022 Silver Lake WQMP (i.e., Phoenix Environmental Laboratories, Alpha Analytical, Aquatic Analysts, and GreenWater Laboratories) for their respective expertise in the following: total phosphorus, dissolved phosphorus, total nitrogen (including total Kjeldahl nitrogen, nitrate-nitrogen, and nitrite-nitrogen), chlorophyll a, phytoplankton (identification and enumeration), and cyanotoxins (microcystins).

Additional water quality measurements were field-measured by TRC at each sampling location, including the following: water temperature, dissolved oxygen, specific conductance, pH, turbidity, and apparent color. Secchi disk transparency was measured at lake and pond locations. Discharge (streamflow) was measured at tributary and outlet stations.

This supplemental water quality monitoring was conducted under the existing Sampling and Analysis Plan (SAP) and Quality Assurance Project Plan (QAPP).

# 2023 Silver Lake Water Quality Monitoring Program – Results

## Silver Lake

### Water Temperature

Silver Lake was strongly stratified in September, with a distinct warm layer occupying the top 7 m (23 ft) of the water column and a cold layer located below 9 m (30 ft) (**Figure 2**). Surface water temperatures were 21°C at SLIL-S in the deepest part of the lake and 21.8°C at SLIL-P near the East Monponsett Pond diversion inlet structure (**Table 1**). Water temperatures declined to 10.3°C near the lake bottom at SLIL-B.

Although weaker, stratification was still evident in October, with somewhat warmer water present in the top 10 m (33 ft) of Silver Lake and colder water evident below 12 m (39 ft) (**Figure 2**). Surface water temperatures were 15.2°C at SLIL-S in the deep hole monitoring location (**Table 1**). Water temperatures remained at 10.3°C near the lake bottom at SLIL-B.

Generally, patterns in water temperatures in 2023 were comparable to those observed at similar points in the season during 2021-2022.

### Dissolved Oxygen

In-lake dissolved oxygen concentrations obtained during the 2023 monitoring program largely mirrored the water temperature profiles, with higher concentrations in surface waters and lower concentrations in bottom waters (**Table 1**). Dissolved oxygen concentrations were sufficient to support aquatic life (greater than 5.0 mg/L) in water shallower than 7 m (September) to 10 m (October). Readings became hypoxic (<5.0 mg/L) or anoxic (<2.0 mg/L) in deeper water.

These patterns in dissolved oxygen concentrations in 2023 were comparable to those observed at similar points in the season in 2021-2022.

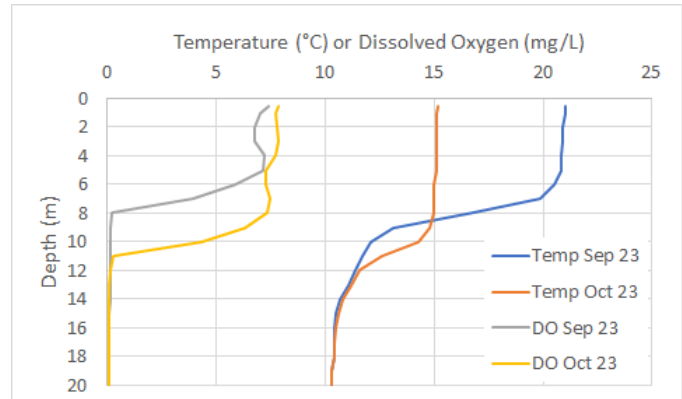
### Specific Conductance

Field-measured specific conductance in Silver Lake was typical of a freshwater system (i.e., less than 1,000  $\mu\text{S}/\text{cm}$ ) in September and October 2023. As measured at the in lake sample location (SLIL), specific conductance ranged from 191 to 224  $\mu\text{S}/\text{cm}$  in September 2023 and between 194 and 234  $\mu\text{S}/\text{cm}$  in October 2023. Lower values were observed in surface waters with highest values coming from the deepest waters (**Table 1**).

Generally, patterns in specific conductance observed in 2023 were comparable to those observed at similar points in the season in 2021-2022.

### pH

Field-measured pH in Silver Lake demonstrated a gradient from higher pH (slightly basic) in surface waters to lower pH (slightly acidic) in bottom waters during both September and October (**Table 1**). The gradient was observed to be sharper in September, when the lake was strongly stratified, than October, when thermal stratification had weakened. Overall, pH in Silver Lake ranged from a minimum of 6.9 SU (SLIL-B) in October to a maximum of 7.5 SU in September (SLIL-S).



*Figure 2. Temperature and Dissolved Oxygen Profiles at SLIL*

September and October 2023 vertical profile results for the Silver Lake deep hole sampling location.

Generally, patterns in pH observed during the 2023 monitoring program were consistent with those observed at similar points in the season in 2021-2022.

#### Turbidity, Apparent Color, and Secchi Depth

Field-measured data collected as part of the 2023 monitoring program indicate turbidity of the in-lake samples ranged from 0.03 NTU (SLIL-B) in October to 2.71 NTU (SLIL-S) in September (**Table 1**). However, turbidity demonstrated no consistent pattern from surface to bottom between the two months.

Apparent color was consistent at the in-lake sample location (SLIL) during both months of the 2023 monitoring program, with a median color measurement of 10 PCU (**Table 1**).

Secchi depth at the in-lake sample location (SLIL) was 1.5 m (5 ft) in September 2023, indicating restricted transparency at the surface of the water column (**Table 1**). By October 2023, Secchi depth had increased to 2.5 m (8 ft), indicating improved transparency.

Generally, turbidity and apparent color measurements during the 2023 monitoring program were comparable with those observed at similar points in the season in 2021-2022. In contrast, Secchi depth was generally lower in 2023 when compared to similar points in the season during 2021-2022, potentially reflecting the higher biovolume of phytoplankton (including cyanobacteria) than at similar points in prior years. However, 2023 Secchi depth readings were not outside the range of values previously observed during the 2021-2022 study (**Figure 3**).



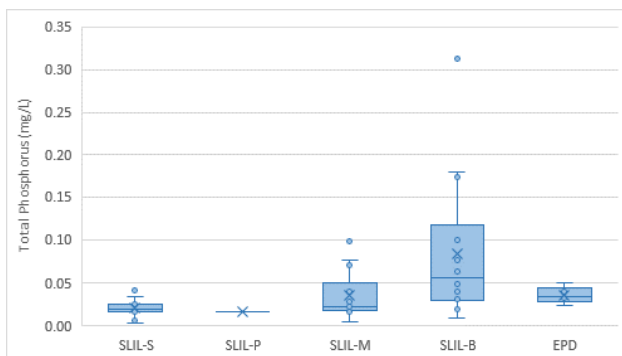
*Figure 3. Secchi Disk Readings 2021-2023*

Silver Lake and East Monponsett Pond results presented as boxplots of all data collected 2021-2023. Median value appears as the dividing line within the box. Average value appears as an "x." Boxplot whiskers represent highest and lowest observed values within 1.5 times the interquartile range (i.e., the green box).

Note: Upper range of EPD values is limited by shallow water. A value of 1.75 m indicates the Secchi disk is on the pond bottom.

**Table 1. Field-Measured Water Quality Results**

| Parameter            | Unit  | Month | East Monponsett Pond Diversion (EPD) | Tubbs Meadow Brook (SLT-1) | Silver Lake In-Lake Surface (SLIL-S) | Silver Lake In-Lake Middle (SLIL-M) | Silver Lake In-Lake Bottom (SLIL-B) | Silver Lake In-Lake Near Monponsett Diversion Inlet (SLIL-P) | Jones River (SLT-D) |
|----------------------|-------|-------|--------------------------------------|----------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--|---------------------|
| Temperature          | °C    | Sep   | 22.2                                 | 18.5                       | 21.0                                 | 16.8                                | 10.3                                | 21.8   | 16.9                |
|                      |       | Oct   | 15.9                                 | 11.6                       | 15.2                                 | 12.6                                | 10.3                                | NS   | 11.6                |
| Dissolved Oxygen     | mg/L  | Sep   | 8.11                                 | 4.00                       | 7.41                                 | 0.23                                | 0.08                                | 8.05   | 4.32                |
|                      |       | Oct   | 8.86                                 | 5.45                       | 7.83                                 | 0.28                                | 0.07                                | NS   | 3.05                |
|                      | %     | Sep   | 92.9                                 | 42.5                       | 82.6                                 | 2.3                                 | 0.7                                 | 90.1   | 44.1                |
|                      |       | Oct   | 88.1                                 | 49.5                       | 76.6                                 | 2.8                                 | 0.6                                 | NS   | 27.7                |
| Specific Conductance | µS/cm | Sep   | 182                                  | 136                        | 191                                  | 206                                 | 219                                 | 189  | 125                 |
|                      |       | Oct   | 180                                  | 164                        | 194                                  | 205                                 | 232                                 | NS   | 121                 |
| pH                   | SU    | Sep   | 6.8                                  | 7.8                        | 7.5                                  | 7.2                                 | 7.1                                 | 7.2  | 4.9                 |
|                      |       | Oct   | 6.8                                  | 6.6                        | 7.2                                  | 7.0                                 | 6.9                                 | NS   | 6.6                 |
| Turbidity            | NTU   | Sep   | 0.91                                 | 1.96                       | 1.52                                 | 0.89                                | 2.71                                | 1.48   | 6.01                |
|                      |       | Oct   | 1.06                                 | 2.17                       | 0.58                                 | 0.51                                | 0.03                                | NS   | 2.05                |
| Apparent Color       | PCU   | Sep   | 10                                   | 10                         | 20                                   | 10                                  | 10                                  | 10   | 10                  |
|                      |       | Oct   | 10                                   | 20                         | 10                                   | 10                                  | 10                                  | NS   | 20                  |
| Secchi Depth         | m     | Sep   | 1.25                                 | N/A                        | 1.5                                  | N/A                                 | N/A                                 | NS   | N/A                 |
|                      |       | Oct   | 1.25                                 | N/A                        | 2.5                                  | N/A                                 | N/A                                 | NS   | N/A                 |
| Discharge            | cfs   | Sep   | N/A                                  | 1.89                       | N/A                                  | N/A                                 | N/A                                 | N/A  | 0.00                |
|                      |       | Oct   | N/A                                  | 0.65                       | N/A                                  | N/A                                 | N/A                                 | N/A  | 0.09                |



*Figure 4. Total Phosphorus 2021-2023*

Silver Lake and East Monponsett Pond results presented as boxplots of all data collected 2021-2023. Median value appears as the dividing line within the box. Average value appears as an "x." Boxplot whiskers represent highest and lowest observed values within 1.5 times the interquartile range (i.e., the blue box).

### Phosphorus

Total phosphorus concentrations in Silver Lake ranged from 0.016 to 0.063 mg/L in September and October 2023, with the highest concentrations observed in bottom waters (**Table 2**). This pattern of higher phosphorus at depth (represented by SLIL-B) is consistent with what has been observed over the course of the Silver Lake WQMP (**Figure 4**) and tends to be most pronounced when the lake is thermally stratified in summer and early autumn.

These observed concentrations are largely in line with previous in-lake observations during the Silver Lake WQMP, including the total phosphorus measured near the East Monponsett Pond diversion inlet pipe (SLIL-P) three days after September's emergency water diversion had ceased (**Figure 4**). However, when averaged over water column, these values still represent an exceedance of the 0.018 mg/L interim target proposed as part of the 2021-2022 Silver Lake WQMP, which is based on the total phosphorus total maximum daily load (TMDL) developed for West and East Monponsett Ponds (MassDEP 2022).

Dissolved phosphorus concentrations in Silver Lake ranged from 0.010 mg/L to 0.053 mg/L in September and October 2023 (**Table 2**). This indicates that the majority of phosphorus was present in a readily available form for uptake by algae and cyanobacteria. Similar to observations in 2021-2022, concentrations of dissolved phosphorus also generally increased with depth, lending additional evidence to the conclusion that internal loading (i.e., phosphorus release from nutrient-rich sediments) is now a substantial source of the phosphorus load to Silver Lake.

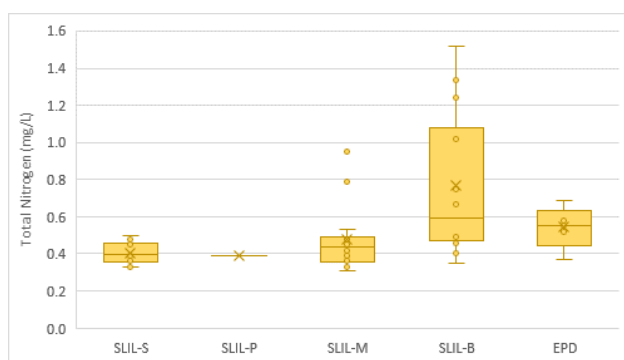


Figure 5. Total Nitrogen, 2021-2023

Silver Lake and East Monponsett Pond results presented as boxplots of all data collected 2021-2023. Median value appears as the dividing line within the box. Average value appears as an "x." Boxplot whiskers represent highest and lowest observed values within 1.5 times the interquartile range (i.e., the gold box).

### Nitrogen

Total nitrogen concentrations at the in-lake sample location ranged from 0.34 mg/L to 1.02 mg/L, with highest values observed in bottom waters (**Table 2**). Nitrate-nitrogen and nitrite-nitrogen were rarely detected. Instead, nitrogen was almost entirely present as Kjeldahl nitrogen, which includes both ammonia and organic forms. The higher concentrations of total Kjeldahl nitrogen in deep waters may be indicative of ammonia release from the sediments. Although the specific mechanisms for ammonia release are different from those for phosphorus release, they are both favored by the low dissolved oxygen concentrations observed in bottom waters of Silver Lake. Similar to phosphorus, this pattern is largely in line with what has been observed over the course of the Silver Lake WQMP (**Figure 5**).

### Chlorophyll a

Chlorophyll a concentrations in Silver Lake started off at a record high level during the September 2023 sampling event, reaching 15.2 mg/m<sup>3</sup> in surface waters at SLIL-S and 16.2 mg/m<sup>3</sup> near the East Monponsett diversion inlet pipe at SLIL-P (**Table 2**). These values are substantially higher than the range of previously observed results from 2021-2022 (**Figure 6**). They are also near or slightly above impairment threshold of 16 mg/m<sup>3</sup>, per the latest version of MassDEP's *Consolidated Assessment and Listing Methodology* (MassDEP 2022).

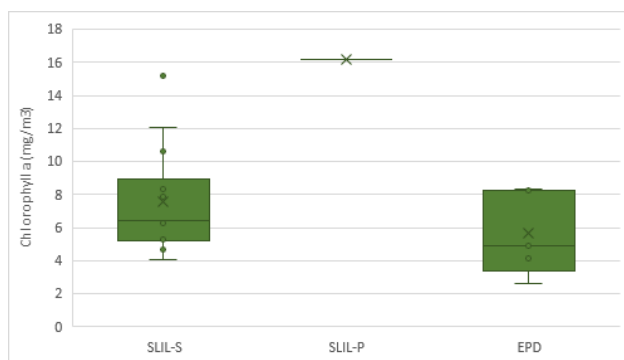


Figure 6. Chlorophyll a, 2021-2023

Silver Lake and East Monponsett Pond results presented as boxplots of all data collected 2021-2023. Median value appears as the dividing line within the box. Average value appears as an "x." Boxplot whiskers represent highest and lowest observed values within 1.5 times the interquartile range (i.e., the dark green box).

The October 2023 chlorophyll a results indicated a return to more typical values for Silver Lake, dropping back to 6.26 mg/m<sup>3</sup>, which is close to the median value for the Silver Lake WQMP (**Table 2** and **Figure 6**).

Chlorophyll a is an indirect measurement of phytoplankton production. Therefore, higher concentrations of chlorophyll a tend to be correlated with higher biomasses of phytoplankton.

### Phytoplankton

The September 2023 phytoplankton sample analysis identified cyanobacteria as the dominant taxa in the water column, constituting 91% of the total biovolume (**Table 2**). Although abundant at both the SLIL-S monitoring location and at SLIL-P near the East Monponsett diversion inlet in Silver Lake, cyanobacteria were not observed above the 70,000 cell/mL level considered to constitute a bloom. However, the cyanobacteria biovolume observed at SLIL-S (4.8 million μm<sup>3</sup>/mL) was the highest observed over the course of the Silver Lake WQMP (previous high was in August 2022 when cyanobacteria biovolume was just over 2 million μm<sup>3</sup>/mL).

Phytoplankton returned to more typical levels in October 2023, although cyanobacteria were still the dominant taxa in the water column, constituting 64% of total biovolume (**Table 2**). Cyanobacteria cell counts also fell to approximately 2,500 cells/mL from the observed high of more than 32,000 cells/mL in September.

Cyanotoxins

Microcystins were not detected in any of the samples collected from Silver Lake during the 2023 WQMP (**Table 2**).

**Table 2. Laboratory Analytical Water Quality Results**

| Parameter               | Unit                | Month | East Monponsett Pond Diversion (EPD) | Tubbs Meadow Brook (SLT-1) | Silver Lake In-Lake Surface (SLIL-S) | Silver Lake In-Lake Middle (SLIL-M) | Silver Lake In-Lake Bottom (SLIL-B) | Silver Lake In-Lake Near Monponsett Diversion Inlet (SLIL-P) | Jones River (SLT-D) |
|-------------------------|---------------------|-------|--------------------------------------|----------------------------|--------------------------------------|-------------------------------------|-------------------------------------|--|---------------------|
| Dissolved Phosphorus    | mg/L                | Sep   | 0.028                                | 0.097                      | 0.010                                | 0.019                               | 0.037                               | 0.007  | 0.014               |
|                         |                     | Oct   | 0.031                                | 0.063                      | 0.017                                | 0.013                               | 0.053                               | NS   | 0.016               |
| Total Phosphorus        | mg/L                | Sep   | 0.032                                | 0.141                      | 0.016                                | 0.016                               | 0.033                               | 0.015  | 0.026               |
|                         |                     | Oct   | 0.040                                | 0.113                      | 0.033                                | 0.016                               | 0.063                               | NS   | 0.167               |
| Nitrite-N               | mg/L                | Sep   | <0.010                               | 0.012                      | <0.010                               | <0.010                              | <0.010                              | <0.010   | <0.010              |
|                         |                     | Oct   | <0.010                               | <0.010                     | <0.010                               | <0.010                              | <0.010                              | NS   | <0.010              |
| Nitrate-N               | mg/L                | Sep   | 0.03                                 | <0.02                      | <0.02                                | <0.02                               | <0.02                               | <0.02  | 0.23                |
|                         |                     | Oct   | 0.08                                 | 0.07                       | 0.03                                 | 0.02                                | <0.02                               | NS   | 0.21                |
| Total Kjeldahl Nitrogen | mg/L                | Sep   | 0.49                                 | 1.11                       | 0.40                                 | 0.34                                | 0.75                                | 0.39   | 0.17                |
|                         |                     | Oct   | 0.61                                 | 0.66                       | 0.42                                 | 0.34                                | 1.02                                | NS   | 0.73                |
| Total Nitrogen          | mg/L                | Sep   | 0.52                                 | 1.12                       | 0.40                                 | 0.34                                | 0.75                                | 0.39   | 0.40                |
|                         |                     | Oct   | 0.69                                 | 0.73                       | 0.45                                 | 0.36                                | 1.02                                | NS   | 0.94                |
| Chlorophyll a           | mg/m <sup>3</sup>   | Sep   | 8.23                                 | NS                         | 15.2                                 | NS                                  | NS                                  | 16.2   | NS                  |
|                         |                     | Oct   | 4.13                                 | NS                         | 6.26                                 | NS                                  | NS                                  | NS   | NS                  |
| Cyanobacteria           | cells/mL            | Sep   | 3,918                                | NS                         | 32,177                               | NS                                  | NS                                  | 19,479   | NS                  |
|                         |                     | Oct   | 292                                  | NS                         | 2,494                                | NS                                  | NS                                  | NS   | NS                  |
|                         | µm <sup>3</sup> /mL | Sep   | 63,810                               | NS                         | 4,782,941                            | NS                                  | NS                                  | 3,166,036  | NS                  |
|                         |                     | Oct   | 33,050                               | NS                         | 349,472                              | NS                                  | NS                                  | NS   | NS                  |
|                         | % bv                | Sep   | 17                                   | NS                         | 91                                   | NS                                  | NS                                  | 89   | NS                  |
|                         |                     | Oct   | 8                                    | NS                         | 64                                   | NS                                  | NS                                  | NS   | NS                  |
| Microcystins            | µg/L                | Sep   | 0.87                                 | NS                         | <0.30                                | NS                                  | NS                                  | NS   | NS                  |
|                         |                     | Oct   | 0.30                                 | NS                         | <0.30                                | NS                                  | NS                                  | NS   | NS                  |



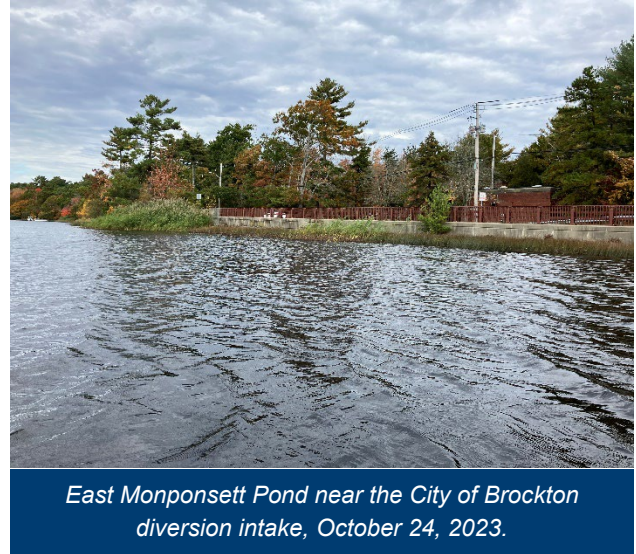
## East Monponsett Pond

### Water Temperature

Water temperatures in East Monponsett Pond were 22°C and 15°C at the surface in September and October, respectively (**Table 1**). This is similar to what was observed at the surface of Silver Lake for each sampling event.

### Dissolved Oxygen

Field-measured data collected in East Monponsett Pond indicate dissolved oxygen concentrations sufficient to support aquatic life (i.e., above 5.0 mg/L) in both September and October, ranging from 7.70 to 8.86 mg/L (**Table 1**). These values are somewhat higher than those observed in surface waters of Silver Lake on the same dates but are generally comparable to those previously observed at this location in 2022. East Monponsett Pond is too shallow to thermally stratify, so a direct comparison with bottom waters of Silver Lake is not appropriate.



*East Monponsett Pond near the City of Brockton diversion intake, October 24, 2023.*

### Specific Conductance

Field-measured specific conductance in East Monponsett Pond ranged from 180 to 182  $\mu\text{S}/\text{cm}$ , in September and October, respectively (**Table 1**). These values are marginally lower than those observed in 2022. They are also marginally lower than those measured in Silver Lake on the same dates.

### pH

Field-measured data collected in East Monponsett Pond in September and October were 6.8 SU (**Table 1**). These observations indicate slightly acidic water and are acidic compared to surface waters of Silver Lake on the same dates. However, these pH measurements are well within the expected value and comparable to observations from 2022.

### Turbidity, Apparent Color, and Secchi Depth

Turbidity in East Monponsett Pond ranged from 0.91 NTU in September 2023 to 1.06 NTU in October 2023 (**Table 1**). These values are somewhat higher than what was observed during sampling events in 2022 but are similar to observations from Silver Lake in 2023.

Apparent color was consistent at 10 PCU during both months of the 2023 monitoring program (**Table 1**).

Secchi depth was also consistent at 1.25 m (4 ft) during both months of the 2023 monitoring program (**Table 1**). This is similar to what was observed in 2022 but lower than observations from Silver Lake in 2023.

### Phosphorus

East Monponsett Pond total phosphorus concentrations were 0.032 mg/L in September and 0.040 mg/L in October 2023 (**Table 2**). These observed concentrations were in line with prior sampling results from the Silver Lake WQMP (**Figure 4**).

Dissolved phosphorus concentrations in East Monponsett Pond were 0.028 mg/L in September and 0.031 mg/L in October 2023 (**Table 2**). This indicates that the majority of phosphorus was present in a readily available form for uptake by algae and cyanobacteria.

### Nitrogen

Total nitrogen concentrations at the East Monponsett Pond sample location were 0.52 mg/L in September and 0.69 mg/L in October 2023 (**Table 2**). The September total nitrogen concentration was largely in line with what has been observed in East Monponsett Pond over the course of the Silver Lake WQMP and, while the October concentration was the highest observed at this location as part of the Silver Lake WQMP, it was not an extreme value (**Figure 5**). Total Kjeldahl nitrogen was the dominant form observed, contributing more than 85% of the overall nitrogen concentration. Nitrate-nitrogen was also detected at low levels during both sampling rounds, although nitrite-nitrogen was not.

### Chlorophyll a

Chlorophyll a concentrations in East Monponsett Pond were in line with previously observed values collected as part of the Silver Lake WQMP (**Table 2** and **Figure 6**).

Chlorophyll a is an indirect measurement of phytoplankton production. Therefore, higher concentrations of chlorophyll a tend to be correlated with higher biomasses of phytoplankton.

### Phytoplankton

Although cyanobacteria were present in both the September and October 2023 phytoplankton samples from East Monponsett Pond, cell counts were well below bloom levels and cyanobacteria biovolume accounted for less than 20% of the total observed in both months (**Table 2**). The phytoplankton assemblage was balanced in September with no single dominant taxa group. This switched to a non-harmful diatom-dominated assemblage in October, which is a typical seasonal shift in temperate lakes and ponds.

### Cyanotoxins

Microcystins were detected in East Monponsett Pond samples from both the September and October 2023 site visits (**Table 2**). The September concentration was 0.87 µg/L, decreasing to 0.30 µg/L in October. These concentrations were well below the Massachusetts recreational advisory level of 8 µg/L but were at or above the US EPA drinking water health advisory technical guidance level of 0.30 µg/L. The drinking water health advisory guidance only applies to finished drinking water but has been used as part of the Silver Lake WQMP for context because water from East Monponsett Pond is diverted to Silver Lake multiple times each year. In 2023, this included a diversion for several days just prior to the September sampling event.

## Tubbs Meadow Brook and Jones River

### Discharge

Streamflows observed in Tubbs Meadow Brook at SLT-1 were higher during the September 2023 visit than in October and higher than any flows reported from those months in 2022 (**Table 1**). This likely reflected the influence of months of wetter than normal conditions in 2023, which peaked in September, when two to four inches more than normal falling areawide that month.

Conversely, the Jones River at SLT-D was not flowing at all during the September 2023 visit and only minimal flow was observed during the October visit (**Table 1**). The mostly stagnant flow conditions observed during these visits to SLT-D likely impacted water quality results, as well.

### Dissolved Oxygen

Field measured dissolved oxygen concentrations in Tubbs Meadow Brook at SLT-1 were sufficient to support aquatic life (greater than 5.0 mg/L) in October; however, hypoxic conditions were documented in September (**Table 1**).

Dissolved oxygen concentrations in the Jones River at SLT-D were insufficient to support aquatic life (less than 5.0 mg/L) in both months (**Table 1**). Similar to observations in 2021-2022, hypoxic conditions at this location tend to be associated with low flow conditions.

### Specific Conductance

Specific conductance in Tubbs Meadow Brook at SLT-1 was 135.8  $\mu\text{S}/\text{cm}$  in September 2023 and 163.6  $\mu\text{S}/\text{cm}$  in October (**Table 1**).

In the Jones River at SLT-D, specific conductance was 124.8  $\mu\text{S}/\text{cm}$  in September 2023 and 121.0  $\mu\text{S}/\text{cm}$  in October (**Table 1**).

Specific conductance at both locations was on the low end or somewhat lower than values observed as part of the Silver Lake WQMP in 2021-2022.

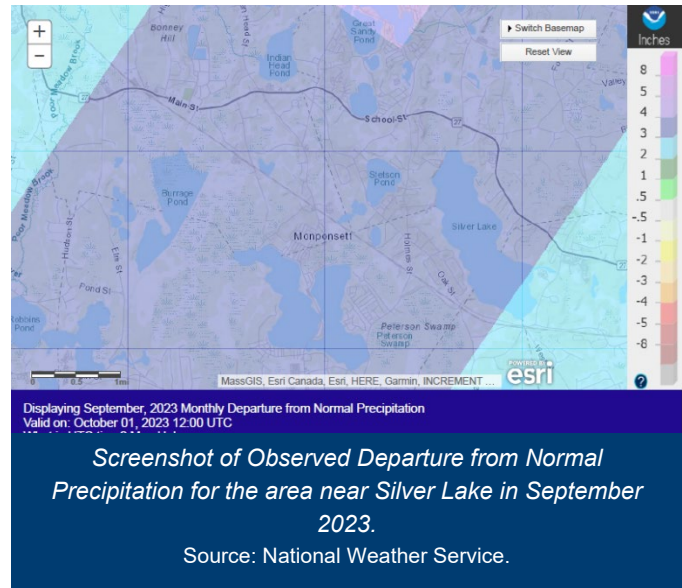
### pH

Field measured pH values were 7.8 and 6.6 in Tubbs Meadow Brook at SLT-1 in September and October 2023, respectively (**Table 1**). These values are higher than (less acidic) than those observed at similar times during the 2021-2022 Silver Lake WQMP.

In the Jones River at SLT-D, pH was 4.9 and 6.6 in September and October 2023, respectively (**Table 1**). The very low pH value observed in September may indicate that the pooled water in the channel was primarily left over from recent precipitation events, rather than residual water from prior Silver Lake outflows or groundwater in seepage.

### Apparent Color

Similar to observations collected as part of the 2021-2022 Silver Lake WQMP, apparent color was unremarkable during the 2023 monitoring program, remaining at 20 PCU or lower in both September and October (**Table 1**).



### Phosphorus

Total phosphorus concentrations in Tubbs Meadow Brook at SLT-1 were 0.141 and 0.113 mg/L in September and October 2023, respectively (**Table 2**).

Total phosphorus concentrations in the Jones River at SLT-D were 0.026 and 0.167 mg/L in September and October 2023, respectively (**Table 2**).

Dissolved phosphorus concentrations in Tubbs Meadow Brook at SLT-1 were 0.097 mg/L and 0.063 mg/L in September and October 2023, respectively (**Table 2**).

Dissolved phosphorus concentrations in the Jones River at SLT-D were 0.014 mg/L and 0.016 mg/L in September and October 2023, respectively (**Table 2**).

These values for total and dissolved phosphorus are generally consistent with the concentrations observed as part of the 2021-2022 Silver Lake WQMP, although dissolved phosphorus in 2023 was on the high end prior observations for Tubbs Meadow Brook.

### Nitrogen

The total nitrogen concentration in Tubbs Meadow Brook at SLT-1 was 1.12 mg/L in September 2023 (**Table 2**), making it the highest concentration observed at this location as part of the Silver Lake WQMP. In October 2023, the concentration of total nitrogen dropped to 0.73 mg/L, which is generally comparable to concentrations observed in 2021-2022 as part of the Silver Lake WQMP. The majority of nitrogen was in the form of Kjeldahl nitrogen, which is also similar to prior observations.

Total nitrogen concentrations in the Jones River at SLT-D were 0.40 mg/L and 0.94 mg/L in September and October 2023, respectively (**Table 2**). These values are comparable to concentrations observed as part of the 2021-2022 Silver Lake WQMP. Nitrate-nitrogen was the primary form of nitrogen sampled in September 2023 but was secondary to total Kjeldahl nitrogen in October. This pattern is similar to what was observed in as part of the 2021-2022 Silver Lake WQMP, particularly with regard to the tendency toward higher proportion of nitrate-nitrogen in the Jones River at SLT-D than most other water quality monitoring stations.

## Findings and Recommendations

### Findings

The supplemental water quality data collected in September and October 2023 support and reinforce the key findings of the 2021-2022 Silver Lake WQMP. Although no acute or immediate impact of the September 14-17, 2023 emergency diversion from East Monponsett Pond was specifically identified based on the water quality data alone, the 2023 Silver Lake WQMP did illuminate some additional findings of potential interest, including the following:

- Hypoxic and anoxic conditions can persist in waters of Silver Lake as shallow as 10 m (33 ft) into late October. In 2021 and 2022, low dissolved oxygen concentrations were measured in shallow waters in early October but were relegated to the deepest waters (i.e., deeper than 15 m [9 feet]) late in the month.
- Precipitation was abundant in 2023, resulting in the need for emergency water diversion from East Monponsett Pond in September. Yet, the flow conditions in the Jones River at SLT-D were comparable to those observed in 2022 (a drought year), reinforcing the observation that downstream flow into the Jones River can be driven more by management of diversions and withdrawals than by seasonal and interannual patterns in weather conditions. Beyond the obvious impacts on downstream biology, prior modeling completed using the 2022 WQMP dataset suggests that reduced discharges to the Jones River make nutrients from the East Monponsett diversion more likely to be retained and impactful in Silver Lake. This can drive excessive phytoplankton growth in the short term and also contribute to future cycles of internal nutrient loading from the sediments over the long term.
- Silver Lake can experience very high cyanobacteria levels (cell counts and biovolume) in September and October. This was previously hypothesized as likely to occur but data from 2022 indicated peak cyanobacteria levels in March and August. Although the conditions observed on the specific sampling dates in 2023 technically fell below “bloom” thresholds and were not accompanied by microcystin toxins, cyanobacteria were present at the highest levels observed as part of the Silver Lake WQMP. Additionally, the highest chlorophyll a laboratory results observed as part of the Silver Lake WQMP were obtained in September 2023. Finally, aerial photographs taken by the Jones River Watershed Association on September 14, 2023 provide visual evidence of a blue-green color in the cove near the East Monponsett diversion inlet pipe.
- Cyanotoxins (microcystins) were detected near the East Monponsett Pond diversion intake for the first time as part of the Silver Lake WQMP. Although the concentrations were well below the Massachusetts recreational advisory level, this was the first direct evidence of microcystins in proximity to the diversion intake. Whether cyanotoxins present in this location would be likely to have an impact on cyanotoxin levels in Silver Lake if water were being actively diverted was beyond the scope of this study. However, the starting concentration in each water body, the nature of the toxin presence (intracellular or extracellular), flow rate, time of travel between the intake and Silver Lake, and possible biodegradation processes within the diversion pipe would likely be factors to consider.

### Recommendations for 2024

Given the findings of the original Silver Lake Water Quality Monitoring Program and the two months of focused monitoring in 2023, TRC recommends the following actions for consideration in 2024.

### Lake Management Plan

As stated in the original *2021-2022 Silver Lake Water Quality Monitoring Program Technical Memorandum*, the development of a lake management plan could provide the CPCWDC and other stakeholders with a pathway to alleviating impairments already listed by MassDEP and addressing other documented water quality and ecological management issues. This will likely require a comprehensive regional approach to ensure the following:

- Stakeholder input is adequately considered in setting the management goals and means of evaluating success.
- The selected management interventions can be appropriately funded and coordinated among the parties responsible for managing watershed lands, water bodies, and water infrastructure.
- The plan achieves the desired improvements over the long term.

The Old Colony Planning Council recently began the process of developing a stakeholder-driven regional water plan. While this plan will likely provide a broad framework for sustainable regional water supply across 17 communities, it is likely that a more focused lake management plan will still be needed to provide the necessary details specific to the management of the Silver Lake system. The lake management plan will need to identify watershed management actions, water supply management actions, and in-lake management actions.

One action that the CPCWDC could consider initiating in 2024 would be an initial feasibility study of in-lake biological, chemical, and physical management options presented in the *2021-2022 Silver Lake Water Quality Monitoring Program Technical Memorandum*. This would develop the information needed to help select and eventually implement the in-lake management actions that would ultimately become a part of the comprehensive lake management plan. It could also be used as a tool to begin budgeting for design, permitting, and implementation of in-lake water quality improvement solutions. Given the amount of directly usable data already collected as part of the Silver Lake WQMP, this feasibility study could probably be completed for \$30,000 or less.

Alternatively, or in addition to this, the CPCWDC could consider initiating a watershed assessment to help identify possible opportunities for water quality improvement in Silver Lake's natural watershed (i.e., lands that drain to one of the three tributaries or directly to Silver Lake). This would develop the information needed to help select and eventually implement the watershed-based actions that would ultimately become a part of the comprehensive lake management plan. The Silver Lake WQMP collected less information on watershed conditions than in-stream and in-lake, so some additional field investigation and coordination with watershed municipalities would be needed to better inform potential locations and concepts for watershed improvement projects. With this understanding, the costs for a watershed assessment are likely to be higher – at least \$50,000 for a narrowly focused study. A more ambitious watershed assessment that seeks to identify locations and develop concept designs for green infrastructure, stormwater Best Management Practices (BMPs), and/or stream channel and floodplain restoration, would exceed \$100,000.

### Monitoring

Some level of ongoing monitoring is recommended for 2024, as it will be important in helping to track management issues and may also provide critical early detections of incipient water quality issues or new invasive species that could be addressed early on, before they become larger scale problems. The recommended monitoring program would remain comprehensive enough to ensure collection of the most useful data for tracking lake and watershed water quality trends but could also be streamlined to focus on the most critical information and maximize cost-effectiveness. Recommended and optional monitoring components are summarized in **Table 3**, along with recommended frequency and locations.

A recommended budget for the monitoring program described above would be \$40,000 to \$75,000, depending on the duration, number of sampling locations, and number of visits.

Ideally, future monitoring would eventually include deployment and operation of a water quality data buoy with telemetry, so that stakeholders would be able to view in-lake data in real time. Although these units can be rented, it is usually more cost-effective to purchase them if they will be used for more than one season.

If the CPCWDC elected to purchase a water quality data buoy system, the anticipated budget for the purchase would be expected to range from \$40,000 for simple but rugged, fixed-location models to \$100,000 or more for higher-end and profiling models. An annual operations and maintenance budget of at least \$20,000 to \$30,000 would also be recommended. This would include annual re-deployment, a data plan, web hosting for real-time data viewing, regular visits to clean and maintain the equipment, and annual winterizing.

**Table 3. Recommended Monitoring Program for 2024**

| Component            | Frequency          | Silver Lake | East Monponsett Pond | Tubbs Meadow Brook | Jones River (Outlet) | Furnace Pond | Little Brook | Mirage Brook | Notes  |
|----------------------|--------------------|-------------|----------------------|--------------------|----------------------|--------------|--------------|--------------|--|
| Dissolved oxygen     | Monthly            | ●           | ●                    | ●                  | ●                    | ○            | ○            | ○            |  |
| Temperature          | Monthly            | ●           | ●                    | ●                  | ●                    | ○            | ○            | ○            |  |
| pH                   | Monthly            | ○           | ○                    | ○                  | ○                    | ○            | ○            | ○            |  |
| ORP*                 | Monthly            | ○           |                      |                    |                      |              |              |              | More complete measure of conditions that favor sediment phosphorus release and other undesirable chemical processes than dissolved oxygen. May want to add SOP to QAPP (minor change). |
| Specific conductance | Monthly            | ○           | ○                    | ○                  | ○                    | ○            | ○            | ○            |  |
| Secchi disk          | Monthly            | ●           | ●                    |                    |                      |              |              |              |  |
| Turbidity            | Monthly            | ○           | ○                    | ○                  | ○                    | ○            | ○            | ○            |  |
| Chlorophyll a        | Monthly            | ●           | ●                    |                    |                      | ○            |              |              |  |
| Phycocyanin*         | Monthly            | ○           | ○                    |                    |                      | ○            |              |              | Pigment specific to cyanobacteria. May want to add SOP to QAPP (minor change).   |
| Phytoplankton        | Monthly            | ●           | ●                    |                    |                      | ○            |              |              |  |
| Cyanotoxins          | Monthly            | ●           | ●                    |                    |                      | ○            |              |              |  |
| Total phosphorus     | Monthly            | ●           | ●                    | ●                  | ●                    | ○            | ○            | ○            |  |
| Dissolved phosphorus | Monthly            | ○           | ○                    | ○                  | ○                    | ○            | ○            | ○            |  |
| Total nitrogen       | Monthly            | ●           | ●                    | ●                  | ●                    | ○            | ○            | ○            |  |
| Ammonia nitrogen     | Monthly            | ○           | ○                    | ○                  | ○                    | ○            | ○            | ○            |  |
| Aquatic plants       | Annually in August | ○           | ○                    |                    |                      | ○            |              |              | Littoral zone (up to 20 ft)  |
| Discharge            | Monthly            |             |                      | ●                  | ●                    |              | ○            | ○            |  |

\*New component  
● = Recommended  
○ = Optional

Although ongoing monitoring of Silver Lake is recommended, TRC also recommends that the CPCWDC coordinate its plans for future monitoring with the City of Brockton as feasible. This will serve to minimize potential duplication of efforts and may allow improved opportunities for data sharing and collaboration.

It has been a pleasure to work with you on this project. Should you have any questions, please contact the undersigned at (401) 330-1204 or [mladewig@trccompanies.com](mailto:mladewig@trccompanies.com).

Sincerely,

**TRC ENVIRONMENTAL CORPORATION**



Matt Ladewig, CLM  
Project Director

Attachments:   A. Laboratory Reports  
                  B. Updated Water Quality Database (Digital)



## **Attachment A: Laboratory Reports**



## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L2355209   |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 09/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2355209-01                | SLIL-S           | WATER         | PLYMOUTH COUNTY            | 09/20/23 10:15                  | 09/20/23            |
| L2355209-02                | SLIL-SS          | WATER         | PLYMOUTH COUNTY            | 09/20/23 10:25                  | 09/20/23            |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

### Case Narrative

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

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

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

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

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

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

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**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

**Case Narrative (continued)**

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with ice and delivered directly from the sampling site. This is considered acceptable since the samples were in the process of cooling.

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:  Cristin Walker

Title: Technical Director/Representative

Date: 09/27/23

# **INORGANICS & MISCELLANEOUS**

Project Name: SILVER LAKE WQMP

Lab Number: L2355209

Project Number: 016120.0000.0000

Report Date: 09/27/23

**SAMPLE RESULTS**

Lab ID: L2355209-01

Date Collected: 09/20/23 10:15

Client ID: SLIL-S

Date Received: 09/20/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                                  | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|--|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| <b>General Chemistry - Westborough Lab</b> |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                              | 15.2   |           | mg/m3 | 2.00 | NA  | 1               | 09/21/23 07:20 | 09/22/23 18:55 | 121,10200H        | JAI     |



Project Name: SILVER LAKE WQMP

Lab Number: L2355209

Project Number: 016120.0000.0000

Report Date: 09/27/23

## SAMPLE RESULTS

Lab ID: L2355209-02

Date Collected: 09/20/23 10:25

Client ID: SLIL-SS

Date Received: 09/20/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                           | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|-------------------------------------|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| General Chemistry - Westborough Lab |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                       | 15.5   |           | mg/m3 | 2.00 | NA  | 1               | 09/21/23 07:20 | 09/22/23 18:55 | 121,10200H        | JAI     |





**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

**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): 01-02 Batch: WG1830155-1 |                  |       |      |     |                 |                |                |                   |         |
| Chlorophyll A   | ND               | mg/m3 | 2.00 | NA  | 1               | 09/21/23 07:20 | 09/22/23 18:55 | 121,10200H        | JAI     |

## Lab Duplicate Analysis

*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2355209

Report Date: 09/27/23

| Parameter   | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1830155-2 QC Sample: L2355211-01 Client ID: DUP Sample |               |                  |       |     |      |            |
| Chlorophyll A   | 8.23          | 8.05             | mg/m3 | 2   |      | 35         |

**Project Name:** SILVER LAKE WQMP**Lab Number:** L2355209**Project Number:** 016120.0000.0000**Report Date:** 09/27/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

| <b>Cooler</b> | <b>Custody Seal</b> |
|---------------|---------------------|
| A             | Absent              |

**Container Information**

| <b>Container ID</b> | <b>Container Type</b>            | <b>Cooler</b> | <b>Initial<br/>pH</b> | <b>Final<br/>pH</b> | <b>Temp<br/>deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen<br/>Date/Time</b> | <b>Analysis(*)</b> |
|---------------------|----------------------------------|---------------|-----------------------|---------------------|-----------------------|-------------|-------------|-----------------------------|--------------------|
| L2355209-01A        | Brown Plastic 1000ml unpreserved | A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |
| L2355209-01B        | Brown Plastic 1000ml unpreserved | A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |
| L2355209-02A        | Brown Plastic 1000ml unpreserved | A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |
| L2355209-02B        | Brown Plastic 1000ml unpreserved | A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

#### **Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355209  
**Report Date:** 09/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

**EPA 625.1:** alpha-Terpineol

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

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

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

### Mansfield Facility

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

#### Non-Potable Water

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

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

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

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

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

### Mansfield Facility:

#### Drinking Water

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

**EPA 522, EPA 537.1.**

#### Non-Potable Water

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

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

**EPA 245.1 Hg.**

**SM2340B**

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





# CHAIN OF CUSTODY

PAGE OF

## Project Information

Project Name: Silver Lake WQMP

Project Location: Plymouth County

Project #: 016120.0000.0000 (Old: C663)

Project Manager: Matt Ladewig

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA Mansfield, MA  
 TEL: 508-898-9220 TEL: 508-822-9300  
 FAX: 508-898-9193 FAX: 508-822-3288

## Client Information

Client: TRC Companies, Inc.

Address: 10 Hemingway Drive

East Providence, Rhode Island 02915

Phone: 401-330-1246

Fax: Stephanie.Martin@TRCCompanies.com

Email: (See above)

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9-20-2023

ALPHA Job #: L2355209

## Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria

## ANALYSIS

| Chlorophyll A                       |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
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SAMPLE HANDLING  
 Filtration  
 Done  
 Not Needed  
 Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials |
|--------------------------------|-----------|------------|------|---------------|--------------------|
|                                |           | Date       | Time |               |                    |
| 55209 - 01                     | SLIL-S    | 9/20/23    | 1015 | SW            | AD                 |
| - 02                           | SLIL-SS   | 9/20/23    | 1025 | SW            | AD                 |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - |
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - |

|   |                   |  |                              |
|---|-------------------|--|------------------------------|
| Relinquished By:                                | Date/Time         | Received By:   | Date/Time                    |
| <i>Stephanie Martin</i><br>Stephanie Martin AAL | 9-20 1500<br>9/20 | <i>Evann Reynolds</i><br>Evann Reynolds AAL<br><i>H. Rivi</i><br>H. Rivi AAL | 9/20/23 1500<br>9-20-23 1608 |
| <i>H. Rivi</i><br>H. Rivi AAL                   | 9-20-23 1806      | <i>Chili</i><br>Chili  | 9/20/23 1500                 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L235211  |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 09/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

---

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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2355211-01                | EPD              | WATER         | PLYMOUTH COUNTY            | 09/20/23 13:40                  | 09/20/23            |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

### Case Narrative

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

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

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

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

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

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

---

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

### Case Narrative (continued)

#### Sample Receipt

The sample was received at the laboratory above the required temperature range. The sample was transported to the laboratory in a cooler with ice and delivered directly from the sampling site. This is considered acceptable since the sample was in the process of cooling.

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:

 Cristin Walker

Title: Technical Director/Representative

Date: 09/27/23

# **INORGANICS & MISCELLANEOUS**

Project Name: SILVER LAKE WQMP

Lab Number: L2355211

Project Number: 016120.0000.0000

Report Date: 09/27/23

## SAMPLE RESULTS

Lab ID: L2355211-01

Date Collected: 09/20/23 13:40

Client ID: EPD

Date Received: 09/20/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                           | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|-------------------------------------|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| General Chemistry - Westborough Lab |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                       | 8.23   |           | mg/m3 | 2.00 | NA  | 1               | 09/21/23 07:20 | 09/22/23 18:55 | 121,10200H        | JAI     |



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

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

| Parameter  | Result | Qualifier | Units | RL   | MDL | Dilution<br>Factor | Date<br>Prepared | Date<br>Analyzed | Analytical<br>Method | Analyst |
|--|--------|-----------|-------|------|-----|--------------------|------------------|------------------|----------------------|---------|
| General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1830155-1 |        |           |       |      |     |                    |                  |                  |                      |         |
| Chlorophyll A  | ND     |           | mg/m3 | 2.00 | NA  | 1                  | 09/21/23 07:20   | 09/22/23 18:55   | 121,10200H           | JAI     |



## Lab Duplicate Analysis

*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2355211

Report Date: 09/27/23

| Parameter   | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1830155-2 QC Sample: L2355211-01 Client ID: EPD |               |                  |       |     |      |            |
| Chlorophyll A   | 8.23          | 8.05             | mg/m3 | 2   |      | 35         |

**Project Name:** SILVER LAKE WQMP**Lab Number:** L2355211**Project Number:** 016120.0000.0000**Report Date:** 09/27/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                      Absent

**Container Information**

| <b>Container ID</b> | <b>Container Type</b>            | <b>Cooler</b> | <b>Initial<br/>pH</b> | <b>Final<br/>pH</b> | <b>Temp<br/>deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen<br/>Date/Time</b> | <b>Analysis(*)</b> |
|---------------------|----------------------------------|---------------|-----------------------|---------------------|-----------------------|-------------|-------------|-----------------------------|--------------------|
| L2355211-01A        | Brown Plastic 1000ml unpreserved | A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |
| L2355211-01B        | Brown Plastic 1000ml unpreserved | A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

**Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355211  
**Report Date:** 09/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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

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

### Westborough Facility

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

**EPA 625.1:** alpha-Terpineol

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

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

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

### Mansfield Facility

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

#### Non-Potable Water

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

### Mansfield Facility:

#### Drinking Water

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

**EPA 522, EPA 537.1.**

#### Non-Potable Water

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

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

**EPA 245.1** Hg.

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE OF

## Project Information

Project Name: Silver Lake WQMP

Project Location: Plymouth County

Project #: 016120.0000.0000 (Old: C663)

Project Manager: Matt Ladewig

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA Mansfield, MA  
 TEL: 508-898-9220 TEL: 508-822-9300  
 FAX: 508-898-9193 FAX: 508-822-3288

## Client Information

Client: TRC Companies, Inc.

Address: 10 Hemingway Drive

East Providence, Rhode Island 02915

Phone: 401-330-1246

Fax: Stephanie.Martin@TRCCompanies.com

Email: (See above)

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9-20-2023

ALPHA Job #: L2355211

## Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria

## ANALYSIS

| Chlorophyll A  | ANALYSIS                            |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | SAMPLE HANDLING  | TOTAL # BOTTLES |
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|                | 1                                   | 2                        | 3                        | 4                        | 5                        | 6                        | 7                        | 8                        | 9                        | 10                       | 11                       | 12                       | 13                       | 14                       | 15                       | 16                       |  |                 |
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|                | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |                 |
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| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials |
|--------------------------------|-----------|------------|------|---------------|--------------------|
|                                |           | Date       | Time |               |                    |
| 55211 - 01                     | EPD       | 9/20/23    | 1340 | SW            | AD                 |
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| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - | - |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - | - |
|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

| Relinquished By:    | Date/Time     | Received By:            | Date/Time     |
|---------------------|---------------|-------------------------|---------------|
| <i>Adrian Cole</i>  | 9-20 15:00    | <i>Evan Reynold APL</i> | 9/20/23 15:00 |
| <i>Evan Reynold</i> | 9/20/23       | <i>Allyson AAL</i>      | 9-20-23 16:00 |
| <i>M. Puri AAL</i>  | 9-20-23 18:06 | <i>Allyson</i>          | 9/20/23 18:06 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.





## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L2355212   |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 09/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2355212-01                | SLIL-P           | WATER         | PLYMOUTH COUNTY            | 09/20/23 11:30                  | 09/20/23            |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

### Case Narrative

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

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

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

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

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

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

---

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

### Case Narrative (continued)

#### Sample Receipt

The sample was received at the laboratory above the required temperature range. The sample was transported to the laboratory in a cooler with ice and delivered directly from the sampling site. This is considered acceptable since the sample was in the process of cooling.

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:  Cristin Walker

Title: Technical Director/Representative

Date: 09/27/23

# **INORGANICS & MISCELLANEOUS**

Project Name: SILVER LAKE WQMP

Lab Number: L2355212

Project Number: 016120.0000.0000

Report Date: 09/27/23

**SAMPLE RESULTS**

Lab ID: L2355212-01

Date Collected: 09/20/23 11:30

Client ID: SLIL-P

Date Received: 09/20/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                                  | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|--|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| <b>General Chemistry - Westborough Lab</b> |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                              | 16.2   |           | mg/m3 | 2.00 | NA  | 1               | 09/20/23 23:11 | 09/22/23 18:55 | 121,10200H        | JAI     |



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

**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 Batch: WG1830015-1 |                  |       |      |     |                 |                |                |                   |         |
| Chlorophyll A  | ND               | mg/m3 | 2.00 | NA  | 1               | 09/20/23 23:11 | 09/22/23 18:55 | 121,10200H        | JAI     |

**Lab Duplicate Analysis**  
*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2355212

Report Date: 09/27/23

| Parameter  | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|--|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1830015-2 QC Sample: L2355212-01 Client ID: SLIL-P |               |                  |       |     |      |            |
| Chlorophyll A  | 16.2          | 15.6             | mg/m3 | 4   |      | 35         |



Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                      Absent

**Container Information****Container ID**    **Container Type**

L2355212-01A    Brown Plastic 1000ml unpreserved

L2355212-01B    Brown Plastic 1000ml unpreserved

| <b>Cooler</b> | <b>Initial<br/>pH</b> | <b>Final<br/>pH</b> | <b>Temp<br/>deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen<br/>Date/Time</b> | <b>Analysis(*)</b> |
|---------------|-----------------------|---------------------|-----------------------|-------------|-------------|-----------------------------|--------------------|
| A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |
| A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

#### **Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355212  
**Report Date:** 09/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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

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

### Westborough Facility

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

**EPA 625.1:** alpha-Terpineol

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

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

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

### Mansfield Facility

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

#### Non-Potable Water

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

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

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

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

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

### Mansfield Facility:

#### Drinking Water

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

**EPA 522, EPA 537.1.**

#### Non-Potable Water

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

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

**EPA 245.1** Hg.

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE OF

## Project Information

Westborough, MA    Mansfield, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

Project Name: Silver Lake WQMP

## Client Information

Client: TRC Companies, Inc.  
 Address: 10 Hemingway Drive  
 East Providence, Rhode Island 02915  
 Phone: 401-330-1246

Project Location: Plymouth County  
 Project #: 016120.0000.0000 (Old: C663)  
 Project Manager: Matt Ladewig

ALPHA Quote #:

Fax: Stephanie.Martin@TRCCompanies.com  
 Email: (See above)

## Turn-Around Time

Standard     Rush (ONLY IF PRE-APPROVED)

These samples have been Previously analyzed by Alpha

Due Date:    Time:

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9-20-2023

ALPHA Job #: L2355212

## Report Information Data Deliverables

FAX     EMAIL  
 ADEx     Add'l Deliverables

## Billing Information

Same as Client info    PO #:

## Regulatory Requirements/Report Limits

State/Fed Program    Criteria

## ANALYSIS

| Chlorophyll A                       | ANALYSIS                 |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|
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| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  |

**SAMPLE HANDLING**  
 Filtration  
 Done  
 Not Needed  
 Preservation  
 Lab to do  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials |
|--------------------------------|-----------|------------|------|---------------|--------------------|
|                                |           | Date       | Time |               |                    |
| 55212 - 01                     | SLIL-P    | 9/20/23    | 1130 | SW            | AO                 |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - | - |

|                         |              |                    |              |
|-------------------------|--------------|--------------------|--------------|
| Relinquished By:        | Date/Time    | Received By:       | Date/Time    |
| <i>Stephanie Martin</i> | 9-20 1500    | <i>Evan Regan</i>  | 9/20/23 1500 |
| <i>Evan Regan AAL</i>   | 9/20/23      | <i>H. Ruiz AAL</i> | 9-20-23 1600 |
| <i>H. Ruiz AAL</i>      | 9-20-23 1806 | <i>[Signature]</i> | 9/20/23 1800 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L2355213   |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 09/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2355213-01                | SLIL-F           | WATER         | PLYMOUTH COUNTY            | 09/20/23 10:15                  | 09/20/23            |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

### Case Narrative

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

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

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

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

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

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

---

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

### Case Narrative (continued)

#### Sample Receipt

The sample was received at the laboratory above the required temperature range. The sample was transported to the laboratory in a cooler with ice and delivered directly from the sampling site. This is considered acceptable since the sample was in the process of cooling.

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:  Cristin Walker

Title: Technical Director/Representative

Date: 09/27/23

# **INORGANICS & MISCELLANEOUS**

Project Name: SILVER LAKE WQMP

Lab Number: L2355213

Project Number: 016120.0000.0000

Report Date: 09/27/23

## SAMPLE RESULTS

Lab ID: L2355213-01

Date Collected: 09/20/23 10:15

Client ID: SLIL-F

Date Received: 09/20/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                           | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|-------------------------------------|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| General Chemistry - Westborough Lab |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                       | ND     |           | mg/m3 | 2.00 | NA  | 1               | 09/20/23 23:11 | 09/22/23 18:55 | 121,10200H        | JAI     |



Project Name: SILVER LAKE WQMP

Lab Number: L2355213

Project Number: 016120.0000.0000

Report Date: 09/27/23

**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 Batch: WG1830015-1 |                  |       |      |     |                 |                |                |                   |         |
| Chlorophyll A  | ND               | mg/m3 | 2.00 | NA  | 1               | 09/20/23 23:11 | 09/22/23 18:55 | 121,10200H        | JAI     |

## Lab Duplicate Analysis

*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2355213

Report Date: 09/27/23

| Parameter  | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|--|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1830015-2 QC Sample: L2355212-01 Client ID: DUP Sample |               |                  |       |     |      |            |
| Chlorophyll A  | 16.2          | 15.6             | mg/m3 | 4   |      | 35         |

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                      Absent

**Container Information****Container ID**    **Container Type**

L2355213-01A    Brown Plastic 1000ml unpreserved

L2355213-01B    Brown Plastic 1000ml unpreserved

| <b>Cooler</b> | <b>Initial<br/>pH</b> | <b>Final<br/>pH</b> | <b>Temp<br/>deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen<br/>Date/Time</b> | <b>Analysis(*)</b> |
|---------------|-----------------------|---------------------|-----------------------|-------------|-------------|-----------------------------|--------------------|
| A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |
| A             | NA                    |                     | 18.5                  | Y           | Absent      |                             | CHLORO-A(1)        |



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

#### **Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2355213  
**Report Date:** 09/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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

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

### Westborough Facility

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

**EPA 625.1:** alpha-Terpineol

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

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

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

### Mansfield Facility

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

#### Non-Potable Water

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

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

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

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

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

### Mansfield Facility:

#### Drinking Water

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

**EPA 522, EPA 537.1.**

#### Non-Potable Water

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

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

**EPA 245.1** Hg.

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE OF

## Project Information

Project Name: Silver Lake WQMP

Project Location: Plymouth County

Project #: 016120.0000.0000 (Old: C863)

Project Manager: Matt Ladewig

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA Mansfield, MA  
TEL: 508-898-9220 TEL: 508-822-9300  
FAX: 508-896-9193 FAX: 508-822-3288

## Client Information

Client: TRC Companies, Inc.

Address: 10 Hemingway Drive

East Providence, Rhode Island 02915

Phone: 401-330-1246

Fax: Stephanie.Martin@TRCCompanies.com

Email: (See above)

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 9-20-2023

ALPHA Job #: L2355213

## Report Information Data Deliverables Billing Information

FAX  EMAIL  
 ADEx  Add'l Deliverables

Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program Criteria

## ANALYSIS

**SAMPLE HANDLING**  
Filtration  
 Done  
 Not Needed  
 Lab to do  
Preservation  
 Lab to do  
(Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials | Chlorophyll A                       |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          | Sample Specific Comments | TOTAL # BOTTLES          |                          |   |
|--------------------------------|-----------|------------|------|---------------|--------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
|                                |           | Date       | Time |               |                    |                                     |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |   |
| 55213 - 01                     | SLIL-F    | 9/20/23    | 1013 | SW            | AD                 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 2 |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
|                                |           |            |      |               |                    | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - | - |

| Relinquished By:       | Date/Time    | Received By:           | Date/Time    |
|------------------------|--------------|------------------------|--------------|
| <i>Chadson Cybis</i>   | 9-20 15:00   | <i>Evony Ryzak AAL</i> | 9/20/23 1500 |
| <i>Evony Ryzak AAL</i> | 9/20/23      | <i>Evony Ryzak AAL</i> | 9/20/23 1600 |
| <i>H. Ryzak AAL</i>    | 9/20/23 1804 | <i>Evony Ryzak AAL</i> | 9/20/23 1806 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L2363081   |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 10/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2363081-01                | SLIL-F           | WATER         | PLYMOUTH COUNTY            | 10/24/23 09:40                  | 10/24/23            |



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

### Case Narrative

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

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

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

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

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

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

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:  Tiffani Morrissey

Title: Technical Director/Representative

Date: 10/27/23

# **INORGANICS & MISCELLANEOUS**

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

**SAMPLE RESULTS**

**Lab ID:** L2363081-01  
**Client ID:** SLIL-F  
**Sample Location:** PLYMOUTH COUNTY

**Date Collected:** 10/24/23 09:40  
**Date Received:** 10/24/23  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Water

| Parameter                                  | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|--|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| <b>General Chemistry - Westborough Lab</b> |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                              | ND     |           | mg/m3 | 2.00 | NA  | 1               | 10/24/23 19:34 | 10/25/23 13:30 | 121,10200H        | JAI     |



Project Name: SILVER LAKE WQMP

Lab Number: L2363081

Project Number: 016120.0000.0000

Report Date: 10/27/23

**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 Batch: WG1843800-1 |                  |       |      |     |                 |                |                |                   |         |
| Chlorophyll A  | ND               | mg/m3 | 2.00 | NA  | 1               | 10/24/23 19:34 | 10/25/23 13:30 | 121,10200H        | JAI     |

## Lab Duplicate Analysis

*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2363081

Report Date: 10/27/23

| Parameter  | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|--|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1843800-2 QC Sample: L2363081-01 Client ID: SLIL-F |               |                  |       |     |      |            |
| Chlorophyll A  | ND            | ND               | mg/m3 | NC  |      | 35         |

**Project Name:** SILVER LAKE WQMP

**Project Number:** 016120.0000.0000

Serial\_No:10272320:19

**Lab Number:** L2363081

**Report Date:** 10/27/23

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

**Cooler**                      **Custody Seal**

A                                      Absent

**Container Information**

**Container ID**    **Container Type**

| <b>Cooler</b> | <b>Initial<br/>pH</b> | <b>Final<br/>pH</b> | <b>Temp<br/>deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen<br/>Date/Time</b> | <b>Analysis(*)</b> |
|---------------|-----------------------|---------------------|-----------------------|-------------|-------------|-----------------------------|--------------------|
| A             | NA                    |                     | 5.4                   | Y           | Absent      |                             | CHLORO-A(1)        |
| A             | NA                    |                     | 5.4                   | Y           | Absent      |                             | CHLORO-A(1)        |

L2363081-01A    Brown Plastic 1000ml unpreserved

L2363081-01B    Brown Plastic 1000ml unpreserved

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

Report Format: Data Usability Report





**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

#### **Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363081  
**Report Date:** 10/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## 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

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

**Westborough Facility**

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

**EPA 625.1:** alpha-Terpineol

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

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

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

**Mansfield Facility**

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:**

**Drinking Water**

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

**Non-Potable Water**

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

**Mansfield Facility:**

**Drinking Water**

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

**EPA 522, EPA 537.1.**

**Non-Potable Water**

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

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

**EPA 245.1 Hg.**

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE OF

## Project Information

Project Name: Silver Lake WQMP

Project Location: Plymouth County

Project #: 016120.0000.0000 (Old: C663)

Project Manager: Matt Ladewig

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA    Mansfield, MA  
 TEL: 508-898-9220    TEL: 508-822-9300  
 FAX: 508-898-9193    FAX: 508-822-3288

## Client Information

Client: TRC Companies, Inc.

Address: 10 Hemingway Drive

East Providence, Rhode Island 02915

Phone: 401-330-1246

Fax: Stephanie.Martin@TRCCompanies.com

Email: (See above)

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 10/24/23

ALPHA Job #: 42363081

## Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info    PO #:

## Regulatory Requirements/Report Limits

State/Fed Program    Criteria

## ANALYSIS

| Chlorophyll A                       | E. Coli                  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
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**SAMPLE HANDLING**  
 Filtration  
 Done  
 Not Needed  
 Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

2

| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials |
|--------------------------------|-----------|------------|------|---------------|--------------------|
|                                |           | Date       | Time |               |                    |
| 23081-01                       | SLIL-F    | 10/24/23   | 0940 | SW            | JB, SM             |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - | - |

|                    |               |                    |               |
|--------------------|---------------|--------------------|---------------|
| Relinquished By:   | Date/Time     | Received By:       | Date/Time     |
| <i>Joseph Beck</i> | 10/24/23 1440 | <i>[Signature]</i> | 10/24/23 1440 |
| <i>H. Paci</i>     | 10/24/23      | <i>H. Paci</i>     | 10/24/23 1600 |
| <i>H. Paci</i>     | 10/24/23 1715 | <i>[Signature]</i> | 10/24/23 1715 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L2363083   |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 10/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

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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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363083  
**Report Date:** 10/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2363083-01                | EPD              | WATER         | PLYMOUTH COUNTY            | 10/24/23 13:30                  | 10/24/23            |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363083  
**Report Date:** 10/27/23

### Case Narrative

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

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

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

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

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

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

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:  Tiffani Morrissey

Title: Technical Director/Representative

Date: 10/27/23

# **INORGANICS & MISCELLANEOUS**



Project Name: SILVER LAKE WQMP

Lab Number: L2363083

Project Number: 016120.0000.0000

Report Date: 10/27/23

**SAMPLE RESULTS**

Lab ID: L2363083-01

Date Collected: 10/24/23 13:30

Client ID: EPD

Date Received: 10/24/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                                  | Result | Qualifier | Units | RL   | MDL | Dilution Factor | Date Prepared  | Date Analyzed  | Analytical Method | Analyst |
|--|--------|-----------|-------|------|-----|-----------------|----------------|----------------|-------------------|---------|
| <b>General Chemistry - Westborough Lab</b> |        |           |       |      |     |                 |                |                |                   |         |
| Chlorophyll A                              | 4.13   |           | mg/m3 | 2.00 | NA  | 1               | 10/24/23 19:34 | 10/25/23 13:30 | 121,10200H        | JAI     |



Project Name: SILVER LAKE WQMP

Lab Number: L2363083

Project Number: 016120.0000.0000

Report Date: 10/27/23

**Method Blank Analysis**  
Batch Quality Control

| Parameter  | Result | Qualifier | Units | RL   | MDL | Dilution<br>Factor | Date<br>Prepared | Date<br>Analyzed | Analytical<br>Method | Analyst |
|--|--------|-----------|-------|------|-----|--------------------|------------------|------------------|----------------------|---------|
| General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1843800-1 |        |           |       |      |     |                    |                  |                  |                      |         |
| Chlorophyll A  | ND     |           | mg/m3 | 2.00 | NA  | 1                  | 10/24/23 19:34   | 10/25/23 13:30   | 121,10200H           | JAI     |

## Lab Duplicate Analysis

*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2363083

Report Date: 10/27/23

| Parameter  | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|--|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1843800-2 QC Sample: L2363081-01 Client ID: DUP Sample |               |                  |       |     |      |            |
| Chlorophyll A  | ND            | ND               | mg/m3 | NC  |      | 35         |

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

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

A                                      Absent

**Container Information****Container ID**    **Container Type**

L2363083-01A    Brown Plastic 1000ml unpreserved

L2363083-01B    Brown Plastic 1000ml unpreserved

| <b>Cooler</b> | <b>Initial<br/>pH</b> | <b>Final<br/>pH</b> | <b>Temp<br/>deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen<br/>Date/Time</b> | <b>Analysis(*)</b> |
|---------------|-----------------------|---------------------|-----------------------|-------------|-------------|-----------------------------|--------------------|
| A             | NA                    |                     | 5.4                   | Y           | Absent      |                             | CHLORO-A(1)        |
| A             | NA                    |                     | 5.4                   | Y           | Absent      |                             | CHLORO-A(1)        |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363083  
**Report Date:** 10/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363083  
**Report Date:** 10/27/23

#### Footnotes

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

#### Terms

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

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

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

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

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

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

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

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

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

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

#### Data Qualifiers

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363083  
**Report Date:** 10/27/23

#### **Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363083  
**Report Date:** 10/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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





## Certification Information

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

### Westborough Facility

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

**EPA 625.1:** alpha-Terpineol

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

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

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

### Mansfield Facility

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

#### Non-Potable Water

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

### Mansfield Facility:

#### Drinking Water

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

**EPA 522, EPA 537.1.**

#### Non-Potable Water

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

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

**EPA 245.1** Hg.

**SM2340B**

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



# CHAIN OF CUSTODY

PAGE OF

## Project Information

Project Name: Silver Lake WQMP

Project Location: Plymouth County

Project #: 016120.0000.0000 (Old: C663)

Project Manager: Matt Ladewig

ALPHA Quote #:

## Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA Mansfield, MA  
 TEL: 508-898-9220 TEL: 508-822-9300  
 FAX: 508-898-9193 FAX: 508-822-3288

## Client Information

Client: TRC Companies, Inc.

Address: 10 Hemingway Drive

East Providence, Rhode Island 02915

Phone: 401-330-1246

Fax: Stephanie.Martin@TRCCompanies.com

Email: (See above)

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 10/24/23

ALPHA Job #: L23G3083

## Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

## Billing Information

Same as Client info PO #:

## Regulatory Requirements/Report Limits

State/Fed Program

Criteria

## ANALYSIS

| Chlorophyll A                       | E. Coli                  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
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SAMPLE HANDLING  
 Filtration  
 Done  
 Not Needed  
 Lab to do  
 Preservation  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

Sample Specific Comments

| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials |
|--------------------------------|-----------|------------|------|---------------|--------------------|
|                                |           | Date       | Time |               |                    |
| 63083-01                       | EPD       | 10/24/23   | 1330 | SW            | JB, SM             |
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| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

|                      |               |                    |               |
|----------------------|---------------|--------------------|---------------|
| Relinquished By:     | Date/Time     | Received By:       | Date/Time     |
| <i>Joseph Ber...</i> | 10/24 1446    | <i>[Signature]</i> | 10/24/23 1446 |
| <i>H. Ruci</i>       | 10/24/23 1715 | <i>[Signature]</i> | 10/24 1715    |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO. 01-01(PAU)  
 (Rev. 8-JAN-12)



## ANALYTICAL REPORT

|                 |  |
|-----------------|--|
| Lab Number:     | L2363086   |
| Client:         | TRC Companies, Inc.<br>10 Hemingway Dr.<br>2nd Fl<br>East Providence, RI 02915 |
| ATTN:           | Matt Ladewig   |
| Phone:          | (401) 330-1204   |
| Project Name:   | SILVER LAKE WQMP   |
| Project Number: | 016120.0000.0000   |
| Report Date:    | 10/27/23   |

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), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

---

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:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363086  
**Report Date:** 10/27/23

| <b>Alpha<br/>Sample ID</b> | <b>Client ID</b> | <b>Matrix</b> | <b>Sample<br/>Location</b> | <b>Collection<br/>Date/Time</b> | <b>Receive Date</b> |
|----------------------------|------------------|---------------|----------------------------|---------------------------------|---------------------|
| L2363086-01                | SLIL-S           | WATER         | PLYMOUTH COUNTY            | 10/24/23 10:50                  | 10/24/23            |
| L2363086-02                | SLIL-SS          | WATER         | PLYMOUTH COUNTY            | 10/24/23 10:55                  | 10/24/23            |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363086  
**Report Date:** 10/27/23

### Case Narrative

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

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

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

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

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

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

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:  Tiffani Morrissey

Title: Technical Director/Representative

Date: 10/27/23

# **INORGANICS & MISCELLANEOUS**

Project Name: SILVER LAKE WQMP

Lab Number: L2363086

Project Number: 016120.0000.0000

Report Date: 10/27/23

**SAMPLE RESULTS**

Lab ID: L2363086-01

Date Collected: 10/24/23 10:50

Client ID: SLIL-S

Date Received: 10/24/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                                  | Result | Qualifier | Units | RL   | MDL | Dilution<br>Factor | Date<br>Prepared | Date<br>Analyzed | Analytical<br>Method | Analyst |
|--|--------|-----------|-------|------|-----|--------------------|------------------|------------------|----------------------|---------|
| <b>General Chemistry - Westborough Lab</b> |        |           |       |      |     |                    |                  |                  |                      |         |
| Chlorophyll A                              | 6.26   |           | mg/m3 | 2.00 | NA  | 1                  | 10/24/23 19:34   | 10/25/23 13:30   | 121,10200H           | JAI     |



Project Name: SILVER LAKE WQMP

Lab Number: L2363086

Project Number: 016120.0000.0000

Report Date: 10/27/23

## SAMPLE RESULTS

Lab ID: L2363086-02

Date Collected: 10/24/23 10:55

Client ID: SLIL-SS

Date Received: 10/24/23

Sample Location: PLYMOUTH COUNTY

Field Prep: Not Specified

Sample Depth:

Matrix: Water

| Parameter                           | Result | Qualifier | Units | RL   | MDL | Dilution<br>Factor | Date<br>Prepared | Date<br>Analyzed | Analytical<br>Method | Analyst |
|-------------------------------------|--------|-----------|-------|------|-----|--------------------|------------------|------------------|----------------------|---------|
| General Chemistry - Westborough Lab |        |           |       |      |     |                    |                  |                  |                      |         |
| Chlorophyll A                       | 2.41   |           | mg/m3 | 2.00 | NA  | 1                  | 10/24/23 19:34   | 10/25/23 13:30   | 121,10200H           | JAI     |





Project Name: SILVER LAKE WQMP

Lab Number: L2363086

Project Number: 016120.0000.0000

Report Date: 10/27/23

**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): 01-02 Batch: WG1843800-1 |                  |       |      |     |                 |                |                |                   |         |
| Chlorophyll A   | ND               | mg/m3 | 2.00 | NA  | 1               | 10/24/23 19:34 | 10/25/23 13:30 | 121,10200H        | JAI     |

## Lab Duplicate Analysis

*Batch Quality Control*

Project Name: SILVER LAKE WQMP

Project Number: 016120.0000.0000

Lab Number: L2363086

Report Date: 10/27/23

| Parameter   | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---------------|------------------|-------|-----|------|------------|
| General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1843800-2 QC Sample: L2363081-01 Client ID: DUP Sample |               |                  |       |     |      |            |
| Chlorophyll A   | ND            | ND               | mg/m3 | NC  |      | 35         |

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

Serial\_No:10272320:17  
**Lab Number:** L2363086  
**Report Date:** 10/27/23

**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

| <b>Cooler</b> | <b>Custody Seal</b> |
|---------------|---------------------|
| A             | Absent              |

**Container Information**

| <b>Container ID</b> | <b>Container Type</b>            | <b>Cooler</b> | <b>Initial pH</b> | <b>Final pH</b> | <b>Temp deg C</b> | <b>Pres</b> | <b>Seal</b> | <b>Frozen Date/Time</b> | <b>Analysis(*)</b> |
|---------------------|----------------------------------|---------------|-------------------|-----------------|-------------------|-------------|-------------|-------------------------|--------------------|
| L2363086-01A        | Brown Plastic 1000ml unpreserved | A             | NA                |                 | 5.4               | Y           | Absent      |                         | CHLORO-A(1)        |
| L2363086-01B        | Brown Plastic 1000ml unpreserved | A             | NA                |                 | 5.4               | Y           | Absent      |                         | CHLORO-A(1)        |
| L2363086-02A        | Brown Plastic 1000ml unpreserved | A             | NA                |                 | 5.4               | Y           | Absent      |                         | CHLORO-A(1)        |
| L2363086-02B        | Brown Plastic 1000ml unpreserved | A             | NA                |                 | 5.4               | Y           | Absent      |                         | CHLORO-A(1)        |

\*Values in parentheses indicate holding time in days



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363086  
**Report Date:** 10/27/23

## GLOSSARY

### Acronyms

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363086  
**Report Date:** 10/27/23

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

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

### Data Qualifiers

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

Report Format: Data Usability Report



**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363086  
**Report Date:** 10/27/23

**Data Qualifiers**

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

**Project Name:** SILVER LAKE WQMP  
**Project Number:** 016120.0000.0000

**Lab Number:** L2363086  
**Report Date:** 10/27/23

## REFERENCES

- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

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

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



## Certification Information

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

### Westborough Facility

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

**EPA 625.1:** alpha-Terpineol

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

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

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

### Mansfield Facility

**SM 2540D:** TSS.

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

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

**Biological Tissue Matrix:** EPA 3050B

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

### Westborough Facility:

#### Drinking Water

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

**EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

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

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

#### Non-Potable Water

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

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

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

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

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

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

### Mansfield Facility:

#### Drinking Water

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

**EPA 522, EPA 537.1.**

#### Non-Potable Water

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

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

**EPA 245.1** Hg.

**SM2340B**

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





# CHAIN OF CUSTODY

PAGE OF

### Project Information

Project Name: Silver Lake WQMP

Project Location: Plymouth County

Project #: 016120.0000.0000 (Old: C663)

Project Manager: Matt Ladewig

ALPHA Quote #:

### Turn-Around Time

Standard  Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Westborough, MA  
TEL: 508-898-9220  
FAX: 508-898-9193

Mansfield, MA  
TEL: 508-822-9300  
FAX: 508-822-3288

### Client Information

Client: TRC Companies, Inc.

Address: 10 Hemingway Drive

East Providence, Rhode Island 02915

Phone: 401-330-1246

Fax: Stephanie.Martin@TRCCompanies.com

Email: (See above)

These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Date Rec'd in Lab: 10/24/23

ALPHA Job #: 62363086

### Report Information Data Deliverables

FAX  EMAIL  
 ADEx  Add'l Deliverables

### Billing Information

Same as Client info PO #:

### Regulatory Requirements/Report Limits

State/Fed Program Criteria

### ANALYSIS

| Chlorophyll A                       | E. Coli                  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
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| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**SAMPLE HANDLING**  
**Filtration**  
 Done  
 Not Needed  
 Lab to do  
**Preservation**  
 Lab to do  
 (Please specify below)

TOTAL # BOTTLES

| ALPHA Lab ID<br>(Lab Use Only) | Sample ID | Collection |      | Sample Matrix | Sampler's Initials |
|--------------------------------|-----------|------------|------|---------------|--------------------|
|                                |           | Date       | Time |               |                    |
| 63086-01                       | SLIL-S    | 10/24/23   | 1050 | SW            | JB, SM             |
| -02                            | SLIL-SS   | 10/24/23   | 1055 | SW            | JB, SM             |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |
|                                |           |            |      |               |                    |

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Container Type | P | P | - | - | - | - | - | - | - | - | - | - | - | - |
| Preservative   | A | H | - | - | - | - | - | - | - | - | - | - | - | - |

|                    |               |              |               |
|--------------------|---------------|--------------|---------------|
| Relinquished By:   | Date/Time     | Received By: | Date/Time     |
| <i>Joseph B...</i> | 10/24 1446    | <i>...</i>   | 10/24/23 1440 |
| <i>...</i>         | 10/24/23      | <i>...</i>   | 10/24/23 1600 |
| <i>H. Ruiz</i>     | 10/24/23 1715 | <i>...</i>   | 10/21 1715    |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.



Tuesday, October 03, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP05537  
Sample ID#s: CP05537

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

October 03, 2023

SDG I.D.: GCP05537

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| EPD       | CP05537 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

13:40  
14:50

Laboratory Data

SDG ID: GCP05537  
Phoenix ID: CP05537

Project ID: SILVER LAKE WQMP  
Client ID: EPD

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.028   | 0.003      | mg/L  | 0.5      | 09/25/23 19:28 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:15 | ER  | E353.2              |
| Nitrate-N                            | 0.03    | 0.02       | mg/L  | 1        | 09/21/23 22:15 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.49    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.52    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.032   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

October 03, 2023

## QA/QC Data

SDG I.D.: GCP05537

| Parameter   | Blank | Blk<br>RL | Sample<br>Result | Dup<br>Result | Dup<br>RPD | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | %<br>Rec<br>Limits | %<br>RPD<br>Limits |
|---|-------|-----------|------------------|---------------|------------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 698635 (mg/L), QC Sample No: CP05772 (CP05537)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Phosphorus, as P  | BRL   | 0.01      | 0.939            | 0.902         | 4.00       | 96.9     |           |            | 99.0    |          |           | 85 - 115           | 20                 |
| Comment:<br>Additional criteria matrix spike acceptance range is 75-125%. |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 698281 (mg/L), QC Sample No: CP05609 (CP05537)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrate-N   | BRL   | 0.02      | 0.07             | 0.07          | NC         | 98.0     |           |            | 102     |          |           | 90 - 110           | 20                 |
| Nitrite-N   | BRL   | 0.01      | 0.042            | 0.04          | NC         | 104      |           |            | 97.2    |          |           | 90 - 110           | 20                 |
| QA/QC Batch 699649 (mg/L), QC Sample No: CP05385 (CP05537)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10      | 0.28             | 0.30          | NC         | 97.4     |           |            | 102     |          |           | 85 - 115           | 20                 |


Comment:

TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 October 03, 2023

Tuesday, October 03, 2023

Criteria: None

State: CT

## Sample Criteria Exceedances Report

GCP05537 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

October 03, 2023

SDG I.D.: GCP05537

---

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



**CHAIN OF CUSTODY RECORD**

687 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: makrina@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-1102

Cooler: Yes  No   
Coolant: IPK  ICE  No   
Temp: ° C Pg of  
Data Delivery/Contact Options:  
Fax: \_\_\_\_\_  
Phone: \_\_\_\_\_  
Email: Stephanie.Martin@TRCCompanies.com

Customer: TRC Companies Project: Silver Lake WCMP  
Address: 10 Hemingway Drive Report to: 016120.0000.0000 (Previously C663.000)  
East Providence, Rhode Island 02915 Invoice to: Barbara Cabral (BCabral@TRCCompanies.com)  
Quote #

Project P.O:  
**This section MUST be completed with Bottle Quantities.**

Sampler's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil  
B=Bulk L=Liquid X = (Other)  
PHOENIX USE ONLY: SAMPLE # 05537 Customer Sample Identification: EPD Date Sampled: 9/20/2023 Time Sampled: 13:10

| Client Sample - Information - Identification | Customer Sample Identification        | Sample Matrix                         | Date Sampled | Time Sampled | MA  | CI                                       | RI  | Turnaround Time:                             |
|--|---------------------------------------|---------------------------------------|--------------|--------------|---|--|---|--|
| *MS/MSD may be billed at analysis unit rate  | GL Amber 8 oz. [with 300 µl] [MAH504] | GL Soil container ( ) oz              |              |              | <input type="checkbox"/> MCP Certification  | <input type="checkbox"/> RCP Cert        | <input type="checkbox"/> (Residential)      | <input type="checkbox"/> 1 Day*              |
| 120 ml Plastic                               | GL Amber 8 oz. [with 300 µl] [MAH504] | GL Soil container ( ) oz              |              |              | <input type="checkbox"/> GW-1 <input type="checkbox"/> MWRA eSMART                                    | <input type="checkbox"/> GW Protection   | <input type="checkbox"/> (Comm./Industrial) | <input type="checkbox"/> 2 Days*             |
| Bacteria Bottle as is                        | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> GW-2 <input type="checkbox"/> S-1 10% CALC                                   | <input type="checkbox"/> Direct Exposure | <input type="checkbox"/> GA Leachability    | <input type="checkbox"/> 3 Days*             |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> GW-3   | <input type="checkbox"/> GA Leachability | <input type="checkbox"/> GB Leachability    | <input checked="" type="checkbox"/> Standard |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> S-1 GW-1 <input type="checkbox"/> S-1 GW-2 <input type="checkbox"/> S-1 GW-3 | <input type="checkbox"/> GA Mobility     | <input type="checkbox"/> GB Leachability    | <input type="checkbox"/> Other               |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> S-2 GW-1 <input type="checkbox"/> S-2 GW-2 <input type="checkbox"/> S-2 GW-3 | <input type="checkbox"/> GB Mobility     | <input type="checkbox"/> GA-GW Objectives   |  |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> S-3 GW-1 <input type="checkbox"/> S-3 GW-2 <input type="checkbox"/> S-3 GW-3 | <input type="checkbox"/> SWPC            | <input type="checkbox"/> GB-GW Objectives   |  |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> S-1 10% CALC   | <input type="checkbox"/> Residential DEC | <input type="checkbox"/> GB-GW Objectives   |  |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> S-1 10% CALC   | <input type="checkbox"/> I/C DEC         | <input type="checkbox"/> Other              |  |
|  | PL AMO3 250ml                         | PL Amber 8 oz. [with 300 µl] [MAH504] |              |              | <input type="checkbox"/> S-1 10% CALC   |  |   |  |

Relinquished by: \_\_\_\_\_ Accepted by: \_\_\_\_\_  
Date: 9-21-23 16:03  
9/21/23 14:50  
Turnaround Time:  
 1 Day\*  
 2 Days\*  
 3 Days\*  
 Standard  
 Other

Comments, Special Requirements or Regulations:  
\*\*\* Field Filtered within 15 minutes of collection

\*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.  
\*SURCHARGE APPLIES

State where samples were collected: MA \*SURCHARGE APPLIES





Tuesday, October 03, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP05536  
Sample ID#s: CP05536

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

October 03, 2023

SDG I.D.: GCP05536

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| SLIL-P    | CP05536 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

11:30  
14:50

Laboratory Data

SDG ID: GCP05536  
Phoenix ID: CP05536

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-P

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.007   | 0.003      | mg/L  | 0.5      | 09/25/23 19:27 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:13 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 09/21/23 22:13 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.39    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.39    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.015   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

October 03, 2023

## QA/QC Data

SDG I.D.: GCP05536

| Parameter   | Blank | Blk<br>RL | Sample<br>Result | Dup<br>Result | Dup<br>RPD | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | %<br>Rec<br>Limits | %<br>RPD<br>Limits |
|---|-------|-----------|------------------|---------------|------------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 698635 (mg/L), QC Sample No: CP05772 (CP05536)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Phosphorus, as P  | BRL   | 0.01      | 0.939            | 0.902         | 4.00       | 96.9     |           |            | 99.0    |          |           | 85 - 115           | 20                 |
| Comment:<br>Additional criteria matrix spike acceptance range is 75-125%. |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 698281 (mg/L), QC Sample No: CP05609 (CP05536)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrate-N   | BRL   | 0.02      | 0.07             | 0.07          | NC         | 98.0     |           |            | 102     |          |           | 90 - 110           | 20                 |
| Nitrite-N   | BRL   | 0.01      | 0.042            | 0.04          | NC         | 104      |           |            | 97.2    |          |           | 90 - 110           | 20                 |
| QA/QC Batch 699649 (mg/L), QC Sample No: CP05385 (CP05536)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10      | 0.28             | 0.30          | NC         | 97.4     |           |            | 102     |          |           | 85 - 115           | 20                 |


Comment:

TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 October 03, 2023

Tuesday, October 03, 2023

Criteria: None

State: CT

## Sample Criteria Exceedances Report

GCP05536 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

October 03, 2023

SDG I.D.: GCP05536

---

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



**CHAIN OF CUSTODY RECORD**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
 Email: makrina@phoenixlabs.com Fax (860) 645-0823  
**Client Services (860) 645-1102**

Coolant: IPK  ICE  No   
 Cooler: Yes  No

Temp / °C Pg of

**Data Delivery/Contact Options:**

Fax: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Email: [Stephanie.Martin@TRCCompanies.com](mailto:Stephanie.Martin@TRCCompanies.com)

Project P.O:

Project: Silver Lake WQMP  
 Report to: 016120.0000.0000 (Previously C663.000)  
 Invoice to: Barbara Cabral (BCabral@TRCCompanies.com)  
 Quote # \_\_\_\_\_

**This section MUST be completed with Bottle Quantities.**

Sampler's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Matrix Code: GW=Ground Water SW=Surface Water WW=Waste Water  
 DW=Drinking Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe Oil=Oil  
 RW=Raw Water L=Liquid X=(Other)  
 B=Bulk

**Client Sample - Information - Identification**  
 Customer Sample Identification: SLIL-P  
 Sample Matrix: SW  
 Date Sampled: 9/20/23  
 Time Sampled: 1130

|   |                                |                          |                               |                                     |                                     |                |                       |
|---|--------------------------------|--------------------------|-------------------------------|-------------------------------------|-------------------------------------|----------------|-----------------------|
| *MS/MSD (May be billed at analysis unit rate) | GL Amber 8 oz. [Metanol] [H2O] | GL Soil container ( ) oz | 120 ml VOA Vial [As Is] [HCl] | PL AS Is [X] 250ml [ 500ml [ 1000ml | PL H2SO4 [X] 250ml [ 500ml [ 1000ml | PL NH3OH 250ml | Bacteria Bottle as is |
|---|--------------------------------|--------------------------|-------------------------------|-------------------------------------|-------------------------------------|----------------|-----------------------|

| PHOENIX USE ONLY SAMPLE # | Customer Sample Identification | Sample Matrix | Date Sampled | Time Sampled | Total Nitrogen (NO2 & NO3) | Total Phosphorus (Total Kjeldahl N) | Alkalinity | *MS/MSD (May be billed at analysis unit rate) |
|---------------------------|--------------------------------|---------------|--------------|--------------|----------------------------|-------------------------------------|------------|---|
| 05536                     | SLIL-P                         | SW            | 9/20         | 1130         | X                          | X                                   | X          | GL Amber 8 oz. [Metanol] [H2O]                |
|                           |                                |               |              |              |                            |                                     |            | GL Soil container ( ) oz                      |
|                           |                                |               |              |              |                            |                                     |            | 120 ml VOA Vial [As Is] [HCl]                 |
|                           |                                |               |              |              |                            |                                     |            | PL AS Is [X] 250ml [ 500ml [ 1000ml           |
|                           |                                |               |              |              |                            |                                     |            | PL H2SO4 [X] 250ml [ 500ml [ 1000ml           |
|                           |                                |               |              |              |                            |                                     |            | PL NH3OH 250ml                                |
|                           |                                |               |              |              |                            |                                     |            | Bacteria Bottle as is                         |

Relinquished by: [Signature] Accepted by: [Signature] Date: 9-20-23 Time: 14:50

Comments, Special Requirements or Regulations: Field Filtered within 15 minutes of collection

Turnaround Time:  
 1 Day\*  
 2 Days\*  
 3 Days\*  
 Standard  
 Other

\*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

\* SURCHARGE APPLIES

**RI**  (Residential)  
 (Comm/Industrial) Direct Exposure  
 GA Leachability  
 GB Leachability  
 GA-GW Objectives  
 GB-GW Objectives  
 Other

**CT**  RCP Cert  
 GW Protection  
 SW Protection  
 GA Mobility  
 GB Mobility  
 SWPC  
 Residential DEC  
 I/C DEC

**MA**  MCP Certification  
 GW-1  
 GW-2  
 GW-3  
 S-1 GW-1  
 S-2 GW-1  
 S-3 GW-1  
 SW Protection

**Data Format**  
 Excel  
 PDF  
 GIS/Key  
 EQUIS  
 Other  
**Data Package**  
 Tier II Checklist  
 Full Data Package\*  
 Phoenix Std Report  
 Other

\* SURCHARGE APPLIES

State where samples were collected: **MA**



Tuesday, October 03, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP05533  
Sample ID#s: CP05533 - CP05535, CP05781

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

October 03, 2023

SDG I.D.: GCP05533

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| SLIL-S    | CP05533 | SURFACE WATER |
| SLIL-M    | CP05534 | SURFACE WATER |
| SLIL-B    | CP05535 | SURFACE WATER |
| SLIL-SS   | CP05781 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

10:15  
14:50

Laboratory Data

SDG ID: GCP05533  
Phoenix ID: CP05533

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-S

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.010   | 0.003      | mg/L  | 0.5      | 09/25/23 19:15 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:10 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 09/21/23 22:10 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.40    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.40    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.016   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

10:40  
14:50

Laboratory Data

SDG ID: GCP05533  
Phoenix ID: CP05534

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-M

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.019   | 0.003      | mg/L  | 0.5      | 09/25/23 19:23 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:11 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 09/21/23 22:11 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.34    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.34    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.016   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

10:50  
14:50

Laboratory Data

SDG ID: GCP05533  
Phoenix ID: CP05535

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-B

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.037   | 0.003      | mg/L  | 0.5      | 09/25/23 19:24 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:12 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 09/21/23 22:12 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.75    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.75    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.040   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

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**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: SR1  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

10:25  
14:50

Laboratory Data

SDG ID: GCP05533  
Phoenix ID: CP05781

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-SS

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | < 0.005 | 0.005      | mg/L  | 1        | 09/26/23 21:06 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:52 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 09/21/23 22:52 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.35    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.35    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.015   | 0.010      | mg/L  | 1        | 09/26/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

October 03, 2023

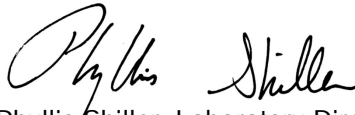
## QA/QC Data

SDG I.D.: GCP05533

| Parameter   | Blank | Blk RL | Sample Result | Dup Result | Dup RPD | LCS % | LCSD % | LCS RPD | MS % | MSD % | MS RPD | % Rec Limits | % RPD Limits |
|---|-------|--------|---------------|------------|---------|-------|--------|---------|------|-------|--------|--------------|--------------|
| QA/QC Batch 698635 (mg/L), QC Sample No: CP05772 (CP05533, CP05534, CP05535)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Phosphorus, as P  | BRL   | 0.01   | 0.939         | 0.902      | 4.00    | 96.9  |        |         | 99.0 |       |        | 85 - 115     | 20           |
| Comment:<br>Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| QA/QC Batch 698816 (mg/L), QC Sample No: CP05891 (CP05781)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Phosphorus, as P  | BRL   | 0.01   | 0.018         | 0.027      | NC      | 99.5  |        |         | 104  |       |        | 85 - 115     | 20           |
| Comment:<br>Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| QA/QC Batch 698281 (mg/L), QC Sample No: CP05609 (CP05533, CP05534, CP05535)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrate-N   | BRL   | 0.02   | 0.07          | 0.07       | NC      | 98.0  |        |         | 102  |       |        | 90 - 110     | 20           |
| Nitrite-N   | BRL   | 0.01   | 0.042         | 0.04       | NC      | 104   |        |         | 97.2 |       |        | 90 - 110     | 20           |
| QA/QC Batch 698283 (mg/L), QC Sample No: CP05772 (CP05781)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrate-N   | BRL   | 0.02   | 1.42          | 1.44       | 1.40    | 98.9  |        |         | 101  |       |        | 90 - 110     | 20           |
| Nitrite-N   | BRL   | 0.01   | 0.041         | 0.04       | NC      | 104   |        |         | 97.8 |       |        | 90 - 110     | 20           |
| QA/QC Batch 699649 (mg/L), QC Sample No: CP05385 (CP05533, CP05534, CP05535)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10   | 0.28          | 0.30       | NC      | 97.4  |        |         | 102  |       |        | 85 - 115     | 20           |
| Comment:<br>TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.<br>Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%. |       |        |               |            |         |       |        |         |      |       |        |              |              |
| QA/QC Batch 699734 (mg/L), QC Sample No: CP05781 (CP05781)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10   | 0.35          | 0.39       | NC      | 91.2  |        |         | 96.7 |       |        | 85 - 115     | 20           |
| Comment:<br>TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.<br>Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%. |       |        |               |            |         |       |        |         |      |       |        |              |              |

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 October 03, 2023

Tuesday, October 03, 2023

Criteria: None

State: MA

## Sample Criteria Exceedances Report

GCP05533 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

October 03, 2023

SDG I.D.: GCP05533

---

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.





CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040
Email: makrina@phoenixlabs.com Fax (860) 645-0823
Client Services (860) 645-1102

Coolant: Yes No IPK/ ICE No No
Temp: °C Pg of

Data Delivery/Contact Options:

Fax: Phone: Email: Stephanie.Martin@TRCCompanies.com

Project P.O:

Silver Lake WQMP
016120.0000.0000 (Previously C663.000)
Barbara Cabral (BCabral@TRCCompanies.com)

Customer: TRC Companies
Address: 10 Hemingway Drive
East Providence, Rhode Island 02915
Project: Silver Lake WQMP
Report to: 016120.0000.0000 (Previously C663.000)
Invoice to: Barbara Cabral (BCabral@TRCCompanies.com)
Quote #

This section MUST be completed with Bottle Quantities.

Sampler's Signature: Date:
Matrix Code:
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe Oil=Oil
B=Bulk L=Liquid X = (Other)

Client Sample - Information - Identification

Table with columns: PHOENIX USE ONLY SAMPLE #, Customer Sample Identification, Sample Matrix, Date Sampled, Time Sampled, Total Nitrogen (NO3 & NO2), Phosphorus, Total Kjeldahl N, etc.

Relinquished by: Accepted by: Date: Time:
RCP Cert, GW Protection, SW Protection, GA Mobility, GB Mobility, SWPC, Residential DEC, I/C DEC
MCP Certification, GW-1, GW-2, GW-3, S-1 GW-1, S-2 GW-1, S-3 GW-1, SW Protection

Comments, Special Requirements or Regulations:
\*\* Field Filtered within 15 minutes of collection
\*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.
\* SURCHARGE APPLIES



Tuesday, October 03, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP05538  
Sample ID#s: CP05538

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

October 03, 2023

SDG I.D.: GCP05538

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| SLIL-F    | CP05538 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

10:15  
14:50

Laboratory Data

SDG ID: GCP05538  
Phoenix ID: CP05538

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-F

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.005   | 0.003      | mg/L  | 0.5      | 09/25/23 19:30 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:16 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 09/21/23 22:16 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | < 0.10  | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | < 0.10  | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.005   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

October 03, 2023

## QA/QC Data

SDG I.D.: GCP05538

| Parameter   | Blank | Blk<br>RL | Sample<br>Result | Dup<br>Result | Dup<br>RPD | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | %<br>Rec<br>Limits | %<br>RPD<br>Limits |
|---|-------|-----------|------------------|---------------|------------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 698635 (mg/L), QC Sample No: CP05772 (CP05538)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Phosphorus, as P  | BRL   | 0.01      | 0.939            | 0.902         | 4.00       | 96.9     |           |            | 99.0    |          |           | 85 - 115           | 20                 |
| Comment:<br>Additional criteria matrix spike acceptance range is 75-125%. |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 698281 (mg/L), QC Sample No: CP05609 (CP05538)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrate-N   | BRL   | 0.02      | 0.07             | 0.07          | NC         | 98.0     |           |            | 102     |          |           | 90 - 110           | 20                 |
| Nitrite-N   | BRL   | 0.01      | 0.042            | 0.04          | NC         | 104      |           |            | 97.2    |          |           | 90 - 110           | 20                 |
| QA/QC Batch 699649 (mg/L), QC Sample No: CP05385 (CP05538)                |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10      | 0.28             | 0.30          | NC         | 97.4     |           |            | 102     |          |           | 85 - 115           | 20                 |


Comment:

TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 October 03, 2023

Tuesday, October 03, 2023

Criteria: None

State: CT

## Sample Criteria Exceedances Report

GCP05538 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

October 03, 2023

SDG I.D.: GCP05538

---

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



# CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: makrina@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-1102

Cooler: Yes  No   
Coolant: IPK  ICE  No

Temp  °C  Pg of

Data Delivery/Contact Options:  
Fax:  Phone:  Email:   
Stephanie.Martin@TRCCompanies.com

Customer: TRC Companies  
Address: 10 Hemingway Drive  
East Providence, Rhode Island 02915  
Project: Silver Lake WQMP  
Report to: 016120.0000.0000 (Previously C663.000)  
Invoice to: Barbara Cabral (BCabral@TRCCompanies.com)  
Quote #

Project P.O.:  
**This section MUST be completed with Bottle Quantities.**

Sampler's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil  
B=Bulk L=Liquid X = \_\_\_\_\_ (Other)  
PHOENIX USE ONLY: SAMPLE # 05536 Customer Sample Identification SLIL - F Sample Matrix SW Date Sampled 9/20 Time Sampled 10:15

| Client Sample - Information - Identification | MA                       | CT                       | RI                       | MA                       | Data Format                                 |
|--|--------------------------|--------------------------|--------------------------|--------------------------|---|
| M/MSD (May be billed at analysis unit rate)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> Excel   |
| GL Amber 8 oz. [W/3PC4] [H2O]                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> PDF     |
| GL Soil container [H2O]                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> GIS/Key            |
| GL Soil container [methanol] [H2O]           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> EQUIS              |
| GL Soil container [ ]                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Other              |
| 40 ml VOA Vial [ ]                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Data Package       |
| 120 ml Plastic                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Tier II Checklist  |
| PL As [X] 250ml [ ]                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Full Data Package* |
| PL As [X] 250ml [ ]                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Phoenix Std Report |
| PL H2SO4 [X] 250ml [ ]                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> Other              |
| PL HNO3 250ml                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
| PL NaOH 250ml                                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
| Bacteria Bottle w/ho                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |
| Bacteria Bottle as is                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |   |

Relinquished by: \_\_\_\_\_ Accepted by: \_\_\_\_\_  
Date: 9-21-23 10:05  
Time: 9/21/23 14:50  
Turnaround Time:  
 1 Day\*  
 2 Days\*  
 3 Days\*  
 Standard  
 Other

Comments, Special Requirements or Regulations:  
\*\* Field Filtered within 15 minutes of collection

\*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

\* SURCHARGE APPLIES

State where samples were collected: MA

\* SURCHARGE APPLIES





Tuesday, October 03, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP05539  
Sample ID#s: CP05539 - CP05540

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

October 03, 2023

SDG I.D.: GCP05539

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| SLT-D     | CP05539 | SURFACE WATER |
| SLT-1     | CP05540 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

12:20  
14:50

Laboratory Data

SDG ID: GCP05539  
Phoenix ID: CP05539

Project ID: SILVER LAKE WQMP  
Client ID: SLT-D

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.014   | 0.003      | mg/L  | 0.5      | 09/25/23 19:31 | LG  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 09/21/23 22:17 | ER  | E353.2              |
| Nitrate-N                            | 0.23    | 0.02       | mg/L  | 1        | 09/21/23 22:17 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.17    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.40    | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.026   | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**

October 03, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by:  
Received by: CP  
Analyzed by: see "By" below

Date

09/20/23  
09/21/23

Time

13:00  
14:50

Laboratory Data

SDG ID: GCP05539  
Phoenix ID: CP05540

Project ID: SILVER LAKE WQMP  
Client ID: SLT-1

| Parameter                            | Result | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|--------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.097  | 0.003      | mg/L  | 0.5      | 09/25/23 19:35 | LG  | SM4500PE-99         |
| Nitrite-N                            | 0.012  | 0.010      | mg/L  | 1        | 09/21/23 22:18 | ER  | E353.2              |
| Nitrate-N                            | < 0.02 | 0.02       | mg/L  | 1        | 09/21/23 22:18 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 1.11   | 0.20       | mg/L  | 2        | 10/03/23       | KDB | E351.1              |
| Total Nitrogen                       | 1.12   | 0.10       | mg/L  | 1        | 10/03/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.141  | 0.003      | mg/L  | 0.5      | 09/25/23       | LG  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

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**Phyllis Shiller, Laboratory Director**

**October 03, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

October 03, 2023


## QA/QC Data

SDG I.D.: GCP05539

| Parameter   | Blank | Blk RL | Sample Result | Dup Result | Dup RPD | LCS % | LCSD % | LCS RPD | MS % | MSD % | MS RPD | % Rec Limits | % RPD Limits |
|---|-------|--------|---------------|------------|---------|-------|--------|---------|------|-------|--------|--------------|--------------|
| QA/QC Batch 698635 (mg/L), QC Sample No: CP05772 (CP05539, CP05540)   |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Phosphorus, as P  | BRL   | 0.01   | 0.939         | 0.902      | 4.00    | 96.9  |        |         | 99.0 |       |        | 85 - 115     | 20           |
| Comment:<br>Additional criteria matrix spike acceptance range is 75-125%.   |       |        |               |            |         |       |        |         |      |       |        |              |              |
| QA/QC Batch 698281 (mg/L), QC Sample No: CP05609 (CP05539, CP05540)   |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrate-N   | BRL   | 0.02   | 0.07          | 0.07       | NC      | 98.0  |        |         | 102  |       |        | 90 - 110     | 20           |
| Nitrite-N   | BRL   | 0.01   | 0.042         | 0.04       | NC      | 104   |        |         | 97.2 |       |        | 90 - 110     | 20           |
| QA/QC Batch 699649 (mg/L), QC Sample No: CP05385 (CP05539)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10   | 0.28          | 0.30       | NC      | 97.4  |        |         | 102  |       |        | 85 - 115     | 20           |
| Comment:<br>TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.<br>Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%. |       |        |               |            |         |       |        |         |      |       |        |              |              |
| QA/QC Batch 699734 (mg/L), QC Sample No: CP05781 (CP05540)  |       |        |               |            |         |       |        |         |      |       |        |              |              |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10   | 0.35          | 0.39       | NC      | 91.2  |        |         | 96.7 |       |        | 85 - 115     | 20           |
| Comment:<br>TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.<br>Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%. |       |        |               |            |         |       |        |         |      |       |        |              |              |

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 October 03, 2023

Tuesday, October 03, 2023

Criteria: None

State: CT

## Sample Criteria Exceedances Report

GCP05539 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

October 03, 2023

SDG I.D.: GCP05539

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The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



# CHAIN OF CUSTODY RECORD

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
Email: makrina@phoenixlabs.com Fax (860) 645-0823  
Client Services (860) 645-1102

Cooler: Yes  No   
Coolant: IPK  ICE   
Temp: / C Pg of

### Data Delivery/Contact Options:

Fax:   
Phone:   
Email:  Stephanie.Martin@TRCCompanies.com

### Project P.O.:

Project: Silver Lake WCMP  
Report to: 016120.0000.0000 (Previously C663.000)  
Invoice to: Barbara Cabral (BCabral@TRCCompanies.com)  
Quote #

**This section MUST be completed with Bottle Quantities.**

### Client Sample - Information - Identification

Sampler's Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Matrix Code:  
DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe OIL=Oil  
B=Bulk L=Liquid X = (Other)

| PHOENIX USE ONLY SAMPLE # | Customer Sample Identification | Sample Matrix | Date Sampled | Time Sampled |
|---------------------------|--------------------------------|---------------|--------------|--------------|
| 05539                     | SLT-D                          | SW            | 9/20/2023    | 12:20        |
| 05540                     | SLT-1                          | SW            | 9/20/2023    | 13:00        |

| Analysis  | GL Antler 8 oz. [MAH504] | GL Soil container [MAH504] | 40 ml VOA Vial [MAH504] | 120 ml Plastic [MAH504] | PL Antler [X] 250ml [150ml] | PL Antler [X] 250ml [150ml] | PL Antler [X] 250ml [150ml] | PL Antler [X] 250ml [150ml] | Bacteria Bottle as is |
|---|--------------------------|----------------------------|-------------------------|-------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------|
| Total Nitrogen (NO <sub>2</sub> & NO <sub>3</sub> ) | X                        | X                          | X                       | X                       |                             |                             |                             |                             |                       |
| Total Phosphorus, Total Kjeldahl N                  | X                        | X                          | X                       | X                       |                             |                             |                             |                             |                       |
| Alkalinity  | X                        | X                          | X                       | X                       |                             |                             |                             |                             |                       |
| Phosphorus, Dissolved**                             | X                        | X                          | X                       | X                       |                             |                             |                             |                             |                       |
| MS/MSD (May be billed at analysis unit rate)        |                          |                            |                         |                         |                             |                             |                             |                             |                       |

Relinquished by: Accepted by: Date: 9/22/23 Time: 14:50

Comments, Special Requirements or Regulations:  
\*\* Field Filtered within 15 minutes of collection

\*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted. \* SURCHARGE APPLIES

RI  (Residential)  (Comm/Industrial) Direct Exposure  GA Leachability  GB Leachability  GA-GW Objectives  GB-GW Objectives  Other

CT  RCP Cert  GW Protection  SW Protection  GA Mobility  GB Mobility  SWPC  Residential DEC  I/C DEC

MA  MCP Certification  GW-1  GW-2  GW-3  S-1 10% CALC  S-1 GW-1  S-2 GW-1  S-3 GW-1  SW Protection

Data Format  Excel  PDF  GIS/Key  EQuIS  Other

Data Package  Tier II Checklist  Full Data Package\*  Phoenix Std Report  Other

\* SURCHARGE APPLIES





Wednesday, November 08, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP33193  
Sample ID#s: CP33193

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

November 08, 2023

SDG I.D.: GCP33193

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| EPD       | CP33193 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
November 08, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

13:30  
14:36

Laboratory Data

SDG ID: GCP33193  
Phoenix ID: CP33193

Project ID: SILVER LAKE WQMP  
Client ID: EPD

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.031   | 0.003      | mg/L  | 0.5      | 10/27/23 15:07 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:45 | ER  | E353.2              |
| Nitrate-N                            | 0.08    | 0.02       | mg/L  | 1        | 10/25/23 21:45 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.61    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.69    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.040   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 08, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

November 08, 2023

## QA/QC Data

SDG I.D.: GCP33193

| Parameter  | Blank | Blk<br>RL | Sample<br>Result | Dup<br>Result | Dup<br>RPD | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | %<br>Rec<br>Limits | %<br>RPD<br>Limits |
|--|-------|-----------|------------------|---------------|------------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 703839 (mg/L), QC Sample No: CP33554 (CP33193)                           |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Phosphorus, as P   | BRL   | 0.01      | 0.033            | 0.039         | NC         | 98.9     |           |            | 103     |          |           | 85 - 115           | 20                 |
| Comment:<br>Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%. |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 703586 (mg/L), QC Sample No: CP33223 (CP33193)                           |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrate-N  | BRL   | 0.02      | <0.02            | <0.02         | NC         | 101      |           |            | 103     |          |           | 90 - 110           | 20                 |
| Nitrite-N  | BRL   | 0.01      | <0.010           | <0.01         | NC         | 92.8     |           |            | 100     |          |           | 90 - 110           | 20                 |
| QA/QC Batch 705199 (mg/L), QC Sample No: CP31827 (CP33193)                           |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl  | BRL   | 0.10      | 0.24             | 0.27          | NC         | 99.1     |           |            | 99.4    |          |           | 85 - 115           | 20                 |


Comment:

TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 November 08, 2023

Wednesday, November 08, 2023

Criteria: None

State: MA

# Sample Criteria Exceedances Report

GCP33193 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

November 08, 2023

SDG I.D.: GCP33193

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The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.



**CHAIN OF CUSTODY RECORD**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
 Email: makrina@phoenixlabs.com Fax: (860) 645-0823  
**Client Services (860) 645-1102**

Cooler: Yes  No   
 Coolant: IPK  ICE   
 Temp 10 Pg of 1  
 Data Delivery/Contact Options:  
 Fax:  Phone:  Email:   
 Stephanie.Martin@TRCCompanies.com

Customer: TRC Companies  
 Address: 10 Hemingway Drive  
 East Providence, Rhode Island 02915  
 Project: Silver Lake WQMP  
 Report to: 016120.0000.0000 (Previously C663.000) **Phase 10**  
 Invoice to: Barbara Cabral (BCabral@TRCCompanies.com)  
 Quote #: TRC Vendor Portal  
 Project P.O.: **This section MUST be completed with Bottle Quantities.**

Sampler's Signature: Joseph Barts Date: 10/24/23  
 Matrix Code:  
 DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe Oil=Oil  
 B=Bulk L=Liquid X = (Other)  
 PHOENIX USE ONLY  
 SAMPLE # 33193 Customer Sample Identification: EPD Date Sampled: 10/24/23 Time Sampled: 1330

| PHOENIX USE ONLY | Customer Sample Identification | Sample Matrix | Date Sampled | Time Sampled | Analysis                                    | MA                       | CT                       | RI                                  | Turnaround Time:         | * SURCHARGE APPLIES      |
|------------------|--------------------------------|---------------|--------------|--------------|---|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 33193            | EPD                            | SW            | 10/24/23     | 1330         | M/MSD (May be billed at analysis unit rate) | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | GL Amber 8 oz. [ W/HSO4 ] [ H2O ]           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | GL Soil container [ ] [ H2O ]               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | GL Soil container [ ] [ H2O ]               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | 40 ml VOA Vial [ ] [ H2O ]                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | 120 ml Plastic [ ] [ HCl ]                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | PL As Is [ X ] 250ml [ 500ml ] 1000ml       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | PL H2SO4 [ X ] 250ml [ 500ml ] 1000ml       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | PL H2SO4 [ X ] 250ml [ 500ml ] 1000ml       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | PL NaOH 250ml                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
|                  |                                |               |              |              | Bacteria Bottle with                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |

Relinquished by: Joseph Barts Accepted by: [Signature] Date: 10/25/23 Time: 9:45  
1475223 14:36  
 Comments, Special Requirements or Regulations:  
 \*\* Field Filtered within 15 minutes of collection  
 Turnaround Time:  
 1 Day\*  
 2 Days\*  
 3 Days\*  
 Standard  
 Other  
 \*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.  
 State where samples were collected: MA  
 \* SURCHARGE APPLIES



Wednesday, November 08, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP33189  
Sample ID#s: CP33189 - CP33192

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style with a large initial "P".

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301





Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

November 08, 2023

SDG I.D.: GCP33189

Project ID: SILVER LAKE WQMP

---

| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| SLIL-S    | CP33189 | SURFACE WATER |
| SLIL-SS   | CP33190 | SURFACE WATER |
| SLIL-M    | CP33191 | SURFACE WATER |
| SLIL-B    | CP33192 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
November 08, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

10:50  
14:36

Laboratory Data

SDG ID: GCP33189  
Phoenix ID: CP33189

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-S

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.017   | 0.003      | mg/L  | 0.5      | 10/27/23 14:56 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:31 | ER  | E353.2              |
| Nitrate-N                            | 0.03    | 0.02       | mg/L  | 1        | 10/25/23 21:31 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.42    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.45    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.033   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 08, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
November 08, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

10:55  
14:36

Laboratory Data

SDG ID: GCP33189  
Phoenix ID: CP33190

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-SS

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.014   | 0.003      | mg/L  | 0.5      | 10/27/23 14:57 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:32 | ER  | E353.2              |
| Nitrate-N                            | 0.03    | 0.02       | mg/L  | 1        | 10/25/23 21:32 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.33    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.36    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.022   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 08, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
November 08, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

11:00  
14:36

Laboratory Data

SDG ID: GCP33189  
Phoenix ID: CP33191

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-M

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.013   | 0.003      | mg/L  | 0.5      | 10/27/23 15:00 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:33 | ER  | E353.2              |
| Nitrate-N                            | 0.02    | 0.02       | mg/L  | 1        | 10/25/23 21:33 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.34    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.36    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.016   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 08, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
November 08, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

11:15  
14:36

Laboratory Data

SDG ID: GCP33189  
Phoenix ID: CP33192

Project ID: SILVER LAKE WQMP  
Client ID: SLIL-B

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.053   | 0.003      | mg/L  | 0.5      | 10/27/23 15:05 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:34 | ER  | E353.2              |
| Nitrate-N                            | < 0.02  | 0.02       | mg/L  | 1        | 10/25/23 21:34 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 1.02    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | E351.1              |
| Total Nitrogen                       | 1.02    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.063   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 08, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

November 08, 2023

## QA/QC Data

SDG I.D.: GCP33189

| Parameter   | Blank | Blk<br>RL | Sample<br>Result | Dup<br>Result | Dup<br>RPD | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | %<br>Rec<br>Limits | %<br>RPD<br>Limits |
|---|-------|-----------|------------------|---------------|------------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 703839 (mg/L), QC Sample No: CP33554 (CP33189, CP33190, CP33191, CP33192) |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Phosphorus, as P  | BRL   | 0.01      | 0.033            | 0.039         | NC         | 98.9     |           |            | 103     |          |           | 85 - 115           | 20                 |
| Comment:<br>Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.  |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 703584 (mg/L), QC Sample No: CP33049 (CP33189, CP33190, CP33191, CP33192) |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrate-N   | BRL   | 0.02      | <0.02            | <0.02         | NC         | 101      |           |            | 103     |          |           | 90 - 110           | 20                 |
| Nitrite-N   | BRL   | 0.01      | <0.010           | <0.01         | NC         | 92.8     |           |            | 102     |          |           | 90 - 110           | 20                 |
| QA/QC Batch 705199 (mg/L), QC Sample No: CP31827 (CP33189, CP33190, CP33191, CP33192) |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10      | 0.24             | 0.27          | NC         | 99.1     |           |            | 99.4    |          |           | 85 - 115           | 20                 |


Comment:

TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.

Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 November 08, 2023

Wednesday, November 08, 2023

Criteria: None

State: MA

# Sample Criteria Exceedances Report

GCP33189 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

November 08, 2023

SDG I.D.: GCP33189

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The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.





**CHAIN OF CUSTODY RECORD**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
 Email: makrina@phoenixlabs.com Fax (860) 645-0823  
**Client Services (860) 645-1102**

Coolant: Yes  No   
 IPK  ICE  No

Temp 10 C Pg of 1  
 Data Delivery/Contact Options:

Fax:   
 Phone:   
 Email:  Stephanie.Martin@TRCCompanies.com

Project P.O.: Silver Lake WQMP  
016120.0000.0000 (Previously C663.000) Phase 10  
**This section MUST be completed with Bottle Quantities.**

Project: Silver Lake WQMP  
 Report to: 016120.0000.0000 (Previously C663.000) Phase 10  
 Invoice to: Barbara Gabriel (BGabrat@TRCCompanies.com)  
 Quote #: TRC Vendor Portal

Sampler's Signature: Joseph Barber Date: 10/24/23  
 Client Sample - Information - Identification

Matrix Code: DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wpe OIL=Oil  
B=Bulk L=Liquid X = (Other)

| PHOENIX USE ONLY SAMPLE # | Customer Sample Identification | Sample Matrix | Date Sampled | Time Sampled |
|---------------------------|--------------------------------|---------------|--------------|--------------|
| 33189                     | SLIL - S                       | SW            | 10/24/23     | 1050         |
| 33190                     | SLIL-SS                        | SW            | ↓            | 1055         |
| 33191                     | SLIL-M                         | SW            | ↓            | 1100         |
| 33192                     | SLIL-B                         | SW            | ↓            | 1115         |

| Alkalinity | Total Nitrogen (NO <sub>3</sub> -N) | Total Phosphorus (Total Kjeldahl N) | MS/MSD (May be blank at analysis unit at) | GL Amber 8 oz. [Whisper] [Metal] [H2O] | GL Soil Container [Metal] [H2O] | GL Soil Container [Metal] [H2O] | 40 ml VOA Vial [As] [HCl] | 120 ml Plastic [As] [HCl] | PL As [X] 250ml [500ml] [1000ml] | PL HNO3 250ml | PL NaOH 250ml | Bacteria Bottle w/10 |
|------------|-------------------------------------|-------------------------------------|---|--|---------------------------------|---------------------------------|---------------------------|---------------------------|----------------------------------|---------------|---------------|----------------------|
| X          | X                                   | X                                   |   |  |                                 |                                 |                           |                           | 1                                | 2             |               |                      |
| X          | X                                   | X                                   |   |  |                                 |                                 |                           |                           | 1                                | 2             |               |                      |
| X          | X                                   | X                                   |   |  |                                 |                                 |                           |                           | 1                                | 2             |               |                      |
| X          | X                                   | X                                   |   |  |                                 |                                 |                           |                           | 1                                | 2             |               |                      |

Relinquished by: Joseph Barber Date: 10-25-23 945  
 Accepted by: [Signature] Date: 10/25/23 14:30

Comments, Special Requirements or Regulations:  
 \*\* Field Filtered within 15 minutes of collection

Turnaround Time:  
 1 Day\*  
 2 Days\*  
 3 Days\*  
 Standard  
 Other

\*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted.

\* SURCHARGE APPLIES

RI  (Residential)  
 (Comm/Industrial) Direct Exposure  
 GA Leachability  
 GB Leachability  
 GA-GW Objectives  
 GB-GW Objectives  
 Other

CI  RCP Cert  
 GW Protection  
 SW Protection  
 GA Mobility  
 GB Mobility  
 SWPC  
 Residential DEC  
 I/C DEC

MA  MCP Certification  
 GW-1  MWRA eSMART  
 GW-2  S-1 10% CALC  
 GW-3  
 S-1 GW-1  S-1 GW-2  S-1 GW-3  
 S-2 GW-1  S-2 GW-2  S-2 GW-3  
 S-3 GW-1  S-3 GW-2  S-3 GW-3  
 SW Protection

Data Format  
 Excel  
 PDF  
 GIS/Key  
 EQUIS  
 Other  
 Data Package  
 Tier II Checklist  
 Full Data Package\*  
 Phoenix Std Report  
 Other

\* SURCHARGE APPLIES

State where samples were collected: MA



Thursday, November 09, 2023

Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Project ID: SILVER LAKE WQMP  
SDG ID: GCP33194  
Sample ID#s: CP33194 - CP33195

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis Shiller". The signature is written in a cursive style.

Phyllis Shiller

Laboratory Director

NELAC - #NY11301  
CT Lab Registration #PH-0618  
MA Lab Registration #M-CT007  
ME Lab Registration #CT-007  
NH Lab Registration #213693-A,B

NJ Lab Registration #CT-003  
NY Lab Registration #11301  
PA Lab Registration #68-03530  
RI Lab Registration #63  
VT Lab Registration #VT11301



Environmental Laboratories, Inc.  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

## Sample Id Cross Reference

November 09, 2023

SDG I.D.: GCP33194

Project ID: SILVER LAKE WQMP

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| Client Id | Lab Id  | Matrix        |
|-----------|---------|---------------|
| SLT-1     | CP33194 | SURFACE WATER |
| SLT-D     | CP33195 | SURFACE WATER |



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
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**Analysis Report**  
November 09, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

12:40  
14:36

Laboratory Data

SDG ID: GCP33194  
Phoenix ID: CP33194

Project ID: SILVER LAKE WQMP  
Client ID: SLT-1

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.063   | 0.003      | mg/L  | 0.5      | 10/27/23 15:08 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:46 | ER  | E353.2              |
| Nitrate-N                            | 0.07    | 0.02       | mg/L  | 1        | 10/25/23 21:46 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.66    | 0.20       | mg/L  | 2        | 11/07/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.73    | 0.10       | mg/L  | 1        | 11/07/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.113   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 09, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



**Environmental Laboratories, Inc.**

587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823

**Analysis Report**  
November 09, 2023

FOR: Attn: Stephanie Martin  
ESS Group Inc. A TRC Company  
10 Hemingway Drive 2nd Floor  
Riverside, RI 02915-2224

Sample Information

Matrix: SURFACE WATER  
Location Code: TRC-RI  
Rush Request: Standard  
P.O.#:

Custody Information

Collected by: JB  
Received by: CP  
Analyzed by: see "By" below

Date

10/24/23  
10/25/23

Time

12:10  
14:36

Laboratory Data

SDG ID: GCP33194  
Phoenix ID: CP33195

Project ID: SILVER LAKE WQMP  
Client ID: SLT-D

| Parameter                            | Result  | RL/<br>PQL | Units | Dilution | Date/Time      | By  | Reference           |
|--------------------------------------|---------|------------|-------|----------|----------------|-----|---------------------|
| Phosphorus, Dissolved as P low level | 0.016   | 0.003      | mg/L  | 0.5      | 10/27/23 15:10 | JR  | SM4500PE-99         |
| Nitrite-N                            | < 0.010 | 0.010      | mg/L  | 1        | 10/25/23 21:49 | ER  | E353.2              |
| Nitrate-N                            | 0.21    | 0.02       | mg/L  | 1        | 10/25/23 21:49 | ER  | E353.2              |
| Nitrogen Tot Kjeldahl                | 0.73    | 0.20       | mg/L  | 2        | 11/09/23       | KDB | E351.1              |
| Total Nitrogen                       | 0.94    | 0.10       | mg/L  | 1        | 11/09/23       | KDB | SM4500NH3/E300.0-11 |
| Phosphorus, as P                     | 0.167   | 0.003      | mg/L  | 0.5      | 10/27/23       | JR  | SM4500PE-11         |

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

**Comments:**

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

**Phyllis Shiller, Laboratory Director**

**November 09, 2023**

**Reviewed and Released by: Anil Makol, Project Manager**



Environmental Laboratories, Inc.  
 587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
 Tel. (860) 645-1102

# QA/QC Report

November 09, 2023


## QA/QC Data

SDG I.D.: GCP33194

| Parameter   | Blank | Blk<br>RL | Sample<br>Result | Dup<br>Result | Dup<br>RPD | LCS<br>% | LCSD<br>% | LCS<br>RPD | MS<br>% | MSD<br>% | MS<br>RPD | %<br>Rec<br>Limits | %<br>RPD<br>Limits |
|---|-------|-----------|------------------|---------------|------------|----------|-----------|------------|---------|----------|-----------|--------------------|--------------------|
| QA/QC Batch 703839 (mg/L), QC Sample No: CP33554 (CP33194, CP33195)   |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Phosphorus, as P  | BRL   | 0.01      | 0.033            | 0.039         | NC         | 98.9     |           |            | 103     |          |           | 85 - 115           | 20                 |
| Comment:<br>Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.  |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 703586 (mg/L), QC Sample No: CP33223 (CP33194, CP33195)   |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrate-N   | BRL   | 0.02      | <0.02            | <0.02         | NC         | 101      |           |            | 103     |          |           | 90 - 110           | 20                 |
| Nitrite-N   | BRL   | 0.01      | <0.010           | <0.01         | NC         | 92.8     |           |            | 100     |          |           | 90 - 110           | 20                 |
| QA/QC Batch 705199 (mg/L), QC Sample No: CP31827 (CP33194)  |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10      | 0.24             | 0.27          | NC         | 99.1     |           |            | 99.4    |          |           | 85 - 115           | 20                 |
| Comment:<br>TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.<br>Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%. |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| QA/QC Batch 705464 (mg/L), QC Sample No: CP33195 (CP33195)  |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |
| Nitrogen Tot Kjeldahl   | BRL   | 0.10      | 0.73             | 0.81          | 10.4       | 98.6     |           |            | 101     |          |           | 85 - 115           | 20                 |
| Comment:<br>TKN is reported as Organic Nitrogen in the Blank, LCS, DUP and MS.<br>Additional criteria: LCS acceptance range for waters is 85-115% and for soils is 75-125%. MS acceptance range is 75-125%. |       |           |                  |               |            |          |           |            |         |          |           |                    |                    |

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

- RPD - Relative Percent Difference
- LCS - Laboratory Control Sample
- LCSD - Laboratory Control Sample Duplicate
- MS - Matrix Spike
- MS Dup - Matrix Spike Duplicate
- NC - No Criteria
- Intf - Interference

  
 Phyllis Shiller, Laboratory Director  
 November 09, 2023

Thursday, November 09, 2023

Criteria: None

State: MA

## Sample Criteria Exceedances Report

GCP33194 - TRC-RI

| SampNo | Acode | Phoenix Analyte | Criteria | Result | RL | Criteria | RL<br>Criteria | Analysis<br>Units |
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|
|--------|-------|-----------------|----------|--------|----|----------|----------------|-------------------|

\*\*\* No Data to Display \*\*\*

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.



**Environmental Laboratories, Inc.**  
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045  
Tel. (860) 645-1102 Fax (860) 645-0823



## Analysis Comments

November 09, 2023

SDG I.D.: GCP33194

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The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.





**CHAIN OF CUSTODY RECORD**

587 East Middle Turnpike, P.O. Box 370, Manchester, CT 06040  
 Email: makrina@phoenixlabs.com Fax (860) 645-0823  
**Client Services (860) 645-1102**

Cooler: Yes  No   
 Coolant: PK  ICE  No

Term 90 C Pg of

Fax:   
 Phone:   
 Email:

Stephanie.Martin@TRCCcompanies.com

Project P.O:

Silver Lake WQMP

Project: Report to: Invoice to: Quote #

016120.0000.0000 (Previously C663.000) Phase 10  
 Barbara Cabral (BCabral@TRCCcompanies.com)  
**TRC Vendor Portal**

**This section MUST be completed with Bottle Quantities.**

Project P.O:

Client Sample - Information - Identification  
 Joseph Buta Date: 10/24/23

**Matrix Code:**  
 DW=Drinking Water GW=Ground Water SW=Surface Water WW=Waste Water  
 RW=Raw Water SE=Sediment SL=Sludge S=Soil SD=Solid W=Wipe Oil=Oil  
 B=Bulk L=Liquid X=(Other)

| PHOENIX USE ONLY SAMPLE # | Customer Sample Identification | Sample Matrix | Date Sampled | Time Sampled |
|---------------------------|--------------------------------|---------------|--------------|--------------|
| 33194                     | SLT-1                          | SW            | 10/24/23     | 1240         |
| 33195                     | SLT-D                          | SW            | 10/24/23     | 1210         |

| MS/MSD (May be billed at analysis unit rate)        | GL Antiser 3 oz. (1/4) H3PO4 (1/4) H2SO4 | GL Soil container ( ) oz | GL Antiser 8 oz. (1/4) H3PO4 (1/4) H2SO4 | GL Soil container ( ) oz | 120 ml VOA Vial (As is) (HCl) | PL As is (X) 250ml (X) 500ml | PL HNO3 250ml | PL NaOH 250ml | Bacteria Bottle with |
|---|--|--------------------------|--|--------------------------|-------------------------------|------------------------------|---------------|---------------|----------------------|
| Alkalinity  | X  |                          | X  |                          |                               |                              | 1             | 2             |                      |
| Total Nitrogen (NO <sub>2</sub> & NO <sub>3</sub> ) | X  |                          | X  |                          |                               |                              | 1             | 2             |                      |
| Total Phosphorus (Total Kjeldahl N)                 | X  |                          | X  |                          |                               |                              |               |               |                      |
| Phosphorus Dissolved                                |  |                          |  |                          |                               |                              |               |               |                      |

Relinquished by: Joseph Buta Accepted by: [Signature] Date: 10-25-23 Time: 9:15  
14:30  
 Comments, Special Requirements or Regulations:  
 \*\* Field Filtered within 15 minutes of collection  
 \*MS/MSD are considered site samples and will be billed as such in accordance with the prices quoted. \* SURCHARGE APPLIES

| RI   | CT   | MA   | Data Format  |
|--|--|--|--|
| <input type="checkbox"/> (Residential)<br><input type="checkbox"/> (Comm/Industrial) Direct Exposure<br><input type="checkbox"/> GA Leachability<br><input type="checkbox"/> GB Leachability<br><input type="checkbox"/> GA-GW Objectives<br><input type="checkbox"/> GB-GW Objectives<br><input type="checkbox"/> Other | <input type="checkbox"/> RCP Cert<br><input type="checkbox"/> GW Protection<br><input type="checkbox"/> SW Protection<br><input type="checkbox"/> GA Mobility<br><input type="checkbox"/> GB Mobility<br><input type="checkbox"/> SWPC<br><input type="checkbox"/> Residential DEC<br><input type="checkbox"/> I/C DEC | <input type="checkbox"/> MCP Certification<br><input type="checkbox"/> GW-1<br><input type="checkbox"/> GW-2<br><input type="checkbox"/> GW-3<br><input type="checkbox"/> S-1 GW-1<br><input type="checkbox"/> S-2 GW-1<br><input type="checkbox"/> S-3 GW-1<br><input type="checkbox"/> SW Protection | <input checked="" type="checkbox"/> Excel<br><input checked="" type="checkbox"/> PDF<br><input type="checkbox"/> GIS/Key<br><input type="checkbox"/> EQUIS<br><input type="checkbox"/> Other<br><b>Data Package</b><br><input type="checkbox"/> Tier II Checklist<br><input type="checkbox"/> Full Data Package*<br><input checked="" type="checkbox"/> Phoenix Std Report<br><input type="checkbox"/> Other |

\* SURCHARGE APPLIES

State where samples were collected: MA

\* SURCHARGE APPLIES

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** SLIL-S  
**Sample Depth:**  
**Sample Date:** 20-Sep-23

**Total Density (#/mL):** 2,324  
**Total Biovolume (um<sup>3</sup>/mL):** 5,064,730  
**Trophic State Index:** 61.5

| Species                            | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|------------------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 <i>Anabaena planctonica</i>      | 1,128           | 48.5               | 4,332,983                        | 85.6                 |
| 2 <i>Rhodomonas minuta</i>         | 468             | 20.1               | 9,367                            | 0.2                  |
| 3 <i>Aphanizomenon flos-aquae</i>  | 208             | 9.0                | 196,705                          | 3.9                  |
| 4 <i>Cryptomonas erosa</i>         | 139             | 6.0                | 72,160                           | 1.4                  |
| 5 <i>Anabaena variabilis</i>       | 121             | 5.2                | 179,706                          | 3.5                  |
| 6 <i>Cosmarium</i> sp.             | 69              | 3.0                | 14,571                           | 0.3                  |
| 7 <i>Oscillatoria limosa</i>       | 35              | 1.5                | 53,773                           | 1.1                  |
| 8 <i>Ankistrodesmus falcatus</i>   | 35              | 1.5                | 867                              | 0.0                  |
| 9 <i>Staurastrum gracile</i>       | 17              | 0.7                | 9,367                            | 0.2                  |
| 10 <i>Microcystis aeruginosa</i>   | 17              | 0.7                | 16,652                           | 0.3                  |
| 11 <i>Cyclotella stelligera</i>    | 17              | 0.7                | 954                              | 0.0                  |
| 12 <i>Aphanothece</i> sp.          | 17              | 0.7                | 3,122                            | 0.1                  |
| 13 <i>Tabellaria fenestrata</i>    | 17              | 0.7                | 166,523                          | 3.3                  |
| 14 <i>Sphaerocystis schroeteri</i> | 17              | 0.7                | 4,857                            | 0.1                  |
| 15 <i>Scenedesmus denticulatus</i> | 17              | 0.7                | 3,122                            | 0.1                  |

94

*Anabaena planctonica* cells/mL = 23,678  
*Anabaena variabilis* cells/mL = 2,428  
*Microcystis aeruginosa* cells/mL = 2,082  
*Oscillatoria limosa* cells/mL = 867  
*Aphanizomenon flos-aquae* cells/mL = 3,122

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** SLIL-SS  
**Sample Depth:**  
**Sample Date:** 20-Sep-23

**Total Density (#/mL):** 2,339  
**Total Biovolume (um<sup>3</sup>/mL):** 5,318,142  
**Trophic State Index:** 61.9

| Species                      | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|------------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 Anabaena planctonica       | 1,236           | 52.9               | 4,750,233                        | 89.3                 |
| 2 Rhodomonas minuta          | 334             | 14.3               | 6,681                            | 0.1                  |
| 3 Aphanizomenon flos-aquae   | 217             | 9.3                | 232,566                          | 4.4                  |
| 4 Cryptomonas erosa          | 134             | 5.7                | 69,487                           | 1.3                  |
| 5 Coscinodiscus sp.          | 100             | 4.3                | 75,167                           | 1.4                  |
| 6 Anabaena variabilis        | 67              | 2.9                | 74,164                           | 1.4                  |
| 7 Sphaerocystis schroeteri   | 50              | 2.1                | 8,769                            | 0.2                  |
| 8 Cyclotella stelligera      | 50              | 2.1                | 2,756                            | 0.1                  |
| 9 Microcystis aeruginosa     | 33              | 1.4                | 18,708                           | 0.4                  |
| 10 Trachelomonas volvocina   | 17              | 0.7                | 31,486                           | 0.6                  |
| 11 Cyclotella comta          | 17              | 0.7                | 37,917                           | 0.7                  |
| 12 Stephanodiscus hantzschii | 17              | 0.7                | 2,004                            | 0.0                  |
| 13 Ankistrodesmus falcatus   | 17              | 0.7                | 835                              | 0.0                  |
| 14 Oocystis pusilla          | 17              | 0.7                | 3,608                            | 0.1                  |
| 15 Tetraedron minimum        | 17              | 0.7                | 752                              | 0.0                  |
| 16 Scenedesmus denticulatus  | 17              | 0.7                | 3,007                            | 0.1                  |

Anabaena planctonica cells/mL = 25,958

Aphanizomenon flos-aquae cells/mL = 3,692

Anabaena variabilis cells/mL = 1,002

Microcystis aeruginosa cells/mL = 2,339

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** SLIL-P  
**Sample Depth:**  
**Sample Date:** 20-Sep-23

**Total Density (#/mL):** 2,031  
**Total Biovolume (um<sup>3</sup>/mL):** 3,531,170  
**Trophic State Index:** 58.9

| Species                    | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|----------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 Anabaena planctonica     | 880             | 43.3               | 3,058,404                        | 86.6                 |
| 2 Rhodomonas minuta        | 512             | 25.2               | 10,235                           | 0.3                  |
| 3 Cryptomonas erosa        | 192             | 9.4                | 99,796                           | 2.8                  |
| 4 Coscinodiscus sp.        | 128             | 6.3                | 95,957                           | 2.7                  |
| 5 Aphanizomenon flos-aquae | 64              | 3.1                | 72,544                           | 2.1                  |
| 6 Ankistrodesmus falcatus  | 32              | 1.6                | 800                              | 0.0                  |
| 7 Synedra radians          | 32              | 1.6                | 11,515                           | 0.3                  |
| 8 Sphaerocystis schroeteri | 32              | 1.6                | 22,390                           | 0.6                  |
| 9 Gomphonema clevei        | 16              | 0.8                | 1,439                            | 0.0                  |
| 10 Tabellaria fenestrata   | 16              | 0.8                | 76,766                           | 2.2                  |
| 11 Scenedesmus quadricauda | 16              | 0.8                | 4,158                            | 0.1                  |
| 12 Microcystis aeruginosa  | 16              | 0.8                | 10,235                           | 0.3                  |
| 13 Oocystis pusilla        | 16              | 0.8                | 3,454                            | 0.1                  |
| 14 Asterionella formosa    | 16              | 0.8                | 3,518                            | 0.1                  |
| 15 Anabaena variabilis     | 16              | 0.8                | 24,853                           | 0.7                  |
| 16 Trachelomonas pulchella | 16              | 0.8                | 31,986                           | 0.9                  |
| 17 Synedra rumpens         | 16              | 0.8                | 2,239                            | 0.1                  |
| 18 Cyclotella stelligera   | 16              | 0.8                | 880                              | 0.0                  |

Anabaena planctonica cells/mL = 16,713  
 Microcystis aeruginosa cells/mL = 1,279  
 Aphanizomenon flos-aquae cells/mL = 1,151  
 Anabaena variabilis cells/mL = 336

**Aquatic Analysts**

**Sample ID:** ZX16

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** EPD  
**Sample Depth:**  
**Sample Date:** 20-Sep-23

**Total Density (#/mL):** 984  
**Total Biovolume (um<sup>3</sup>/mL):** 352,560  
**Trophic State Index:** 42.3

| Species                    | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|----------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 Rhodomonas minuta        | 344             | 35.0               | 6,880                            | 2.0                  |
| 2 Cryptomonas erosa        | 248             | 25.2               | 129,185                          | 36.6                 |
| 3 Cyclotella stelligera    | 67              | 6.8                | 3,679                            | 1.0                  |
| 4 Chrysococcus rufescens   | 67              | 6.8                | 5,685                            | 1.6                  |
| 5 Sphaerocystis schroeteri | 57              | 5.8                | 38,125                           | 10.8                 |
| 6 Microcystis aeruginosa   | 38              | 3.9                | 27,519                           | 7.8                  |
| 7 Melosira italica         | 38              | 3.9                | 43,204                           | 12.3                 |
| 8 Ankistrodesmus falcatus  | 29              | 2.9                | 717                              | 0.2                  |
| 9 Anabaena flos-aquae      | 19              | 1.9                | 32,010                           | 9.1                  |
| 10 Crucigenia quadrata     | 19              | 1.9                | 1,624                            | 0.5                  |
| 11 Oocystis pusilla        | 10              | 1.0                | 1,032                            | 0.3                  |
| 12 Cyclotella comta        | 10              | 1.0                | 21,690                           | 6.2                  |
| 13 Chroococcus minimus     | 10              | 1.0                | 4,281                            | 1.2                  |
| 14 Trachelomonas volvocina | 10              | 1.0                | 18,011                           | 5.1                  |
| 15 Trachelomonas scabra    | 10              | 1.0                | 15,288                           | 4.3                  |
| 16 Cyclotella meneghiniana | 10              | 1.0                | 3,631                            | 1.0                  |

Microcystis aeruginosa cells/mL = 3,440

Anabaena flos-aquae cells/mL = 478

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** SLIL-S  
**Sample Depth:**  
**Sample Date:** 24-Oct-23

**Total Density (#/mL):** 1,149  
**Total Biovolume (um<sup>3</sup>/mL):** 543,400  
**Trophic State Index:** 45.5

| Species                    | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|----------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 Rhodomonas minuta        | 775             | 67.4               | 15,496                           | 2.9                  |
| 2 Anabaena planctonica     | 107             | 9.3                | 293,364                          | 54.0                 |
| 3 Cryptomonas erosa        | 89              | 7.8                | 46,311                           | 8.5                  |
| 4 Aphanizomenon flos-aquae | 45              | 3.9                | 56,108                           | 10.3                 |
| 5 Coscinodiscus sp.        | 18              | 1.6                | 13,359                           | 2.5                  |
| 6 Synedra ulna contracta   | 9               | 0.8                | 3,117                            | 0.6                  |
| 7 Achnanthes lanceolata    | 9               | 0.8                | 1,603                            | 0.3                  |
| 8 Gomphonema angustatum    | 9               | 0.8                | 1,603                            | 0.3                  |
| 9 Synedra ulna             | 9               | 0.8                | 17,723                           | 3.3                  |
| 10 Melosira italica        | 9               | 0.8                | 25,168                           | 4.6                  |
| 11 Navicula rhynchocephala | 9               | 0.8                | 2,627                            | 0.5                  |
| 12 Cyclotella kutzingiana  | 9               | 0.8                | 1,024                            | 0.2                  |
| 13 Synedra radians         | 9               | 0.8                | 3,206                            | 0.6                  |
| 14 Trachelomonas scabra    | 9               | 0.8                | 14,250                           | 2.6                  |
| 15 Amphora perpusilla      | 9               | 0.8                | 1,478                            | 0.3                  |
| 16 Tabellaria fenestrata   | 9               | 0.8                | 42,749                           | 7.9                  |
| 17 Fragilaria construens   | 9               | 0.8                | 3,990                            | 0.7                  |
| 18 Ankistrodesmus falcatus | 9               | 0.8                | 223                              | 0.0                  |

64.3

Anabaena planctonica cells/mL = 1,603  
 Aphanizomenon flos-aquae cells/mL = 891  
 2,494

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** SLIL-SS  
**Sample Depth:**  
**Sample Date:** 24-Oct-23

**Total Density (#/mL):** 1,026  
**Total Biovolume (um<sup>3</sup>/mL):** 667,002  
**Trophic State Index:** 46.9

| Species                     | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|-----------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 Rhodomonas minuta         | 616             | 60.0               | 12,317                           | 1.8                  |
| 2 Anabaena planctonica      | 174             | 16.9               | 508,607                          | 76.3                 |
| 3 Aphanizomenon flos-aquae  | 47              | 4.6                | 59,691                           | 8.9                  |
| 4 Cryptomonas erosa         | 39              | 3.8                | 20,529                           | 3.1                  |
| 5 Cyclotella stelligera     | 32              | 3.1                | 1,737                            | 0.3                  |
| 6 Ankistrodesmus falcatus   | 24              | 2.3                | 592                              | 0.1                  |
| 7 Mallomonas sp.            | 16              | 1.5                | 6,001                            | 0.9                  |
| 8 Sphaerocystis schroeteri  | 16              | 1.5                | 11,054                           | 1.7                  |
| 9 Coscinodiscus sp.         | 16              | 1.5                | 11,843                           | 1.8                  |
| 10 Melosira italica         | 8               | 0.8                | 14,875                           | 2.2                  |
| 11 Quadrigula closterioides | 8               | 0.8                | 1,516                            | 0.2                  |
| 12 Synedra rumpens          | 8               | 0.8                | 1,105                            | 0.2                  |
| 13 Chrysococcus rufescens   | 8               | 0.8                | 671                              | 0.1                  |
| 14 Chlamydomonas sp.        | 8               | 0.8                | 2,566                            | 0.4                  |
| 15 Asterionella formosa     | 8               | 0.8                | 13,896                           | 2.1                  |

Aphanizomenon flos-aquae cells/mL = 947

Anabaena planctonica cells/mL = 2,779

## Phytoplankton Sample Analysis

**Sample:** Silver Lake  
**Sample Site:** EPD  
**Sample Depth:**  
**Sample Date:** 24-Oct-23

**Total Density (#/mL):** 655  
**Total Biovolume (um<sup>3</sup>/mL):** 395,328  
**Trophic State Index:** 43.2

| Species                     | Density<br>#/mL | Density<br>Percent | Biovolume<br>um <sup>3</sup> /mL | Biovolume<br>Percent |
|-----------------------------|-----------------|--------------------|----------------------------------|----------------------|
| 1 Rhodomonas minuta         | 392             | 59.8               | 7,838                            | 2.0                  |
| 2 Melosira italica          | 187             | 28.6               | 335,025                          | 84.7                 |
| 3 Cryptomonas erosa         | 18              | 2.7                | 9,125                            | 2.3                  |
| 4 Anabaena planctonica      | 12              | 1.8                | 32,114                           | 8.1                  |
| 5 Ankistrodesmus falcatus   | 12              | 1.8                | 292                              | 0.1                  |
| 6 Nitzschia amphibia        | 6               | 0.9                | 562                              | 0.1                  |
| 7 Melosira distans alpigena | 6               | 0.9                | 1,024                            | 0.3                  |
| 8 Microcystis aeruginosa    | 6               | 0.9                | 936                              | 0.2                  |
| 9 Kephyrion sp.             | 6               | 0.9                | 369                              | 0.1                  |
| 10 Crucigenia quadrata      | 6               | 0.9                | 1,492                            | 0.4                  |
| 11 Sphaerocystis Schroeteri | 6               | 0.9                | 6,551                            | 1.7                  |

Anabaena planctonica cells/mL = 175

Microcystis aeruginosa cells/mL = 117



## Microcystins/Nodularins Report

Project: TRC

Submitted to: Stephanie Martin  
 Organization: TRC  
 Address: 10 Hemingway Drive, East Providence, RI 02915  
 Email: [stephanie.martin@trccompanies.com](mailto:stephanie.martin@trccompanies.com)  
 Sample Receipt Date: 14 November 2023  
 Sample Condition: 1.9 °C upon arrival  
 Report#: 230920\_231024\_TRC  
 Date Prepared: 15 November 2023  
 Prepared by: Christopher Schaller

Table 1: Samples analyzed

| <u>Lab ID</u>  | <u>Sample ID</u> | <u>Site</u> | <u>Collected</u>  |
|----------------|------------------|-------------|-------------------|
| SLIL-F-231024  | SLIL-F           | Silver Lake | 24 October 2023   |
| SLIL-S-231024  | SLIL-S           | Silver Lake | 24 October 2023   |
| SLIL-SS-231024 | SLIL-SS          | Silver Lake | 24 October 2023   |
| EPD-231024     | EPD              | Silver Lake | 24 October 2023   |
| SLIL-F-230920  | SLIL-F           | Silver Lake | 20 September 2023 |
| SLIL-S-230920  | SLIL-S           | Silver Lake | 20 September 2023 |
| SLIL-SS-230920 | SLIL-SS          | Silver Lake | 20 September 2023 |
| SLIL-P-230920  | SLIL-P           | Silver Lake | 20 September 2023 |
| EPD-230920     | EPD              | Silver Lake | 20 September 2023 |

**Analytes:** Adda Microcystins/Nodularins (MCs/NODs)

| Abbreviations |                                      |       |                                       |
|---------------|--------------------------------------|-------|---------------------------------------|
| NA            | Not Applicable                       | LFSM  | Lab Fortified Sample Matrix           |
| MDL           | Method Detection Limit               | LFSMD | Lab Fortified Sample Matrix Duplicate |
| MQL           | Method Quantification Limit          | LD    | Lab Duplicate                         |
| ND            | Not Detected above the MDL           | IS    | Internal Standard                     |
| Blank         | Regent Water free from interferences | —     | Not Analyzed                          |
| LFB           | Lab Fortified Blank                  | MRL   | Method Reporting Limit                |
| CCC           | Continued Calibration Check          | CV    | Low-range calibration verification    |

## Sample Preparation

### *Water Sample Freeze-Thaw*

The samples were inverted for 60 seconds to mix. A subset from each sample was transferred to a 15 mL vial. Three freeze-thaw cycles were employed prior to additional sample preparation and subsequent analysis.

## Analytical Techniques

### *Enzyme-Linked Immunosorbent Assay (ELISA)*

#### *MCs/NODs*

A microcystins/nodularins Adda ELISA (Abraxis) was utilized for the quantitative and sensitive congener-independent detection of MCs/NODs (US EPA Method 546 & Ohio EPA DES 701.0). The current method reporting limit is 0.30 ng/mL (ppb) based on kit sensitivity (0.15 ng/mL), dilution factors (1-fold), and initial demonstration of capability.

| Qualifier | Flag   |
|-----------|--|
| CL        | Analytical result is estimated due to ineffective quenching.   |
| J         | Analyte was positively identified; the associated numerical value is estimated.                          |
| PT        | The reported result is estimated because the sample was not analyzed within required holding time.       |
| B         | Analytical result is estimated. Analyte was detected in associated reagent blank as well as the samples. |
| E         | Analytical result is estimated. Values achieved were outside calibration range.                          |
| N         | Spiked sample control was outside limits   |
| T         | The reported result is estimated because the sample exceeded temperature threshold when received         |

## Quality Control

Table 2: LFSM and IS QC samples prepared for analyses pre-extraction (unless otherwise noted). Additional Quality Control/Quality Assurance checks included method blanks, continued calibration checks, LFBs, and external curves.

| Analyte | Concentration<br>(ng/mL) | Lab ID        | QC<br>Type | Return |
|---------|--------------------------|---------------|------------|--------|
| MC-LR   | 1.0                      | EPD-231024    | LFSM       | 111%   |
| MC-LR   | 1.0                      | SLIL-F-230920 | LFSM       | 116%   |

\*Control limits: water LFSM  $\pm 30\%$ ; complicated matrix LFSM and when LFSM within 2x MDL  $\pm 50\%$ ; IS  $\pm 50\%$

Table 3: Adda MC-ELISA Quality Control Value Tables

| Date Analyzed:                      | 15-Nov-23 | Requirement           | Pass/Fail |
|-------------------------------------|-----------|-----------------------|-----------|
| <b>R<sup>2</sup> value:</b>         | 0.999     | $\geq 0.98$           | PASS      |
| <b>%CV STDs:</b>                    | 0.2-3.8%  | $\leq 15\%$           | PASS      |
| <b>LFB (1 ppb) recovery:</b>        | 105%      | $\pm 40\%$ True Value | PASS      |
| <b>%CV LFB:</b>                     | 4.4%      | $\leq 20\%$           | PASS      |
| <b>Low CCC (0.15 ppb) recovery:</b> | 118%      | $\pm 50\%$ True Value | PASS      |
| <b>LRB</b>                          | <0.08     | <0.08                 | PASS      |

## Results

Table 4: Raw ELISA Data including the sample identification, analyte, date analyzed, interpolated values 1 and 2, the dilution factor, %CV of the absorbance values, and average final concentration (ng/mL; ppb).

| Lab ID         | Sample<br>Type | Analyte  | Date<br>analyzed | Value 1<br>(ng/mL) | Value 2<br>(ng/mL) | Dilution<br>Factor | %CV | Average<br>(ng/mL) |
|----------------|----------------|----------|------------------|--------------------|--------------------|--------------------|-----|--------------------|
| SLIL-F-231024  | FS             | MCs/NODs | 11/15/2023       | 0.00               | 0.03               | 1                  | 2.3 | <0.30              |
| SLIL-S-231024  | FS             | MCs/NODs | 11/15/2023       | 0.10               | 0.08               | 1                  | 1.6 | <0.30              |
| SLIL-SS-231024 | FS             | MCs/NODs | 11/15/2023       | 0.03               | 0.08               | 1                  | 2.7 | <0.30              |
| EPD-231024     | FS             | MCs/NODs | 11/15/2023       | 0.33               | 0.27               | 1                  | 4.1 | <b>0.30</b>        |
| EPD-231024     | LFSM           | MCs/NODs | 11/15/2023       | 1.43               | 1.39               | 1                  | 1.2 | 1.41               |
| SLIL-F-230920  | FS             | MCs/NODs | 11/15/2023       | 0.04               | 0.01               | 1                  | 1.7 | <0.30              |
| SLIL-F-230920  | LFSM           | MCs/NODs | 11/15/2023       | 1.22               | 1.09               | 1                  | 4.8 | 1.16               |
| SLIL-S-230920  | FS             | MCs/NODs | 11/15/2023       | 0.15               | 0.13               | 1                  | 1.9 | <0.30              |
| SLIL-SS-230920 | FS             | MCs/NODs | 11/15/2023       | 0.15               | 0.16               | 1                  | 0.9 | <0.30              |
| SLIL-P-230920  | FS             | MCs/NODs | 11/15/2023       | 0.16               | 0.15               | 1                  | 0.5 | <0.30              |
| EPD-230920     | FS             | MCs/NODs | 11/15/2023       | 0.87               | 0.87               | 1                  | 0.3 | <b>0.87</b>        |


## Summary of Results

Table 5: Summary of results in ng/mL

| Lab ID                   | MCs/NODs<br>(ng/mL) |
|--------------------------|---------------------|
| SLIL-F-231024            | ND                  |
| SLIL-S-231024            | ND                  |
| SLIL-SS-231024           | ND                  |
| EPD-231024               | <b>0.30</b>         |
| SLIL-F-230920            | ND                  |
| SLIL-S-230920            | ND                  |
| SLIL-SS-230920           | ND                  |
| SLIL-P-230920            | ND                  |
| EPD-230920               | <b>0.87</b>         |
| <i>MRL (ng/mL):</i>      | <i>0.30</i>         |
| <i>Analyst Initials:</i> | <i>CS</i>           |
| <i>Date Analyzed:</i>    | <i>11/15/2023</i>   |

### Interpretations:

Microcystins/nodularins were detected below the EPA recommended recreational threshold (8.0 ng/mL) in the **EPD-231024** and **EPD-230920** samples. Microcystins/nodularins were not detected above the MRL (0.30 ng/mL) in the remaining submitted samples.

Submitted by:   
 Mark T. Aubel, Ph.D.  
 Lab Director

Date: November 16, 2023

*The results in this report relate only to the samples listed above.  
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## **Attachment B: Updated Water Quality Database (Digital)**